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## The Historical and Legal Creation of a Fissured Workplace: The Case of Franchising

Brian Callaci

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**THE HISTORICAL AND LEGAL CREATION OF A  
FISSURED WORKPLACE: THE CASE OF  
FRANCHISING**

A Dissertation Presented

by

BRIAN CALLACI

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2019

Economics

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## DEDICATION

*To the workers of the Fight for \$15.*

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## ABSTRACT

# THE HISTORICAL AND LEGAL CREATION OF A FISSURED WORKPLACE: THE CASE OF FRANCHISING

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This dissertation explores the consequences of institutional change in capitalist firms, focusing on vertical dis-integration, the legal boundaries of the firm and what David Weil has called workplace “fissuring,” in which corporations place intermediaries (subcontractors, temp agencies, or franchisees) between themselves and workers, often with negative consequences for workers. It focuses specifically on franchising, a type of fissured workplace in which one firm outsources retail operations to smaller, legally independent franchisees. The first chapter uses archival sources to identify the legal and policy changes driving workplace fissuring in the franchising context: specifically the relaxing of antitrust prohibitions on vertical restraints (contractual controls on separate firms, such as price and supplier restrictions). These contractual mechanisms, which allow chains to achieve uniformity and control over their outlets



without directly owning them, helped create fissured workplaces in the case of franchising. I show that franchising firms waged a struggle in courts and legislatures to expand their ability to impose vertical restraints, pulling in the legal boundaries of the firm and leaving workers outside.

With a formal model emphasizing the two-level principal-agent problem in franchising (between franchisors and franchisees, and franchisees and workers), the second chapter shows that franchise brands can induce very high levels of franchisee effort by leveraging product market power and one-sided contract terms to reduce the franchisee's bargaining position. Franchising in this context functions as a type of surveillance and labor discipline organizational technology, in which franchise contracts induce franchisees to surveil production workers and extract high levels of effort from them, reducing the investments in monitoring and/or efficiency wages that franchisors would otherwise have to make.

The third chapter exploits a new, hand-collected data set from 530 franchise contracts, to link, to my knowledge for the first time, vertical restraints to workforce characteristics. It uncovers an empirical relationship between contingent, relatively unskilled and low-wage workforces and the likelihood of franchisors imposing vertical restraints. I argue that franchisors impose vertical restraints to target a vulnerable and cheap workforce. By removing alternative profit-making strategies from the franchisees' decision set, these restraints incentivize franchisees to focus on minimizing labor costs and extracting effort from workers for their profit margins.

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## INTRODUCTION

American businesses today are smaller, leaner, and more flexible than the giant, vertically integrated corporations of the mid-twentieth-century era. While General Motors employed over 600,000 workers at its peak in 1979 and handled design, parts manufacturing, and assembly in-house, today it employs 200,000 and contracts for virtually everything but the design and assembly of its automobiles. Perhaps the most iconic American brand, McDonald's, today employs only 90,000 of the 840,000 people who work at its restaurants, outsourcing the actual operation of the bulk of its core food service operations to a network of thousands of legally independent franchisees. Economists and economic historians have largely focused on the efficiency aspects of this process. According to this story, in some cases, as communications and transportation technologies reduced the costs of relying on decentralized markets to organize production, firms responded by scaling back their use of internal, centrally planned hierarchies in favor of contracting in the market (Lamoreaux et al. 2003; Williamson 1985). In other cases firms took advantage of the superior incentives of residual claimancy for solving principal-agent problems and switched from employment relationships inside the firm to independent contractor relationships outside the firm (Rubin 1978; Mathewson and Winter 1985). In all cases, firms primarily responded to exogenous technological changes and adopted more efficient organizational techniques.

Technological change certainly played a role in vertical dis-integration. But the differential legal and regulatory treatment of activities taking place inside vs. outside the formal boundaries of the firm also contributed to the shift to dis-integrated organizational structures. While the economic boundaries of the firm correspond to

the extent of centrally planned and hierarchically coordinated production, the legal boundaries are set in politically contested legislatures and courts. Exploiting or creating mismatches between the two has enabled corporations to enjoy the economic benefits of vertical integration while avoiding many of the legal risks and costs. Franchising is a large and important type of vertical dis-integration. The three chapters of this dissertation examine the historical process by which franchising was created, the advantages franchisors achieved by innovating this new business form, and the consequences for workers and other stakeholders.



# CHAPTER 1

## CONTROL WITHOUT RESPONSIBILITY: THE LEGAL CREATION OF FRANCHISING 1960-1980

The first capitalist firms to reach large size in the late nineteenth and early twentieth century did so through the mechanism of vertical integration—formal ownership of assets and employment of workers. In the 1950s a group of entrepreneurs, concentrated especially in the emerging industry of fast food, pioneered a different route to bigness. This new path deployed highly restrictive franchise contracts rather than formal property ownership and employment relationships to bind subordinate units into coherent, centrally controlled business organizations. Under franchise contracts, a large franchisor like McDonald’s, rather than owning and operating its retail business operations, licensed legally independent franchisees to do so. Franchisees typically paid a percentage of their sales to the franchisor and signed long-term contracts that gave franchisors substantial control of unit operations.<sup>1</sup> In 2012, the most recent year for which data are available, franchising firms accounted for 7.9 million jobs in the United States, compared to 13.4 million jobs in manufacturing. Franchisors accounted for more than 450,000 establishments, 10.45 percent of all establishments. Sales of franchised chains were about 1.3 trillion dollars in 2007, or 9.2 percent of total U.S. GDP (Kosová and Lafontaine 2012).

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<sup>1</sup>The term “franchising” is sometimes also used to refer to exclusive dealing relationships between manufacturers and distributors. In this paper I use “product distribution franchising” to refer to this kind of exclusive dealing arrangement, and “business format franchising” to refer to the type of franchising where a franchisor licenses a franchisee to operate a business concept under a trademark. Since business format franchising is the focus of this dissertation, the term “franchising” when used alone refers to business format franchising.

The economic history and business history literature on franchising is surprisingly thin.<sup>2</sup> This chapter begins to deepen that history by delving into the concrete struggles franchisors undertook to establish their unique business form. On one hand, franchisors fought against broad antitrust prohibitions on vertical restraints—controls on legally separate firms like price, supplier and customer restrictions. Their eventual victory on this front allowed them to follow an alternative path to giant size different from that pursued by the vertically integrated firms of the nineteenth and early twentieth century. On the other hand, they persuaded courts and a wide range of regulators that, despite tight control exercised through vertical restraints, franchised chains should not be considered single organizations under labor, tax and other laws. Rather, franchised chains should be understood under these laws as loose constellations of dozens, hundreds or thousands of legally separate organizations, with the central franchisor not ultimately responsible or liable for activity at any of the individual branches.

Franchising thus in a sense redefined the legal boundaries of the firm. What did franchisees gain by pulling in the legal boundaries of the firm? As Nelson Lichtenstein (2017) has argued, twentieth-century policymakers created the regulatory law holding firms accountable for the activity they oversaw and controlled with the archetype of the large vertically integrated firm in mind. This meant that they tied legal responsibility and accountability to the formal characteristics of vertical integration: the ownership of assets and employment of workers. While Progressive and New Deal-era regulation worked reasonably well for as long as the relevant economic activity took

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<sup>2</sup>Several profiles of successful franchisors have been published, including Love (1995) and Shook and Shook (1993). Luxenberg (1986) is a (highly critical) journalistic account of the history of franchising. However, Dicke (1992) is to my knowledge the only scholarly history of this business form. Through case studies of five firms from 1840 to 1980, he explores the business form's history by a comparative analysis of the challenges faced by representative franchisors in five industries. Blair and Lafontaine (2010) provide a good overview of the main legal and economic issues involved in franchising.

place within the legal boundaries of such firms, subsequent vertical dis-integration undermined the ability of the public to subject corporations to social control. For example, vertical dis-integration created what David Weil (2014) has called “fissured workplaces,” in which the legal boundaries of the firm acted as barriers excluding workers outside it from gaining access to higher wages paid by large firms, internal career ladders, and legal protections (whose coverage remains largely limited to the firm in which the worker has formal employee status). Tomaskovic-Devey (2014) similarly argues that vertical dis-integration contributes to inequality by excluding workers from “organizational citizenship” and the ability to make claims on the resources of the firm.

In litigating and lobbying to pull in the legal boundaries of the firm, franchisors pursuing vertical dis-integration ironically followed in the footsteps of the nineteenth-century manufacturers that created the first vertically integrated large industrial firms. Most economic studies of vertical integration, dis-integration and franchising emphasize technological changes or efficiency considerations as driving changes in vertical industrial organization (Williamson 1985; Lamoreaux et al. 2003; Blair and Lafontaine 2010). However, far from merely responding to technological changes making mass production possible, the first vertically integrated large manufacturing firms actually created, through lobbying and litigation, the very national U.S. market that made it profitable for them to invest in those mass-production technologies in the first place (McCurdy 1978). Similarly, twentieth-century franchisors, with help from increasingly sympathetic antitrust policymakers, the dynamic Law and Economics movement, and somnolent labor law, used lobbying and litigation to transform an innovative legal structure of fragile legality into an accepted staple of American business.

Franchising allowed firms to escape the legal and regulatory costs and risks that constrained vertically integrated corporations of the earlier era, and many contempo-

rary observers therefore felt that franchisors were unfairly avoiding the law. Donald Conley, the first franchising vice president for McDonald's, who left that position to become a franchisee, testified that "the franchise relationship is so sophisticated that it is not presently regulated by any traditional state or federal law, and has basically become a vehicle for getting around traditional law" (Committee on Commerce 1976, 390-391). Franchisors had to persuade regulators, legislators, and courts that their business form was new, unique and valuable, and should not be regulated according to existing conceptions of legal relationships.

Franchisors relied on their trade association, the International Franchise Association (IFA), as their main public voice and lobbying vehicle. It has remained the official voice of franchisors from its founding in 1960, as franchisors have grown into some of the largest corporations in the United States. The IFA is the only consistent presence across the two decades of public hearings, litigation, and legislative action over the years 1960-1980. While opponents of the IFA, in particular the various short-lived franchisee associations, appear in the public record one year and disappear the next, the IFA is still active today. Its activities have included lobbying, filing amicus briefs, engaging in public relations, mobilizing its members to lobby state and federal legislators and agencies and, starting in 1978, becoming one of the early business associations founding a Political Action Committee (PAC). As one journalist reported, "the IFA in its own limited area is an unchallenged force" (Luxenberg 1986, 243).

## **1.1 Vertical restraints: an alternative route to bigness**

According to a study commissioned by the Small Business Administration in 1963, "[t]he legal status of franchising is the dominant problem affecting the future of this method of distribution" (Lewis and Hancock 1963, 72). To put it bluntly, franchising as we know it in 2018 was not legal in the 1960s. The history of the creation of

franchising is in large part the story of the loosening of antitrust restrictions on what are known as *vertical restraints*. These contractual controls on independent franchisees, such as price, supplier, and customer restrictions, were the mechanisms franchisors relied on to create the uniform chain-store appearance of their far-flung operations in the absence of formal vertical integration. Without vertical restraints, franchisors would have been forced to directly own and operate outlets to achieve similar levels of chain store uniformity.

In important ways, however, franchising represented an alternative path to centralized vertical control rather than true vertical dis-integration,. Franchising firms like Burger King sought to tightly control their production networks, setting prices, products, suppliers, menus, recipes and hours of operation, dictating everything from the process for making french fries to the manner in which employees greeted customers. They aimed to achieve this, however, without taking title to productive assets or employing workers. As Earl Pollock, a former Antitrust Division attorney and then-Chairman of antitrust programs for the American Bar Association, put it in 1973, “integration by contract is a substitute for integration by ownership” (International Franchise Association 1973, 49). From this perspective, *franchising was vertical integration by other means*.

The minute control franchisors sought to impose on franchisees could be intense. As Ray Kroc, the founder of franchisor *par excellence* McDonald’s, put it, “the only way we can positively know that these units are doing what they are supposed to do ... is to give them no alternative whatsoever. You can’t give them an inch” (Love 1995, 144). To enforce this control, franchisors required franchisees to follow detailed operations manuals incorporated into the franchise contract. These manuals often left little to franchisee discretion. As one bemused regulator complained to an IFA audience in 1976, a certain Mexican food chain’s operations manual opened with the

three lines, “Put the key in the door,” “Open the door,” and “Turn on the light” (International Franchise Association 1976, 3).

Franchisors, however, soon faced a problem in replacing property and employment with contract as a means of vertical integration. While traditionally antitrust laws allowed centralized control and coordination *within* firms, they prohibited many types of control and coordination *between* firms, including vertical price-fixing and other vertical restraints.<sup>3</sup> In particular, many antitrust policymakers believed antitrust laws should protect the independence of small business from domination and control by larger firms through vertical restraints. For example, when Monte Pendleton, President of the IFA, argued in 1965 before the Senate Subcommittee on Antitrust and Monopoly that franchisors should have the *same* ability to impose constraints through contract that vertically integrated corporations could impose through administrative fiat, Jerry Cohen, Chief Counsel to the Subcommittee, was incredulous:

Then what would be the difference between a franchise operation and an integrated corporation? The argument we get here for franchising is that it allows an independent businessman to be independent. But if he is told what product he has to buy, what prices he has to charge, what operation he has to operate in, then he is no longer independent is he? He is part of an integrated franchisor’s operation (Subcommittee on Antitrust and Monopoly 1965, 55).

Cohen, articulating a widely held antitrust principle of the time, felt that franchisors violated the antitrust laws when they constrained the independence of smaller firms through vertical restraints.

Throughout the 1960s and 1970s, antitrust policy moved away from the goal of preserving the independence of small business and towards a consumer welfare standard focused narrowly on maintaining low consumer prices. Economists replaced lawyers as top staffers in the Antitrust Division of the Department of Justice and the

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<sup>3</sup>The function of antitrust law in “allocating economic coordination rights” is developed in much greater detail in Paul (2019).

Federal Trade Commission in the 1960s, bringing with them a focus on prices rising above marginal cost as the chief evil of monopoly (Eisner 1991). Meanwhile, the Law and Economics movement, which applied anti-regulation University of Chicago economic theories to law, grew increasingly influential within the judiciary. According to Law and Economics doctrines, the proper role of law, especially antitrust law, was to promote economic efficiency rather than social goals like restraining corporate power (Posner 1973). Law and Economics antitrust theory was especially helpful to franchisors by providing scholarly ammunition for their arguments about vertical contracts, which Law and Economics scholars like Bork (1978) argued should be presumed efficient because firms would not adopt them if they were not. In particular, franchisors (Subcommittee on Antitrust and Monopoly 1965, written submission of IFA President Monte Pendelton, 456-458) and Law and Economics (Bork 1966) both argued that vertical restraints, including price-fixing contracts, promoted efficiency by enhancing competition *between* brands even if it hampered competition between franchisees *within* brands.

However, franchisees, many of whom had been lured to franchising by the promise of independent business ownership, often rebelled against vertical restraints. Franchisee frustration with franchisor controls ultimately fueled litigation, in which the courts judged the various vertical restraints in terms of their compliance with antitrust laws. The courts struggled to come to terms with franchising in its initial two decades. In the *White Motor* case in 1963, the Supreme Court said it did not have enough information about franchising to issue a blanket rule on the legality of non-price vertical restraints. This ruling initiated a period of confusing and sometimes conflicting judicial rulings.<sup>4</sup>

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<sup>4</sup>*White Motor Co. v. United States*, 372 U.S. 253 (1963).

Judicial rulings over vertical restraints reflected a deep divide in legal thinking about antitrust that ran all the way back to the debates over the passage of the Sherman Act itself. Was its goal keeping consumer prices low (the “consumer welfare standard”), as staff economists at the Antitrust Division and FTC, as well as University of Chicago Law and Economics scholars, argued? Or was it meant to restrain the power of big business, including protecting the independence of small business from control by larger corporations, as the antitrust tradition associated with Louis Brandeis held? In the early years of franchising this divide had not yet been resolved in favor of the consumer welfare standard. At the beginning of the first Congressional hearings addressing the new business form, Senator Philip Hart declared, “About the only area of agreement is that there is disagreement about how the antitrust laws should be applied in this area” (Subcommittee on Antitrust and Monopoly 1965, 2). It would take two decades for franchisors to comfortably establish the legality of their business form under antitrust law.

The courts initially applied antitrust law to franchising in a confused manner, exemplified by the bombshell U.S. Supreme Court decision in *United States v. Arnold, Schwinn & Co* in 1967.<sup>5</sup> *Schwinn* struck down vertical restraints in bicycle manufacturer Schwinn’s contracts with its franchisees that barred franchisees from selling Schwinn bicycles outside their assigned territories. The Court ruled that such vertical restraints were *per se* violations of Section 1 of the Sherman Act, meaning that such contract terms were always illegal no matter the circumstances, and courts would not even listen to evidence justifying them on a case-by-case basis. Nothing dominated the International Franchise Association’s annual legal meeting agendas from that date through the 1970s as much as the fallout from *Schwinn* and the IFA’s strat-

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<sup>5</sup>*United States v. Arnold, Schwinn & Co.*, 388 U.S. 365 (1967).



egy to overturn it. *Schwinn* struck at the heart of franchising by refusing to grant broad antitrust approval to franchisor vertical restraints on franchisees.<sup>6</sup>

The ruling put franchising on uncertain legal ground. Over the course of ten years following the *Schwinn* decision, franchisors agonized over whether and how *Schwinn* might apply to them. The Supreme Court created confusion by grounding its decision in the fact that Schwinn franchisees took title to the bicycles, and thereby as the owner had the right to dispose of them free from franchisor vertical interference. According to a narrow interpretation of the majority opinion, the *per se* rule in *Schwinn* only applied to cases where franchisees took title to the franchisor's goods, and did not apply to business format franchisors like Burger King or Jiffy Lube that provided services under a licensed trademark.

The Federal Trade Commission's Ad Hoc Committee on Franchising concluded that the reasoning of *Schwinn* probably did not apply to service or business format franchisors (Ad Hoc Committee on Franchising 1969). However, others warned that *Schwinn* was the first step in a movement by the courts to protect small business franchisees from large franchisors. Robert Grossman, Chief of Evaluation for the Antitrust Division, warned that the Court "left little doubt as to its desire to preserve the business prerogatives of independent distributors," and was likely to rule against franchisors in future business format franchising cases (International Franchise Association 1970, 73). During this era of antitrust jurisprudence, before the consumer welfare standard and the Law and Economics movement attained ascendancy, the idea of a large corporation controlling and dominating a smaller company still evoked the whiff of antitrust violations. As IFA Chairman Jerrold Van Cise lamented, "Easier for a camel to go through the eye of a needle than for a fat franchisor to comply with

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<sup>6</sup>Price restraints will be addressed in more detail below. Maximum vertical price restraints were *per se* illegal from 1968 to 1997. Minimum vertical price restraints were *per se* illegal from 1911 to 2007.

the antitrust laws when he seeks to control the franchisee” (International Franchise Association 1968, 25).

Some types of vertical restraints attracted virtually no legal scrutiny. Minimum hours requirements were rarely challenged, and when they did, franchisors won soundly.<sup>7</sup> Vertical restraints upholding quality standards such as sales quotas and controls over service standards, layout and design, and advertising also attracted little antitrust scrutiny (International Franchise Association 1970, 11). For other types of vertical restraints, franchisees pursued innovative strategies in devising workarounds to adverse antitrust rulings, such as partial vertical integration (operating company-owned shops in competition with franchisee-owned locations), franchisor advertising of prices, or using the threat of termination or nonrenewal against franchisees who did not comply with “suggested” prices, products, and so on (Subcommittee on Minority Small Business Enterprise and Franchising 1973, 96; Committee on Commerce 1976, 26-28). For example, when *Siegel v. Chicken Delight* prohibited forcing franchisees to buy inputs from the franchisor as a condition of using the franchise trademark, franchisors largely stopped requiring mandatory purchases. Instead, they adopted lists of “approved suppliers” and quality standards, and earned income from franchisees by charging them royalties rather than selling them inputs.<sup>8</sup>

In other instances, franchising firms engaged in litigation to change the courts’ interpretation of the laws. In key cases the IFA’s lawyers represented franchisors, and the IFA itself filed *amici* briefs in support of franchisors, beginning with *Susser v. Carvel* in 1965.<sup>9</sup> Franchisors benefited from the lack of an organized opposition:

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<sup>7</sup>For example, *Gordon v. Crown Central Petroleum Corp.*, 423 F. Supp. 58 (N.D. Ga. 1976).

<sup>8</sup>*Siegel v. Chicken Delight, Inc.*, 311 F. Supp. 847 (N.D. Cal. 1970).

<sup>9</sup>*Susser v. Carvel Corp.*, 381 U.S. 125 (1965). Others include *Nichols v. Arthur Murray, Inc.*, CA Court of Appeals Civ. 8198 (1967), *Ungar v. Dunkin Donuts* 531 F.2d 1211, Court of Appeals, 3rd Circuit (1976), *Siegel v. Chicken Delight* 448 F.2d 43, Court of Appeals, 9th Circuit (1971), *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977).

in most cases, only the IFA and industry-specific franchisor trade associations filed briefs.

Supplier restrictions, in particular, faced difficult challenges under antitrust law. For franchisors, maintaining uniform appearance and quality equivalent to that found in an integrated chain was essential. However, a major obstacle was antitrust law’s prohibition against tying—requiring a buyer to buy a second, undesired item as a condition of buying a first, desired item. Early court decisions found that the trademark license was a separate product from the other inputs to a franchise, and could therefore be considered a tying item under antitrust law. This opened up franchisors to challenges from franchisees who did not want to buy other inputs or lease real estate from franchisors, or from suppliers designated by franchisors.<sup>10</sup> At the extreme, an FTC Bureau of Competition staffer warned IFA members against exclusive deals with name-brand catsup and soft drink providers, asking, “[is there] a substantial difference in quality catsups between Heinz, Hunts, and Ritters?” (International Franchise Association 1971, 114-115). Today we take our inability to get a Pepsi at McDonald’s or a Coke at Taco Bell for granted, but at least some in the FTC questioned the legality of such vertical restraints in the early years of franchising. Franchisor attorney Harvey Applebaum noted four years later, “Virtually every major national, and sometimes even local, fast food or ‘business package’ franchisor is presently or recently has been under some form of antitrust treble damage attack with respect to required purchases of products” (International Franchise Association 1975, 64). In 1975 the Federal Trade Commission required seventy-five fast food franchisors to answer a questionnaire pertaining to whether they required franchisees to purchase

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<sup>10</sup>*Siegel v. Chicken Delight, FTC v Brown Shoe Co., Inc.*, 384 U.S. 316 (1966); *Perma Life Mufflers v. Int’l Parts Corp.*, 392 U.S. 134 (1968); *Chock Full O’Nuts Corp.*, FTC Docket No. 8884 (1973).

products or services from designated suppliers, and to justify any such requirements (Federal Trade Commission 1975, 12).

Thus, in the mid-1970s franchisors were not certain whether the logic of *Schwinn* would be pushed further into business format franchising. Would they be able to impose sufficient control on franchisees to project a chain store image and achieve vertical integration by contract, or would the regulators and courts block their efforts in order to preserve the independence of franchisees? Until the mid-1970s, franchisors felt the momentum of judicial reasoning was against them and moving in the direction of “expanding the applicability of the *Schwinn* doctrine” (Zeidman 1976, 11).

The fortunes of franchisors took a decisively positive turn, however, with the outcome of the *Sylvania* case. GTE Sylvania, a product distribution franchisor, restricted the geographical areas in which its franchised distributors could sell its products. Its franchisees sued, and the case made its way to the Supreme Court. While considered a watershed in antitrust jurisprudence today, only the IFA and two industry-specific franchisor groups filed *amici* briefs. The Court, in language very similar to that in the IFA’s amicus brief, overturned *Schwinn*.<sup>11</sup> The decision all but terminated any uncertainty surrounding non-price vertical restraints, ending a decade of confusion as to the legality of a key pillar of the franchising business form. Zeidman celebrated the importance of the case for business format franchisors:

For those operating service franchises or business format franchises, the haunting question of the applicability of *Schwinn* in the absence of a sale and resale context ... has now presumably been rendered academic (Zeidman 1977, 15-16).

Zeidman was not exaggerating when he beamed of *Sylvania*, “With that holding, one era of franchise litigation comes to an end” (ibid., 11).

While the time period of the analysis in this chapter ends in 1980, it is worth noting that the permissive logic of *Sylvania* with respect to vertical restraints did not

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<sup>11</sup> *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977).

end with that case. Eventually the courts extended their blessing even to vertical *price* restraints. With *State Oil Co. v. Khan*, the Supreme Court found that maximum vertical price restraints could be pro-competitive, since they kept consumer prices low.<sup>12</sup> Finally, the the Supreme Court in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.* overturned the 96-year old *per se* prohibition on minimum vertical price restraints.<sup>13</sup> There is no more fundamental business decision than what price to charge. Post-*Leegin*, franchisors were free to control even this aspect of their “independent” franchisees’ operations.

## 1.2 The benefits of vertical separation

At the same time that franchisors sought to achieve centralized economic control through vertical restraints, they also lobbied and litigated to escape the consequences of that economic control. They sought to convince government agencies and courts that economic control through contracts should not entail the same kinds of legal responsibilities that control through ownership traditionally entailed, especially responsibilities to workers under employment law. In seeking economic control without legal responsibilities, franchisors sought to pull in the legal boundaries of the firm, taking advantage of the differential legal and regulatory treatment of activities occurring inside vs. outside the legal boundaries of the firm.

Thus while franchisors fought to expand the economic control of franchised organizations through legalization of vertical restraints, they also sought to establish franchisees’ legal status as independent contractors outside the firm. Franchisors’ first success in this arena came when the Small Business Administration (SBA) changed its definition of “small businesses” eligible for SBA assistance to include franchisees.

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<sup>12</sup>*State Oil Co. v. Khan*, 522 U.S. 3 (1997).

<sup>13</sup>*Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

Prior to the 1966 rule change, the SBA considered franchisees, due to vertical controls, to be part of franchisor organizations and not independent businesses at all.<sup>14</sup> As SBA Administrator Eugene P. Foley testified in 1965, any requirement that a small business person “conduct his business in strict conformity with an operating manual issued by the franchisor,” or establishment by the franchisor of “standards of quality, service, protection and advertising” rendered the franchisee ineligible (Subcommittee on Antitrust and Monopoly 1965, 9-10). According to Foley, “the major decision for the Small Business Administration is this: Are we financing the distribution outlets of large businesses or are we financing independent small businesses as the Congress intended us to?” (ibid., 19).

Shortly after Foley’s testimony, the SBA decided to revisit the issue of franchising. In early 1966, the SBA invited academics and businesspeople to present information and opinions on whether the SBA should change its definition of small business to include franchisees. The IFA advised the SBA on whom to invite. The IFA’s General Counsel, President, and Chairman all received invitations to attend.<sup>15</sup> Very few, if any, franchisees participated, however. As then-SBA General Counsel Philip F. Zeidman wrote to the SBA Administrator, “It must be conceded that the hearing was inadequate in that most of those participating were either franchisors or associations representing franchisors.”<sup>16</sup>

Zeidman recommended that the agency completely abandon any consideration of franchisor control in approving SBA loans. The SBA followed his advice. The new

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<sup>14</sup>Small Business Size Standards, 13 C. F. R. § 121 (1965). Reproduced in Subcommittee on Antitrust and Monopoly (1965, 382-392).

<sup>15</sup>Small Business Administration Archive. Record Group 309, National Archives Building, College Park, MD [hereafter SBA Archive]. Administrative Subject Files 1953-1972, Box 290, File 18 FY 66.

<sup>16</sup>Action Memorandum for the Administrator, Subject: Hearing on Franchisee Size Standards, Philip F. Zeidman to Bernard L. Boutin, July 1, 1966, p. 9. SBA Archive: Administrative Subject Files 1953-1972, Box 290, File 18 FY 66.

standard for independence under the Small Business Act would be that the franchisee had the “right to profit” from effort and bore the “risk of loss or failure,” regardless of the level of control of its business by a larger firm. The rule change opened up an important new source of financing to franchisors that remains important to this day: in 2014, forty-three percent of first-time franchisees obtained financing from SBA loans (Johnson 2015). The SBA rule change was also the first federal response to the uncertainty released by *White Motor*, and an early ruling in favor of a more permissive approach to franchising. Henceforth, for purposes of receiving SBA financing, franchisees would be considered legally separate businesses, despite the control exerted by franchisors. The SBA went from skepticism of big business controlling small business through franchise agreements to being the advocate for franchising it remains to this day, as foreshadowed by Zeidman’s note to SBA Administrator Boutin that “SBA will endeavor to influence the shaping of antitrust enforcement policy with respect to franchising as well as otherwise into directions legitimately and appropriately beneficial to small business concerns.”<sup>17</sup> Zeidman went on to serve as Washington Counsel to the IFA from 1970 to 2016.

Throughout this period, franchisors also expressed intense anxiety that their control over franchisee operations might create a legal employment relationship between themselves and their franchisees, or between themselves and their franchisees’ employees. While franchisors sought to create an alternative path to large size other than traditional vertical integration by imposing vertical restrictions on franchisees, they desperately wanted to keep franchisees and franchised employees outside the legal boundaries of the firm under employment law. At the 1971 IFA Legal and Government Affairs Symposium, for example, IFA attorney Jerome Fels chastised McDonald’s for

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<sup>17</sup>Action Memorandum for the Administrator, Subject: Hearing on Franchisee Size Standards, Philip F. Zeidman to Bernard L. Boutin, Administrator, July 1, 1966, p. 5. SBA Archive: Administrative Subject Files 1953-1972, Box 290, File 18 FY 66.

accepting the legal standard of employer/employee relationships in litigation of a post-termination covenant not to compete,<sup>18</sup> warning that “[a]ccepting any theory that the franchisor/franchisee relationship is an employment relationship or similar to it might have some unfortunate consequences” (International Franchise Association 1971, 85). Those “unfortunate consequences” were that workers at franchised establishments would have legal rights against franchisors. Of particular concern was the possibility that workers could unionize and gain the right to bargain directly with the *franchisor*, not just the franchisee that formally employed them, under the “joint employer” doctrine. As a law professor invited to the IFA’s 1972 legal symposium explained,

If the [National Labor Relations] Board does not assert jurisdiction, those employees do not have the protection of the National Labor Relations Act. They can be fired for union activity, and ... the employees have few legal rights with respect to union organizing. So it is in the immediate interest of the McDonald [sic] Corporation to assert that the franchisee is the sole employer of those employees (International Franchise Association 1972, 41).

IFA General Counsel Harry L. Rudnick sounded the alarm in 1967 after the National Labor Relations Board ruled that a Mister Softee franchisee’s truck drivers were employees rather than independent contractors under the definition of the National Labor Relations Act. The Board ruled that while formally the drivers’ contracts were those of independent contractors and not wage workers, the substance of the controls enforced by the franchisor and franchisee removed them from independent contractor status and put them under the jurisdiction of the National Labor Relations Act as employees. The relevant test, according to the Board, was a “right of control” test: who controlled the means and manner by which the output was generated?<sup>19</sup> While

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<sup>18</sup>*McDonalds v. Sandys*, 45 Ill. App. 2d 57 (1963).

<sup>19</sup>*Mister Softee Inc. and Curb Service of Indianapolis, Inc. and Oil, Chemical and Atomic Workers International Union, AFL-CIO*, 162 NLRB 22 (1966).



the ruling did not challenge the franchise relationship itself, focusing only on the relationship of ice cream truck drivers to a franchisee, Rudnick warned that “It is not difficult to project the application of this line of analysis and reasoning to a great many franchise systems” (Rudnick 1967a, 29).

Franchisors must have breathed a sigh of relief, then, when two years later the NLRB refused to use franchisor control over franchisees as a reason to expand its jurisdiction to franchising relationships. In *Southland Corporation v. Retail Store Employees Union*, the Board ruled that Southland, the franchisor of 7-11 stores, was not the joint employer of a franchisee’s employees, because the franchisor did not *directly* control the labor relations of the franchised store. According to the Board, “We have long held that the critical factor in determining whether a joint employer relationship exists is the control which one party exercises over the labor relations policy of the other.”<sup>20</sup> If franchisors avoided interfering directly in the labor relations of franchisees, such as by telling them whom to hire and fire or setting shift schedules, they would avoid triggering NLRB jurisdiction, even if they indirectly controlled labor conditions by controlling the work process, equipment used, hours of operation, franchisee prices, and countless other aspects of the business through contractual restraints.

Franchisors’ concerns with the Fair Labor Standards Act (FLSA), which regulates minimum wages and overtime, echoed their anxieties about the National Labor Relations Act. In a 1978 article in the *IFA Current Legal Digest*, Lewis Rudnick and John Dickens, citing a recent Department of Labor interpretive bulletin, highlighted the risk that the Wage and Hour Division of the Department of Labor would find franchisors to be joint employers under the FLSA, making them liable for wage and hour and overtime violations at franchised establishments (Rudnick and Dickens 1978).

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<sup>20</sup>*Southland Corporation v. Retail Store Employees Union, Local 428*, 170 NLRB 159 (1968).

As it happened, the courts ultimately defined the meaning of “employer” narrowly in interpreting the FLSA, relying on a physical control test similar to that of the NLRB (Power 2016).

In retrospect, franchisor fears seem misplaced, since the NLRB and Department of Labor would stick to the “right to control” test and refuse to consider the indirect ways in which one firm could control the labor relations of another firm by controlling production processes and other aspects of the firm’s operations that determine labor relations. But for franchisors in the 1960s and 1970s, fighting to establish their organizational form as a relationship of vertical integration for antitrust purposes and independent contracting under employment, tax, and other law, franchising’s legal status did not feel secure just yet.

Franchisors were also apprehensive about courts and regulators finding franchisees to be inside the boundaries of the firm under other legal regimes. A major concern was that courts would find franchisors liable for the actions of franchisees under principal-agent law, under which courts could rule that the franchisor’s control over the franchisee meant that the franchisee was legally acting on behalf of the franchisor. In that case the franchisor would be responsible for the franchisee’s actions undertaken on its behalf. As Lewis Rudnick cautioned in 1967, “[t]he courts will not unlikely say that the franchisor has guided and controlled its franchisee to the extent necessary to make him the franchisor’s agent” (Rudnick 1967b, 255-256).

Throughout the 1970s, the IFA fought back attempts by state legislatures to tie franchisors to franchisees under a variety of laws. After intense lobbying from the IFA, New Jersey in 1976 restricted an indemnification and warranty bill holding franchisors responsible for actions taking place within their chains to the automobile industry, excluding business format franchisees from its jurisdiction (Zwisler 1976). In 1978 the IFA lobbied against attempts in two states to include franchised chains under chain store tax regimes (International Franchise Association 1978, 81). That year also saw

Arizona and Massachusetts consider laws to impose joint tort liability on franchisors by statute. IFA persuaded the Arizona Senator who introduced the law to withdraw it, and the Massachusetts legislature rejected a similar bill (*ibid.*, 83).

### **1.3 Fighting off alternative regulations**

Robert Pitofsky, then-Director of the Federal Trade Commission's Bureau of Consumer Protection, grappled with the danger of franchising falling into an unregulated gap between antitrust and labor law in 1972:

If the relationship is viewed as one between independent businessmen or businesses ... then it makes sense to apply the public policies of the antitrust laws, with the prime objective of preserving the franchise as an independent competitive unit. ... On the other hand, one may view the relationship as essentially characterized by vastly unequal bargaining power and access, in which the franchise is ... virtually indistinguishable from the position of employees or agents. Given this view, it makes sense to apply the public policies of the National Labor laws (International Franchise Association 1972, 3).

Pitofsky was uneasy with franchisors' attempt to create a new kind of status, franchisee, that was neither a truly independent competitor protected by antitrust laws, nor an employee protected by labor laws.

As franchisors succeeded in avoiding regulation of franchising under either antitrust or employment law doctrines, federal and state lawmakers stepped into the breach to propose regulations to control this new business form, which had escaped the grasp of traditional doctrines. Their main concern was the gross power imbalance between the parties. Franchisees were small businesses who signed restrictive, one-sided contracts offered on a take-it-or-leave-it basis from franchisors who were often large corporations. Indentured servitude and feudal metaphors abounded: franchising, for example, was "feudal in concept—the lord and the serf" according to a Senate Antitrust Subcommittee lawyer (International Franchise Association 1973, 60). As Timothy H. Fine, General Counsel of the National Franchisee Association Coalition

put it, “if franchisees are to be more than branch managers taking orders from a parent corporation, such power must be curbed” (Subcommittee on Consumer Protection and Finance 1976, 189).

Laws that equalized bargaining power by prohibiting certain onerous contract terms soon emerged as an alternative to both labor law and the regulation of vertical restraints as a means of regulating franchising. Franchisees advocated laws that regulated the substance of the franchise relationship itself, in particular termination and non-renewal clauses. The IFA strongly opposed these efforts, and sought to channel franchise regulatory efforts into laws regulating the sale of franchises, particularly favoring pre-contract disclosure laws (International Franchise Association 1967). The first skirmish was fought over the Franchise Competitive Practices Act, introduced in 1967 by Senator Philip Hart, Chair of the Subcommittee on Antitrust and Monopoly, to regulate termination and nonrenewal of franchises. A revised version of Hart’s bill introduced in 1969 prohibited terminations and failures to renew without cause. The bill did not pass, and the IFA took credit for killing it (International Franchise Association 1972, 88). Franchising bills continued to be introduced in subsequent years, with Representative Abner Mikva’s Franchising Practices Reform Act in 1976 garnering an “an almost unheard of” 109 co-sponsors, according to Zeidman (International Franchise Association 1976, 9). Ultimately, however, like the Hart Bill, Mikva’s legislation came to nothing.

Franchise relationship laws were also introduced in a number of state legislatures in the early 1970s, and the IFA played an extremely active role in lobbying and shaping state legislation, with considerable success. As of 2004, only eighteen states had relationship laws. Of these, most did not regulate the franchisor’s right to terminate contracts, requiring only advance notice of termination. Only eight states (Arkansas, Hawaii, Illinois, Iowa, Michigan, Minnesota, Washington, and Wisconsin) required

that franchisors give franchisees an opportunity to cure defaults before terminating a franchisee (Barkoff and Seldern 2004, 325).

From the franchisor’s perspective, all this talk of unequal bargaining power was completely beside the point. Philip Zeidman declared during one hearing, “In fact, all men are not equal, nor does anything in our law or our history require that they be so” (Committee on Commerce 1976, 189). The IFA sought to keep franchising firmly within the domain of contract law, where “buyer beware” governed agreements between consenting parties, no matter the balance of power between them. The IFA accordingly pushed pre-contract disclosure rather than post-contract regulation as the remedy for the alleged abuses in franchising. It argued that as long as franchisees were warned beforehand about the contents of the contract they signed, there could be no complaint afterward about the unfairness of any contract term. The IFA drafted model disclosure legislation and worked closely with lawmakers to introduce and pass it around the country. The IFA also urged the FTC to adopt a disclosure approach when the agency announced its intention to regulate franchising in 1971. In 1970, Lew Rudnick declared the IFA-developed California Franchise Investment Law to be the IFAs “model act,” and optimistically predicted that in ten years federal legislation along the lines of that law would be enacted (International Franchise Association 1970, 115). He was almost right—but it would be a Federal Trade Commission regulation, not a federal statute, that applied the principles of the California law to the whole country.

While the FTC discussed, but never aggressively pursued, taking action against dominant franchisors under its Section 5 authority to prohibit unfair methods of competition, it ultimately took the path favored by the IFA and implemented a disclosure rule. The IFA’s allies in advocating for this approach included the Nixon

White House.<sup>21</sup> When the FTC announced its intention to promulgate a trade rule regulating franchising in 1971, the IFA was there from the beginning, lobbying the FTC to attack fraud and misrepresentation in franchise sales, but to leave the franchise relationship alone.<sup>22</sup> Disclosure regulation was favored by franchisors because it attacked the “fast buck artists” and frauds who gave franchising a bad name, while leaving the basic power imbalance at the heart of franchising unchallenged. Disclosure, moreover, actually protected franchisors in litigation with franchisees: after mandatory full disclosure, franchisees could no longer claim franchise contracts were adhesion contracts that they were forced to sign (International Franchise Association 1975, 2-3). A disclosure rule would thus sanctify franchise contracts as purely private, bilateral, arms-length transactions between equal parties in the marketplace, cementing franchisees’ status as outside the firm.

Franchisees, for their part, never supported and were dismayed by the FTC’s embrace of disclosure rather than regulation. Robert Purvin, franchisee lawyer and head of the American Association of Franchised Dealers, argued during the FTC’s 1995 review that the rule “has achieved a situation of legitimizing what I call systematic fraud.”<sup>23</sup> As franchisee attorney Harold Brown remarked, “with the adoption of this rule in 1979, the FTC has, for almost all practical purposes, withdrawn from the conduct regulation activity in which it previously was occupied.”<sup>24</sup> The FTC rule

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<sup>21</sup>Federal Trade Commission Public Records, request made by the author [hereafter FTC Public Records]. Folder 398394087, Document 04, Memo dated March 31, 1972 from the White House Director of Policy Analysis to FTC Bureau of Consumer Protection.

<sup>22</sup>FTC Public Records: Folder 398394088, Document 01, Statement on Behalf of International Franchise Association before the Federal Trade Commission Hearing on Proposed Trade Regulation Rule, 10 A.M., February 14, 1972, Presented by Philip F. Zeidman.

<sup>23</sup>FTC Public Records: Folder 296701583, Document 02, In the Matter of: Periodic Review of Franchise Rule, Docket No. P954402, Tuesday, September 12, 1995, Crown Sterling Suites 901-34th Ave, Bloomington, Minnesota, p. 16.

<sup>24</sup>FTC Public Records: Folder 296701583, Document 02, In the Matter of: Periodic Review of Franchise Rule, Docket No. P954402, Thursday, September 14, 1995, Crown Sterling Suites 901-34th Ave, Bloomington, Minnesota, p. 587

was finally enacted in 1979. With *Sylvania* and the FTC rule, franchisors ended the 1970s with their regulatory agenda largely achieved.

## 1.4 Conclusion

By 1980, franchisors had succeeded in establishing their organizational innovation under the law, giving them rights to coordination and control consistent with vertical integration without triggering the responsibilities, under employment and other laws, that traditionally accompanied integration. The Supreme Court gave franchisors the right to vertically integrate by contract, rather than direct ownership, through non-price vertical restraints. The FTC, meanwhile, abandoned any attempt to reduce the power imbalance between franchisees and franchisors, adopting the IFA's preferred policy of pre-contract disclosure rather than post-contract regulation. The IFA simultaneously beat back most attempts at the federal and state level to regulate the franchise relationship beyond disclosure requirements. Finally, employment and other laws that New Deal-era policy had used to socially control corporations did not adapt to changing legal forms and remained fixated on narrow, formalistic definitions of the boundaries of the firm.

This chapter has shown how the creation of franchising entailed a political and legal struggle to shrink the legal boundaries of the firm relative to its economic boundaries. Franchisors persuaded regulators, courts, and legislatures to allow them to pursue *de facto* vertical integration by contract (imposing vertical restraints such as customer and price restrictions on their franchisees), while simultaneously claiming benefits of vertical separation, such as eligibility for Small Business Administration assistance and avoidance of tax, labor, and other laws that would apply if franchisees were not legally separate entities. Franchisors transformed business practices that rested on shaky legal ground in the 1960s into legal components of a new business form.

## CHAPTER 2

### FRANCHISING AS POWER-BIASED ORGANIZATIONAL CHANGE

Recent groundbreaking research by Krueger and Ashenfelter (2017) has highlighted how franchise corporations like McDonald’s control labor costs at independent franchised establishments through the imposition of no-poaching agreements, which prohibit franchisees from hiring each other’s workers. Krueger and Ashenfelter argue that these agreements are a mechanism to facilitate franchisee monopsony power. After the publication of this research, some franchisors have started to cease including such agreements in franchise contracts (Johnson 2018). While eliminating these agreements removes a particularly egregious mechanism for restraining wages, this chapter argues that franchisor control over labor costs and working conditions at franchised establishments goes far beyond no-poaching agreements. Franchising, I argue, is a mechanism to extract effort from a low-wage workforce. It reduces expenditures on monitoring and efficiency wages, allowing the franchisor and franchisee to share the profits from extra effort. However, because franchisors are not the legal employers of production workers, franchisors escape legal responsibility for their terms and conditions of employment. The analysis of contractual provisions provided here shows that franchisors are, in a sense, co-employers who exercise *de facto* control over terms of employment. This organizational structure strengthens the bargaining power of employers over workers.



## 2.1 Efficiency theories of franchising

Under incomplete contracts with imperfect information, the principals who own franchised chains must pay the agents who manage each location a premium over their next-best alternative (their “fallback position”) to elicit their work effort. Agents paid a premium eschew shirking because if they do not exert the desired effort level they can be terminated, losing access to the premium. For this reason the premium is often called an “enforcement rent.” Efficiency and power are closely related in principal-agent models, and power can be exercised in ways that increase or decrease efficiency.

Principals offering enforcement rents have power over their agents because they have the ability to induce agents to act in ways that further their own interests, while agents lack this ability with respect to principals. By threatening to withdraw the enforcement rent, principals can induce agents to act in ways that further their own interests. This exercise of power is Pareto-improving: rather than pay the agent his or her reservation wage to work at his or her reservation effort level, the principal pays an enforcement rent, resulting in both higher profits for the principal and higher income for the agent (Bowles and Gintis 2007).

In these so-called efficiency wage models, principals not only must pay an enforcement rent, but also invest in monitoring to detect shirking. Pareto improvements are therefore still possible, since monitoring, unlike higher wages, has a social cost. Making the agents residual claimants on output solves the principal-agent problem by fully aligning their incentives with the principals, eliminating the need to monitor their effort and creating a Pareto improvement over even the wage premium-plus-monitoring alternative (Bowles 1985; Bowles and Gintis 1988; Shapiro and Stiglitz 1984). With royalty rates averaging only five percent of gross sales, franchise contracts in the fast food industry make franchisees virtually complete residual claimants on output.

Models of franchising emphasize these efficiency aspects of franchise contracts, focusing on how franchisor-principals incentivize franchisee-agents to provide high levels of effort (Mathewson and Winter 1985; Rubin 1978; Norton 1988a). Empirical support is provided by Lafontaine and Slade (1997), who show that the importance of the franchisee’s effort is positively related to the use of high-powered incentives in franchise contracts, and that high costs of monitoring are positively related to the use of franchised outlets relative to company-owned and -operated outlets.

However, the existence of externalities gives franchisees some power against franchisors through their ability to affect franchisor profitability through shirking. For example, franchisees can free-ride on the franchisor’s brand name. Franchisors therefore must invest in enforcement rents and monitoring to internalize these externalities, even though franchisees are residual claimants. Kaufmann and Lafontaine (1994) show that McDonald’s does indeed pay enforcement rents to its franchisees. Rather than extract the full value of the franchise, it leaves money on the table to induce effort. Moreover, McDonald’s specifically selects wealth-constrained franchisees who must depend on their franchise for their livelihoods, and thus have the most to lose from termination of the enforcement rent. Franchisors also invest in monitoring. They send “secret shoppers” to franchised establishments, and monitor franchisee cash registers and operations through real time “point of sale” systems. Moreover, as will be shown below, franchisors also supercharge the incentives of residual claimancy through investments in bargaining power.

We can model the franchisor-franchisee relationship according to the familiar efficiency wage model. Franchisor profits are represented by the equation:

$$\pi = s[y(ne(m, w, s; h)) - n(m + w)] \quad (1)$$

Franchisors share profits with franchisees.<sup>1</sup> In this model,  $s$  is the franchisor's share of profits (so  $1 - s$  is therefore the share left to franchisees). Revenues,  $y$ , are a function of the number of franchisees,  $n$ , and the effort of each franchise,  $e$ . I assume identical franchisees throughout this paper. Effort is in turn a function of the level of franchisor monitoring of franchisees,  $m$ , operating costs (including wages),  $w$ , the franchisor's profit share,  $s$  and the franchisee's exogenous fallback position,  $h$ .  $e_m > 0$  (increased monitoring increases franchisee effort),  $e_w < 0$  (higher costs lower franchisee returns to effort) and  $e_s < 0$  (franchisees have weaker incentives to exert effort when the franchisor's profit share is high). The cost side of the profit equation contains the number of outlets times the monitoring costs  $m$  and operating costs  $w$ .

Franchisors vary  $n$ ,  $m$ ,  $w$ , and  $s$  to maximize profits. Franchisor first order conditions are given by:

$$y' = \frac{m + w}{e} \quad (2.1)$$

$$\frac{e}{m + w} = e_m = e_w \quad (2.2)$$

$$\frac{e}{sy} = e_s \quad (2.3)$$

(2.1) states that the marginal product of franchisee effort equals the unit cost of effort. (2.2) states that the marginal effect of variations in the level of monitoring and operating costs equals the average level of effort per dollar of expenditures. (2.3) states that the marginal impact on effort of varying the franchisor's profit share equals the average level of effort per dollar in revenue. Profitability is increased when monitoring costs or operating costs fall. Because franchisors and franchisees share the profits of the franchise system, franchisors benefit from low franchise-level operating

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<sup>1</sup>In practice, most franchisors charge a royalty on revenues rather than profits, because profits are considered too easy for franchisees to manipulate. For analytical convenience, I have set up a profit-sharing rather than revenue-sharing model. In practice under a revenue-sharing contract franchisors and franchisees split the surplus from franchisee unit operations, so the profit-sharing model is apt.

costs, including low wages. Franchisor profitability's relationship to the profit share parameter is ambiguous: a higher franchisor profit share directly benefits franchisors, but at the cost of decreasing franchisee effort, which lowers the revenues available for sharing between franchisors and franchisees.

Franchisees, meanwhile, determine their effort levels by maximizing the objective function  $U$ ,

$$U = (1 - t(e))v(e) + t(e)h(a, \bar{y}, \lambda) \quad (3)$$

In this equation,  $t(e)$  represents the termination function, capturing the effect of effort on the probability of the franchisee being terminated and reverting to his or her fallback position. Greater effort reduces the likelihood of termination, so  $t' < 0$ . The function  $v(e)$  describes the value of the franchise to the franchisee.<sup>2</sup>

$v(e)$  is increasing and concave,  $v' > 0, v'' < 0$ , for two reasons. First, franchisee income (and, cumulatively, assets) are increasing in effort, but the franchisee experiences a declining marginal utility of income and wealth. Second, effort carries a disutility, and disutility increases at an accelerating rate at higher levels of effort. Note that unlike standard efficiency wage models, franchisee income is not a flat wage but varies with effort. Finally,  $h(a, \bar{y}, \lambda)$  represents the franchisee's fallback position, which is a function of the value of the franchisee's assets outside the franchise relationship,  $a$ , the franchisee's expected income outside the franchise relationship,  $\bar{y}$ , and the probability of finding income-generating activity outside the franchise relationship,  $\lambda$ . Franchisees vary effort to maximize utility, taking their fallback position as exogenous, giving the following first order condition:

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<sup>2</sup>A more explicit function for  $v$  is:

$$v = v\left(\frac{1-s}{n}\pi(e, m, w, s), d(e)\right) \quad (4)$$

Franchisee income,  $\frac{1-s}{n}\pi$  is the franchisee's share of profits, and  $d$  is the franchisee's disutility of effort.

$$v_e = t_e \frac{h - v}{1 - t} \quad (5)$$

That is, starting at a high level of effort, franchisees decrease effort until the marginal utility of effort (reflecting both increased income from effort and disutility of effort) just equals the marginal effect of decreasing effort on the expected value of the fallback position as weighted by the probability of termination. At this stage, the model shows that by internalizing externalities through monitoring and enforcement rents, and aligning incentives with franchisors through residual claimancy, franchise contracts raise franchisor profits through improvements in efficiency.

## 2.2 Franchising, labor discipline, and efficiency

Franchisors go beyond the efficiency-enhancing exercises of power described in the first section, however. They also make investments in bargaining power to reduce the fallback position of franchisees. By reducing the franchisee's fallback position, franchisors can induce franchisees to work harder, raising output and franchisor profits. The extra output is not a genuine productivity increase, because output has not increased per unit input. Rather, one input has been squeezed into producing additional output.

From equations (3) - (5) above, we see that franchisors can increase franchisee effort by decreasing the (exogenous to franchisees) franchisee fallback position,  $h(a, \bar{y}, \lambda)$ . By a reasonable assumption, the franchisee fallback position is increasing in franchisee assets  $a$  and expected income  $\bar{y}$  outside the franchise relationship, and also increasing in the probability of finding income-generating economy activity outside the franchise relationship  $\lambda$ . Interventions that reduce the fallback position shift the franchisee's effort function inward, which through the franchisor's first order conditions (2.1) - (2.3) increases franchisor profits. I discuss some of these interventions in detail in the next section.

Moreover, franchisees are a special kind of agent. They are not potentially shirking production workers who directly produce the output, as envisioned in classic efficiency-wage-type principal-agent models. Rather, *they are the monitors*. As Norton (1988b, 202) points out, this aspect of franchising makes labor intensity a key variable explaining which industries deploy franchise contracts. Since workers, not machines, have a propensity to shirk, franchise contracts only make sense in labor-intensive industries like fast food. Franchising thus solves principal-agent problems between owners and management only to face them again one level lower, between management and labor. Furthermore, franchisors have a direct stake in labor costs. Since franchisors and franchisees share the profits from franchised outlets, franchisors benefit from lower labor costs.

The franchisee's role as labor monitor has efficiency and fairness implications that have been overlooked by the franchising literature, which tends to examine the efficiency implications of franchise contracts for the owner-manager principal-agent problem, without looking further into the manager-worker relationship. As the sociologist Felstead (1993) points out, franchisee contracts maximize franchisee effort *toward maximizing worker effort*.<sup>3</sup> But workers are not residual claimants in franchising systems and the efficiency (and fairness) claims made for franchising do not extend to them and their non-contractable effort. Rather than being motivated by residual claimancy, franchisors motivate workers through a combination of monitoring and the offer of enforcement rents. The organizational innovation of franchising, by improving the ability of franchisors to monitor workers through the effort of franchisees, is designed to decrease the power of production workers in franchised chains in order to extract extra effort. This biases franchisees toward intense monitoring

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<sup>3</sup>Felstead also argues, as this chapter does, that the mere extraction of additional effort from labor cannot be considered a true efficiency gain. However, he dismisses the relevance of the type of principal-agent/labor discipline models that I rely on to show that point, claiming (I believe erroneously) that such models ignore power.

and effort extraction strategies over high-wage efficiency wage or employee skilling strategies.

Skott and Guy (2007) argue that because the size of the enforcement rent depends on the employee's ability to affect profitability by varying his or her own effort, workers have power over employers to the extent that they can control their effort and effect outcomes important to employers. Technological changes that increase managers' ability to monitor workers decrease worker power. In a formal model, they show how such "power-biased technical change" can increase profitability by increasing effort extraction from workers, even if the new technology is less technically efficient than existing technologies. The negative effect on profits of lower technical efficiency in such cases is more than made up for by the decrease in workers' power and the accompanying changes in effort and wages.

We can think of franchising as an example of power-biased *organizational* change within Skott and Guy's framework. The organizational innovation of franchising, by solving the principal-agent problem between owners and managers, influences the principal-agent problem one level down, between managers and production workers. By highly incentivizing franchisee-managers to monitor production workers, franchising as an organizational innovation increases employer power in Skott and Guy's model just as surely as a new surveillance technology. The use of franchising, even if it has no effect on technical efficiency, can increase franchisor profits by extracting additional effort from production workers.

### **2.3 Investments in bargaining power over franchisees**

The initial source of the franchisor's bargaining power over franchisees is its product market power, derived from its trademark and trade name. These give the franchisor a type of power known as "short-side" power: the power to control access to scarce resources of which quantities are limited (Bowles and Gintis 2007). In markets

characterized by short-side power the market does not clear, and there are queues on the short side of the market consisting of those who would like to transact on terms being offered to others but are unable to do so. The franchisor's ability to restrict access to its brand name gives it the ability to confer a rent on the franchisees with whom it does transact, since the fallback position for the franchisee is exclusion from the brand. Exclusion means competing with the franchisor's established chain, with years of consumer recognition behind it, as an independent business. Franchisees have attested to the power of the brand name, noting that they experience difficulty persuading customers, banks, or real estate owners to do business with them as an independent firms in competition with established brands. When the fallback position is operating without a brand name and competing with McDonald's or Burger King, affiliation with an established brand confers a rent on the independent businessperson-cum-franchisee, a rent that franchisors can threaten to withdraw. As Richard Riggs, a Dunkin' Donuts franchisee testified before Congress in April 1976, explaining why he signed such a restrictive franchise contract, "We had counsel at the time but we had not very much choice. We had limited funds. I had the choice of going with a franchisor or opening up Riggs Donut Shop on the corner and competing with the franchisor" (Subcommittee on Consumer Protection and Finance 1976, 93).

Beyond the rents conferred by association with the brand name, franchisors also require franchisees to sign contracts that raise the value of this rent. For example, franchisees are required to make investments in relationship-specific sunk assets (oddly shaped buildings, proprietary signage and equipment, their own industry-specific human capital) that have value inside the franchise relationship, but little value outside it, raising the value of  $v$  relative to  $h$ . According to Dnes (1993), franchisors *create* most of this asset-specificity through trademarking fixtures and equipment, and through restrictive covenants in franchise contracts. Some common



terms of franchise agreements increase franchisee sunk investments. As Representative Abner Mikva said in 1976,

Once the agreement is entered into, the franchisee is totally dependent on the products, services or tradename supplied by the franchisor. Loss of the right to use the franchisor's tradename or distribute the franchisor's product or service results in economic ruin for the franchisee. It is a relationship that more closely resembles one between a master and his indentured servant than between economically equal contracting parties (Subcommittee on Consumer Protection and Finance 1976, 53-54).

Franchisee lawyer Barry Kellman testified to Congress in 1988 that "bargaining power changes over time to the greater advantage of the franchisor" due to sunk, firm-specific investments the franchisees make over time and the costs the franchisors contractually impose for leaving the relationship, such as non-compete agreements and restrictions on sales and transfers (Subcommittee on Antitrust, Impact of Deregulation, and Privatization 1988, 44). Franchisee lawyer Peter Singler testified that:

I ask one question when a new client comes into my office, and that is, if you weren't already in this system, would you do it all over again? The answer, without exception, has been "Absolutely not." And it is usually followed with a statement, "But because of non-competition covenants, because of restrictions on sourcing, because of restrictions on transferability—on my ability to sell my business—I can't get out, and so I've got to make the best of it" (Subcommittee on Commercial and Administrative Law 1999, 100).

Franchisor investments in bargaining have not gone unnoticed by franchising scholars. Michael (2000) shows that franchisor investments in bargaining power, such as covenants not to compete, reduce litigation between franchisors and franchisees. Dnes (1993) argues that the requirement that franchisees reduce their own fallback positions in franchise contracts through sunk investments is yet another sign of franchising's efficiency, as it acts as a screening and signalling device. Franchisees who have what it takes, he argues, will self-select into franchise rather than alternative contracts, their willingness to do so acting as a signal to franchisors of their high productivity.

However, Dnes's claim demands a high degree of information and foresight from franchisees. For one thing, franchisees may not be aware of the full meaning of the highly restrictive contracts they sign at the moment they sign them. And even if they are, real economic agents are loss-averse, weighing future losses more heavily than future gains from any point in time (Benartzi and Thaler 1995). Thus, the franchisee is in effect a different economic agent before and after signing the franchise contract. Once they start making sunk investments, they overweight the cost of losing them. As franchisees accumulate sunk investments over time, the bargaining power of the franchisor increases, as the franchising lawyers quoted above testified.

An analysis of franchise contracts reveals the prevalence of these and other methods of increasing franchisor bargaining power. From the State of Wisconsin, I collected franchise contracts from all 530 franchisors operating in Wisconsin with more than eighty-five outlets nationwide. This set includes all the national chains plus some regional chains as well. The data discussed below all come from these contracts. Contract terms that reduce the bargaining power of franchisees include the following:

- Franchisor remote, independent access to franchisee data increases the effectiveness of franchisor monitoring, raising the sensitivity of the termination function  $t(e)$  to franchisee effort. Increases in monitoring effectiveness reduce the size of the enforcement rent necessary to induce a given level of effort. Ninety percent of fast food franchise contracts require franchisees to give franchisors independent access to their computers and data. What is more, eighty-three percent require the franchisee to give the franchisor the ability to withdraw funds directly from the franchisee's bank account.
- Virtually all franchise contracts require franchisees to sign covenants not to compete with the franchisor for a period of time after the franchise contract ends. Such covenants raise the expected duration of time before the franchisee can earn income again,  $\frac{1}{\lambda}$ , and reduce the value of his or her human capital  $a$

by temporarily prohibiting continued employment in the industry in which he or she has developed skills. The average duration of the noncompete agreement in fast food is twenty months.

- Franchisors tend to require franchisees to give them a right of first refusal in any sale of the franchisee's business. The ability of the franchisor to swoop in at any time depresses the resale value of the franchise, and thus the franchisee's wealth should it exit the franchise relationship,  $a$ . Ninety-two percent of fast food contracts contain this clause.
- Franchisors also often give themselves a right to purchase the franchisee's assets at expiration of the contract, restricting the universe of potential buyers and similarly reducing  $a$ . Fifty-nine percent of contracts contain this clause.
- Many franchisees require that franchisees personally operate their franchised outlets. This indicates a preference for natural persons rather than incorporated enterprises as franchisees, the former having a lower wealth endowment  $a$  and thus a lower fallback position. Forty-nine percent of contracts require a personal obligation to operate.
- Franchisors frequently require franchisees to give the franchisor recourse to their personal assets in legal disputes. Some even require the franchisee's spouse to sign such a personal guarantee as well. This raises the franchisee's cost of leaving the franchise relationship early or misbehaving during the relationship, as their entire personal assets are put at risk by doing so, further reducing  $a$ . Ninety-four percent of fast food contracts contain a personal guarantee, and thirty-three percent a spousal guarantee.
- Finally, franchisors frequently require franchisees to agree to mandatory arbitration clauses, in which franchisees sign away rights they have under the law

to a jury trial, class action litigation, and the like, and forum clauses, in which franchisees agree that any litigation must take place in the geographical jurisdiction of the franchisor's choosing. The former blocks the franchisee from access to the legal system to settle disputes, while the latter dramatically raises the cost of litigation to the franchisee. These clauses limit the ability of the franchisee to recover damages that could form the assets to start a new business, *a*. Fifty-five percent of contracts contain a mandatory arbitration clause, and ninety percent contain a forum restriction.

Table 2.1 contains information on the use of these contract terms, and other contract terms discussed later in the paper, in both the whole sample of 530 contracts and the 78 contracts from fast food industry franchisors.

These exercises of power through the contract terms and restrictive covenants above can result in exploitative outcomes, but also in Pareto improvements. Residual claimancy solves the principal-agent problem, reducing unproductive monitoring expenditures and enabling the creation of additional output. Because franchisees are near-residual claimants, franchising is in a sense fair: franchisees get nearly the entire benefit of the extra effort that these onerous contract terms extract from them.

However, much depends on the shape of the franchisee utility function with respect to income and disutility of effort. Efficiency wage models focus on worker shirking, with enforcement rents inducing them to provide the contracted-for level of effort. Franchisee effort, in contrast, is a continuum of effort rather than a binary shirk or do not shirk choice, and franchise contracts have the potential to extract effort beyond the level the franchisee would have agreed to before becoming bound by the contract. For example, if franchisees are "satisficers" targeting a given level of income with only small utility gains beyond that point, investments in bargaining power can lower their fallback position such that they work harder than they would have agreed to before entering the franchise relationship. The extra output is not a genuine productivity

increase, because output has not increased per unit input. Rather, one input has been squeezed into producing additional output.

## 2.4 Increasing power over workers

As I show in the next chapter, franchisors focus franchisees on labor supervision by taking away their discretion in other areas through the imposition of vertical restraints—contractual controls that limit their choice set to a few variables. Looking again to Table 2.1, in my sample of fast food franchise contracts, on average seventy-eight percent of franchisee purchases must be acquired from suppliers restricted by the franchisor. Ninety-five percent of contracts restrict franchisees to selling only franchisor-approved products. Ninety-two percent set mandatory hours of operation. And fifty-six percent even set maximum or minimum prices. Each one of these restrictions takes discretion away from the franchisee and focuses franchisee effort on labor management and discipline. According to Lafontaine and Sivadasan (2009, 119), fast food industry insiders report that “labor schedule changes and flexibility in hours per week per worker are among the most important margins that managers have at their disposal to keep production costs down,” highlighting the lack of ability to alter other variables affecting profitability and the importance of labor costs to fast food profitability.

What is more, some franchisors intervene directly to hold wages down at their franchisees’ restaurants. Sixty-nine percent of fast food franchisors in my sample impose no-poaching clauses, which forbid franchisees from hiring workers away from each other. Krueger and Ashenfelter (2017) find evidence that the incidence of these clauses is associated with low-wage, high-turnover industries indicating that their purpose is to increase franchisee monopsony power over production workers.

Incentivizing franchisees through residual claimancy and effort-extracting contract terms mitigates the need to spend money on paying for monitoring *or* efficiency wages

of production workers, allowing the franchisor and franchisee to share the profits from extra effort extracted from workers. Franchisors structure contracts to focus the energies of franchisees on labor effort extraction. The workplaces reflect this: rather than invest in worker skills, franchised fast food establishments are highly Taylorist and designed to employ workers with a minimum of training. Highly vigilant labor supervisors create a precarious workforce through “flexible” scheduling and extract maximum effort from them when they are on the job. Rather than invest in training or skills, franchisors incentivize franchisees to extract effort from a high-turnover, poorly trained workforce. Industry average data are consistent with such a labor market strategy: the industry-average wage in fast food is \$10.88 per hour, and 28.62 percent of workers in the industry have less than one year of tenure at their current job.

## **2.5 The short side of the market and trickle-down power**

Franchising is an example of a multi-level principal-agent problem. It is essential to understand both levels. In the first level, franchisors have power over franchisees, as evidenced by the existence of enforcement rents. In the second level, franchisors *also* have power over production workers, which they exercise *through* their franchisees. The franchisor’s product market power (enhanced by investments in contractual power over franchisees), cascades downward into the market for franchise management opportunities, and further downward into the labor market.

There are similarities between franchising and the model of linked credit, management and labor markets in Bowles (2006, 359). In this model of linked non-clearing markets, demand outstrips supply, resulting in queues of “quantity constrained” individuals who would like to contract at the going price but are unable to do so. Principals on the “short side” of the market, the side where the desired number of transactions is least, have power over their agents on the “long side” because the

former can offer the latter rents, defined as payments above their fallback position. Meanwhile there are individuals who would like to have franchise contracts with a recognized brand but are unable to secure them, just as there are unemployed workers who would like jobs at the going wage but are unable to land them. These individuals are “quantity constrained,” and their presence limits the bargaining position of long side agents. Principals on the short side of each market can therefore confer rents on “long-side” agents, and thus exercise power over them. In this way, principals with access to scarce resources exercise power over the agents with whom they contract. Figure 2.1 illustrates this process in the context of franchising.

In the figure, brands receive rents from the product market. Firms that do not have brand names are consigned to a status as marginal producers at the fringes of the product market. Down a level, in the market for franchise opportunities, franchisors, which are the brands on the long side at the higher level, exercise power over franchisees by their ability to control access to valued brand names. Some of the franchisees in this market may even be those excluded, or “quantity constrained” from the higher market. Franchisees, in turn, are the bosses in the labor market, one level down from the market for franchise opportunities. They have power over workers in the labor market as bosses, by their ability to control access to scarce jobs. Labor law, focused narrowly on employee status, confines labor issues to the bottom level only. The working conditions at the bottom, however, are determined several levels up, by the market power of franchise corporations.

## **2.6 Conclusion**

Franchising is an example of power-biased organizational change. The structure of franchise contracts contains some features that increase profits through efficiency improvements, but others that do so through extracting additional effort from the labor input. The use of a franchised business model, in which franchisees are highly

incentivized to manage, and extract effort from, low-wage, high-turnover workers, is thus a kind of labor management strategy. However, because franchisors are not the legal employers of production workers under franchising, franchisors escape legal responsibility for their working conditions.

Franchise contracts shape outcomes at franchised establishments while avoiding franchisor legal responsibility for outcomes. This chapter also provides evidence that existing legal criteria of who is an “employer” responsible for working conditions may be in error, as franchisors, whatever their legal relationships with production workers, intimately shape their working conditions through their contracts with franchisees.



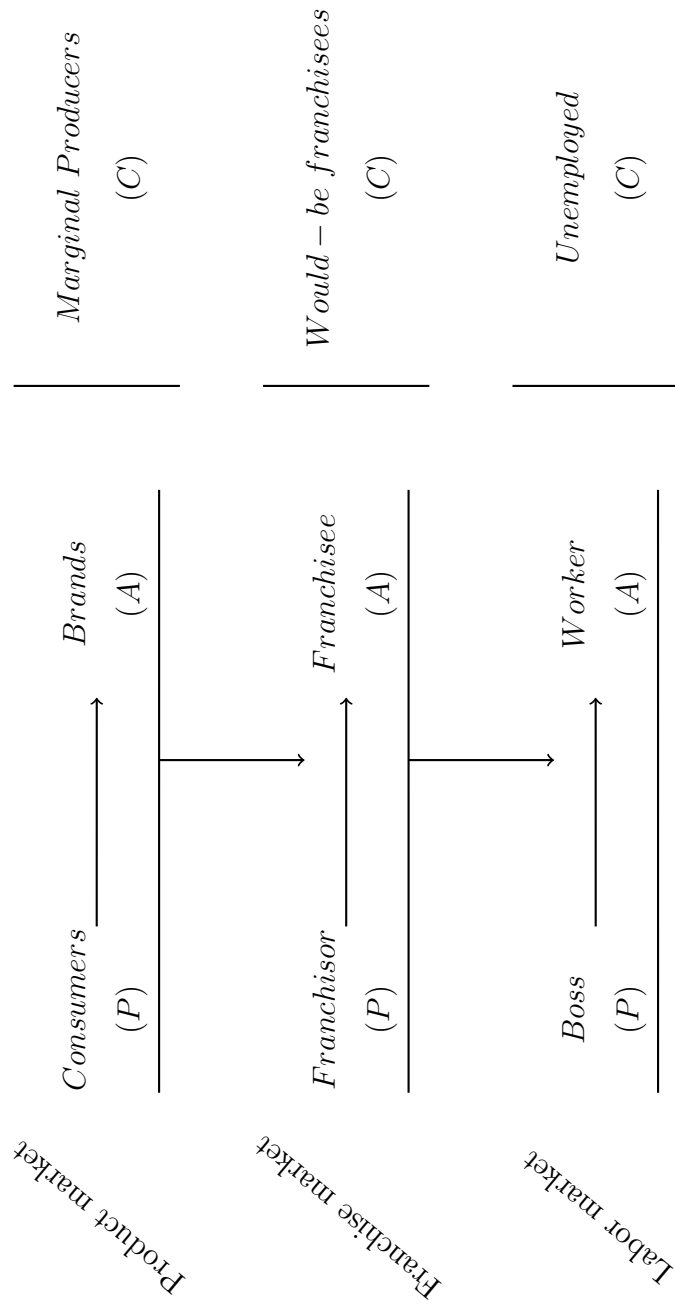
## 2.7 Chapter 2 tables and figures

**Table 2.1.** Prevalence of selected contract terms in franchise contracts

Contract feature	All industries	Fast food
<b>Franchisee Effort-Inducing Contract Terms</b>		
Avg royalty rate (pct gross sales)	5.1%	4.9%
Pct of contracts: ind data access	79%	83%
Pct of contracts: ind bank account access	81%	90%
Avg duration of non-compete (months)	19.03	20.31
Pct of contracts: right of 1st refusal	85%	92%
Pct of contracts: right to purchase at expiration	49%	59%
Pct of contracts: obligation to operate	35%	49%
Pct of contracts: personal guarantee	93%	94%
Pct of contracts: spousal guarantee	38%	33%
Pct of contracts: mandatory arbitration	58%	55%
Pct of contracts: forum clause	91%	90%
<b>Vertical Restraints</b>		
Avg percent of purchases from restricted sources	47%	78%
Pct of contracts: prohibit unapproved products	91%	95%
Pct of contracts: mandatory hours of operation	64%	92%
Pct of contracts: set max or min prices	45%	56%
Pct of contracts: no poaching clause	55%	69%
N	530	78

**Figure 2.1.** Power moves across markets

P = short-side principals, A = long-side agents, C = quantity constrained



## CHAPTER 3

# VERTICAL RESTRAINTS AND THE CREATION OF A FISSURED WORKPLACE: EVIDENCE FROM FRANCHISE CONTRACTS

Vertical restraints—contractual controls imposed by an upstream firm on the operations of a downstream firm, such as price, supplier and customer restrictions—are the essential features of franchise contracts. The presence or absence of particular vertical restraints determines which business decisions the franchisor seeks to control, and which it seeks to delegate downstream. Federal courts initially looked skeptically on the imposition of vertical restraints, questioning the legality under antitrust law of big business dominating and controlling small business through restrictive contracts.<sup>1</sup> However, since *Continental Television, Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977), franchisors have had wide latitude to impose non-price vertical restraints. Since *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007), they have had similar freedom to impose price vertical restraints.

### 3.1 Explanations for vertical restraints

#### 3.1.1 Agency costs

Franchising is a principal-agent relationship, and most existing theoretical treatments of vertical restraints in franchising focus on agency costs to explain the imposition of vertical restraints. The presence of externalities, for example, drives franchisors to impose vertical restraints because franchisees have incentives to free ride on the

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<sup>1</sup>*United States v. Arnold Schwinn & Co.*, 388 U.S. 365 (1967).

value of the franchisor’s brand, by shirking, substituting lower-quality inputs, or cannibalizing sales from existing locations rather than seeking new customers. Mandating mandatory hours of operation, restricting sources of supply or imposing location restrictions can limit franchisee opportunities for free-riding (Tesler 1960; Mathewson and Winter 1984; Blair and Lafontaine 2010). Meanwhile maximum price controls, a major type of vertical restraint, can eliminate the double marginalization problem, which occurs when franchisors and franchisees both have market power, resulting in a double markup over marginal cost. Maximum prices imposed by the franchisor can bring price and quantity closer to the competitive levels (Spengler 1950; Blair and Lafontaine 2010). Under these theories, franchisors facing higher agency costs are more likely to impose vertical restraints.

### **3.1.2 Information and uncertainty**

The risk and incentives model of Prendergast (2002), meanwhile, suggests that risk and uncertainty should drive decisions of whether or not to impose vertical restraints. In Prendergast’s model, under conditions of high uncertainty (high variance of output), principals do not know which tasks should be undertaken or how, and delegate authority to their agents. Under lower levels of uncertainty, principals do know what tasks should be undertaken and how, and delegate fewer tasks. Vertical restraints, which take discretion away from franchisees rather than leaving them free to make their own decisions, can be seen as alternatives to delegating authority to franchisees. Under Prendergast’s theory, franchisors facing less variable output are more likely to impose vertical restraints.

### **3.1.3 Targeting a vulnerable workforce**

Finally, the decision to impose vertical restraints may be driven in part by labor market considerations. Krueger and Ashenfelter (2017) find a strong empirical relationship between the presence of one type of vertical restraint in franchise contracts,

a no-poaching clause, in which franchisees are prohibited from hiring each others' employees, and industry-level low wages and high employee turnover. They interpret their results as suggesting that the purpose of such contract clauses is to facilitate oligopsony by restricting the mobility of high-turnover workers, reducing their wages and increasing the rents available to be shared between franchisors and franchisees.

There may be more to the relationship between vertical restraints and workforce characteristics than Krueger and Ashenfelter's monopsony results suggest, however. For one thing, vertically dis-integrated organizational structures like franchising, in which independent smaller franchisees stand between larger brands and workers, have created what David Weil (2014) has called "fissured workplaces." These are workplaces in which the "lead" firm (in this case the franchisor) focuses on the highest-value-added activities (in this case licensing the trademark) and outsources low-value-added, labor-intensive activities to third parties. In fissured workplaces, the legal boundaries of the firm act as barriers excluding workers outside them from gaining access to firm-specific and union rents, internal career ladders, and legal protections (whose coverage remains largely limited to the firm in which the worker has formal employee status). Vertical restraints create fissured workplaces, because without the ability to control quality through extensive vertical restraints franchisors would be forced to directly own and operate production units to achieve uniform levels of quality control. Workplace fissuring reduces labor costs, and the ability to fissure the workplace may be another factor driving the use of vertical restraints. The poor quality of franchised jobs, in fact, has long been known. Krueger (1991) finds that wages are lower at franchised outlets than at outlets directly owned by the parent company, and that company-owned restaurants have a steeper tenure-earnings profile. Ji and Weil (2015) find that franchised outlets have more wage and hour violations than company-owned outlets.

Vertical restraints do more than simply fissure workplaces, lowering costs by excluding workers from rents. They also limit the labor relations strategies open to franchisees. Vertical restraints focus the energies of franchisees on labor cost control and the extraction of effort from workers by taking away franchisee discretion in other areas. As the imposition of vertical restraints regarding sourcing, pricing, hours of operation, product selection and other decisions removes items from franchisee discretion, their profit-making options are constrained. As I show in the previous chapter, other features of franchise contracts (non-compete clauses, mandatory arbitration, and more) reduce the fallback position of franchisees, inducing them to exert high levels of effort. Vertical restraints focus and direct that franchisee effort towards extracting production worker effort. According to a report by the National Employment Law Project in 2014:

While the [franchisors] claim that they have no influence over wages paid to workers, they control wages by controlling every other variable in the businesses except wages (Ruckelshaus et al. 2014, 11).

Supplier restrictions are especially consequential here, since they take away franchisees' ability to control their own non-labor costs, forcing them to focus all the more on restraining labor costs for their margins. Lafontaine and Sivadasan (2009, 119) cite fast food industry insiders as reporting that "labor schedule changes and flexibility in hours per week per worker are among the most important margins that managers have at their disposal to keep production costs down," highlighting the lack of ability to alter other costs and the importance of labor costs to fast food profitability.

Franchisors that impose extensive vertical restraints are likely pursuing a different franchising strategy than those that delegate more authority to franchisees. Franchisors that delegate more tasks to franchisees are likely to rely more on the entrepreneurial abilities and discretion of their franchisees, including allowing them the freedom to pursue various labor market strategies, including employee skilling or

efficiency wage strategies. Franchisors that do not delegate, but control most details of franchisee businesses through vertical restraints, are likely to rely on their franchisees' role as labor monitor rather than entrepreneur. Franchisor firms pursuing this strategy would be expected to structure franchise contracts to target workers with low bargaining power, relying on brute effort extraction rather than employee skilling or other strategies.

In the fast food industry in particular, brands have long sought out vulnerable and low-bargaining power workers for employment in their restaurants, despite not directly employing them. A major early innovation of McDonald's, for example, was introducing an automated system to replace skilled chefs with unskilled, younger workers. However, McDonald's early attempts at franchising failed due to the lack of vertical control. Under CEO Ray Kroc in the 1960s McDonald's harnessed the power of vertical restraints to expand its fordist system "tailored for unskilled labor" throughout the U.S. (Love 1995, 136). Royle (1999) documents how the same firm, McDonald's, deliberately "recruits an acquiescent workforce" internationally, favoring cheap, unskilled and (what McDonald's perceives as) more pliable labor. In the US, franchisors have long sought young part-time workers in particular. The main franchise lobby group in fact pushed hard for a youth sub-minimum wage in the 1970s (International Franchise Association 1979, 112). Under what I will call the "targeting a vulnerable workforce" theory of vertical restraints, indicators of low worker bargaining power should be associated with the imposition of vertical restraints.

## 3.2 Data

This paper uses a unique data set created from 530 franchise contracts to examine which franchisor and industry characteristics predict the likelihood of imposing vertical restraints. The Federal Trade Commission requires franchisors to furnish prospective franchisees with a Franchise Disclosure Document (FDD), which con-

tains a copy of the contract and detailed information about the franchisor. Some states require franchisors to register with the state and file a copy of their FDD. I acquired all FDDs filed in the State of Wisconsin in 2016 (containing 2015 data), and hand-collected a data set from the FDDs for all 530 franchisors with more than 80 outlets nationwide. I use the cutoff of 80 to ensure my data set includes only mature large chains, excluding fly-by-night chains, small local chains and other marginal operators. The sample contains all of the national U.S. chains and some regional chains as well: the mean franchisor in my data set operates in thirty-seven states and territories.

To analyze what factors are associated with the decision to impose vertical restraints, I collected variables representing six common vertical restraints, a set of variables representing characteristics of each franchisor, and industry-level workforce traits. The vertical restraints are as follows. The first is the proportion of the franchisee's ongoing purchases that must be made from sources of supply restricted by the franchisor. The other five are dummy variables ( $Y=1$ ) indicating the presence or absence of specific contract terms: whether franchisor approval is required for the site of the business, whether the franchisor prohibits the sale of unapproved products or services, whether the franchisor sets mandatory hours of operation, whether the franchisor sets maximum or minimum prices, and, following Krueger and Ashenfelter, whether the franchisor imposes a no-poaching clause.

I collect franchisor characteristics from the FDDs to examine whether agency costs predict the imposition of vertical restraints. Franchisors with more valuable brands have higher externalities and would be expected to impose more vertical restraints to constrain franchisee moral hazard and free-riding. The number of outlets (Lafontaine 1992; Lafontaine and Shaw 1999, 2005; Combs et al. 2009), length of the franchisee training program (Lafontaine 1992; Lafontaine and Shaw 1999, 2005), and age of the brand (Lafontaine 1992; Combs et al. 2009) typically proxy for brand value in



the franchising literature. I also include a financial variable, the total assets of the franchisor, to capture brand value. Monitoring costs are another type of agency costs. Number of states with outlets captures the geographical dimension of monitoring costs, as more dispersed production networks are more difficult to surveil (Lafontaine 1992; Lafontaine and Shaw 1999, 2005). The size of the average initial franchisee investment, measuring outlet size and complexity, captures another dimension of monitoring costs (Lafontaine 1992; Lafontaine and Shaw 2005; Combs et al. 2009). Lafontaine (1992) uses proportion of outlets discontinued at the sector level as a measure of risk (variance of output). I use proportion of discontinued outlets (or the outlet turnover rate) at the franchisor level.

Finally, to examine whether workforce traits are associated with the decision to impose vertical restraints, I collected industry-level average hourly wage data for 2015 from the Current Employment Statistics survey and 2015 industry-level average employee turnover (new hire rate, or proportion of workers with less than one year of tenure), age and education (years of schooling) data from the Current Population Survey, and merged these industry-level data with the data from the franchise contracts.

Descriptive statistics for the vertical restraints are presented in Table 3.1, and descriptive statistics for franchisor characteristics in Table 3.2. It is apparent that two of the vertical restraints, site selection and product approval, are imposed by nearly all franchisors and do not vary much at all. Tables 3.3 and 3.4 list the industry mean value of each workforce characteristic in each CPS and CES industry in the data set. These tables show that franchisors in the sample are concentrated in a few industries, with a long tail of industries with only one or two franchisors.

The data contain six different vertical restraints, multiple measures of brand value and monitoring costs, and multiple measures of workforce traits that all represent low-bargaining power workers. Therefore multicollinearity among variables is likely.

Tables 3.5-3.7 present correlation matrices for each grouping of variables: vertical restraints, franchisor characteristics and workforce traits. Table 3.5 displays the correlation matrix for the six vertical restraints. All correlation coefficients but one are greater than zero, indicating that there is a positive relationship among them, but the strength of the correlations are relatively weak. Given the weak correlations, it makes sense to analyze each vertical restraint separately to learn which franchisor characteristics and workforce traits are associated with each one.

Table 3.6 displays the correlation matrix for franchisor characteristics. The brand value measures—number of outlets, brand age, training, and assets—are all positively correlated with each other, but only weakly. The same goes for the monitoring cost variables. The risk measure (outlet turnover) is essentially orthogonal to the other franchisor characteristics.

Turning to the worker characteristics in Table 3.7, these are highly collinear with each other. Workers who are either young or relatively uneducated tend to also have low tenures at their current jobs and earn low wages. This makes sense, as a worker who exhibits any of these traits is likely to have low bargaining power and share the other traits as well.

### **3.3 Logit regressions**

In the regressions that follow, I explore which variables predict the use of vertical restraints in franchise contracts. The correlation matrices in the previous section suggest that the workforce traits together represent a latent variable, low bargaining power. Because of the high collinearity between the workforce traits, I enter them one by one in separate regressions. The franchisor characteristics, however, do not exhibit similar tight correlations with each other, and I therefore enter them together. I estimate the following equation for each of the six dummy variables representing

vertical restraints.<sup>2</sup> Subscripts  $i$  vary at the franchisor level and subscripts  $j$  vary at the industry level. Because of the use of industry-level variables, I cluster standard errors at the 2-digit NAICS industry level.

$$\text{logit}(\text{Pr}(\text{Vertical Restraint}_i = 1)) = \beta_0 + \beta_1 \ln(\text{Worker Trait}_j) + \beta_2 \ln(\text{Outlets}_i) + \beta_3 \text{States}_i + \beta_4 \ln(\text{Age}_i) + \beta_5 \ln(\text{Training}_i) + \beta_6 \ln(\text{Investment}_i) + \beta_7 \ln(\text{Assets}_i) + \beta_8 \ln(\text{Turnover}_i)$$

I take the log of those variables that appear log-normally rather than normally distributed according to visual inspection of the distributions, adding 0.001 to variables with zero-valued observations.<sup>3</sup>

### 3.3.1 Predictors common to multiple vertical restraints

In this section I study whether there are predictors shared by multiple vertical restraints. In the next section I will examine each vertical restraint individually to study if there are variations in predictors depending on the particular vertical restraint. According to the externality and free-riding explanations for vertical restraints, we would expect to see positive signs on the brand value and monitoring cost coefficients. Under the Prendergast theory, we would expect a negative coefficient on the outlet turnover variable. Under the “targeting a vulnerable workforce” theory, we would expect a negative coefficient on the age, education and wage variables and a positive coefficient on the new hire rate.

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<sup>2</sup>Since the proportion of supplies under restriction is not a bivariate outcome variable, I use OLS rather than logit for that case.

<sup>3</sup>While the logit estimator does not rely on a normality assumption, I take the natural log anyway in order to present the results in the same table with the results from the OLS estimator, which does depend on a normality assumption. The log transformation should not affect the significance of the results, although it does of course affect the interpretation of the coefficients. Appendix A.2 contains results for the linear probability model, which yields results with a more straightforward coefficient interpretation.

Four separate regression tables, one for each of the four collinear  $j$  workforce trait variables, are presented in Tables 3.8-3.11.<sup>4</sup> That makes 24 separate regression equations. Significance is conservatively reported for a two-tailed test. Looking first to the agency cost explanations for vertical restraints, we see that the brand value variables do not always agree with each other. We would expect each to be positively associated with the imposition of vertical restraints. The length of the franchisor’s training program for franchisees is consistently positively and significantly associated with vertical restraints, having a strong relationship with all but franchisor site approval. Number of outlets, meanwhile, is positive and significant (at the one percent level) in two of six regressions. Brand age and franchisor assets are only significant sporadically and switch signs depending on the vertical restraint. Turning to monitoring costs, number of states is consistently negatively associated with vertical restraints, while average initial franchisee investment flips signs between different vertical restraints. A clear story according to the agency costs explanations for vertical restraints does not emerge. This could be because these measures are noisy proxies for the underlying “brand value” variable. For example, brand age could be capturing life-cycle effects in addition to brand-value effects.

The risk variable, outlet turnover, is negatively associated with three vertical restraints: product approval, mandatory hours of operation, and price fixing. While risk is associated with only half of the vertical restraints, in those cases where it is the coefficients have the sign predicted by the Prendergast model. The next section looks at each vertical restraint separately and will take up the question of why risk is associated with some vertical restraints but not others.

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<sup>4</sup>While logit is an appropriate functional form for a binary dependent variable, it has the drawback relative to the linear probability model of yielding coefficient magnitudes that are complicated to interpret. I therefore include linear probability model regressions in Appendix A.2 below.

Finally, the coefficients on the worker characteristics are almost always of the sign expected under the “targeting a vulnerable workforce” theory. In only two regressions out of twenty-four are they of the unexpected sign, and in both of those cases they are not statistically significant at any reasonable significance level. Among the worker characteristics, age is the most strongly associated with vertical restraints: it is associated with six of six vertical restraints at the one percent significance level. Turning to the other workforce characteristics, worker turnover is associated with four of six vertical restraints at the ten percent level, and wages with three of six. Education is rarely statistically significant, but this may be due to the low variation in this explanatory variable: the mean years of schooling is 11.3 years with a standard deviation of 1.2 years. These results point to the relative youth and inexperience of the workforce as strongly predictive of the use of vertical restraints, even more so than their turnover and wage levels. Workforce traits indicative of a vulnerable workforce are strongly predictive of the likelihood of franchisors imposing vertical restraints.

### **3.3.2 Differences among vertical restraints**

Workforce traits appear to have a consistent relationship across vertical restraints. The “targeting a vulnerable workforce” explanation for vertical restraints, therefore, seems to have general applicability. However, workforce characteristics seem to be particularly relevant to two restraints: restrictions on hours and on suppliers. Of the vertical restraints, worker characteristics are most likely to be associated with mandatory hours of operation: three of four worker characteristics (all but education) are significantly associated with mandatory hours of operation at the one percent level. Three of the four worker characteristics (again, all but education) are significantly associated with supplier restrictions at the ten percent level, with turnover and age significant at the one percent level. Franchisors hiring in industries characterized by inexperienced, high-turnover and low-wage workers tend especially to control the

franchisee's hours of operation and their non-labor inputs more than franchisors in other industries.

Three of four worker characteristics are associated with no-poaching agreements at the ten percent level. Worker characteristics are more weakly associated with product restrictions and price fixing, and site approval is only associated with worker age. However, the weak relationships of workforce characteristics with product restrictions and site approval may simply reflect the extremely low variation in those variables: ninety percent of franchise agreements contain a product restriction clause, and eighty-one percent contain a site approval clause (see Table 3.2).

The signs on the franchisor characteristics sometimes flip between positive and negative depending on the particular restraint, suggesting the agency costs and risk and incentives theories may apply to different vertical restraints in different ways. The regressions suggest that measures of brand value do a fair job predicting site selection, purchase restrictions and (somewhat less strongly) product approval. A brand value/externalities theory of vertical restraints is less consistent, however, with the evidence regarding no-poaching agreements, price fixing and hours of operation. The variables capturing difficulty monitoring indicate that franchisors are *less* likely to impose site, purchase, product and hours restrictions when monitoring costs are high. It could be the case, under rather Prendergastian reasoning, that it is more profitable to let franchisors make their own decisions when the franchisor has less knowledge about local conditions.

Finally, the coefficients on the risk variable conform to the Prendergast model. We would not expect risk to be associated with no-poaching (which has nothing to do with choice under uncertainty) or site selection (a one-time decision made at the beginning of the relationship). Franchisors behaving according to the Prendergast model would be expected to delegate authority more when it comes to managerial decisions like product offerings, hours of operation and price: they would delegate

when uncertainty is high, and impose vertical restraints when uncertainty is low. That is indeed what the results show.

### **3.4 LASSO regression results**

The logit regressions in the previous section are intended as descriptive prediction exercises rather than causal analyses. Another useful methodology for prediction is the LASSO model. LASSO models are typically used on large data sets with very large numbers of predictors, using regularization to prevent overfitting by trading off a small increase bias for a large decrease in variance. Conventional models overfit because adding additional regressors tends to mechanically reduce variance even if the regressors are not truly explanatory. With many regressors included, some of the regressors will, by chance, fit the realized data and decrease variance even if they have no association in the true data-generating process. LASSO, an example of regularization, penalizes the addition of regressors, and so the model will admit only regressors that substantially explain the outcome well enough to overcome the penalty for adding additional regressors. Compared to OLS, LASSO changes the tradeoff between bias (finding a regressor significant when in reality it is not) and variance (failing to fit the observed data) towards accepting more residual variance rather than assigning importance to an irrelevant regressor.

While the data in this paper do not present the problem of a large number of predictors that LASSO models are designed to solve, LASSO's ability to perform variable selection nonetheless serves as a useful check on the logit models in the previous section. Using cross-validation to tune the model parameters, I run six LASSO models, regressing each vertical restraint on the full set of franchisor characteristics and workforce traits. As an atheoretical prediction methodology, LASSO more or less blindly drops variables in groups of highly collinear variables, so too much should not be read into LASSO's choice of one variable over another in a group of collinear vari-

ables. More important is which group is selected by the LASSO procedure—brand value, monitoring costs, risk, or low worker bargaining power?

Results of the LASSO variable selection exercise are presented in Table 3.12. The LASSO results largely confirm the logit models in the previous section. Once again, the brand value measures do not agree with each other, or even with themselves across vertical restraints. As with logit results, geographic dispersion (number of states with outlets) tends to be negatively associated with vertical restraints, while outlet complexity (average initial franchisee investment) flips signs depending on the restraint.

Once again, Prendergast holds up relatively well. Franchise chains exposed to higher risk tend to impose vertical restraints on hours and prices, which are the two vertical restraints most reflective of day-to-day business decisions. However, product approval, which had been associated with risk in the logit model, is dropped from the LASSO model. Finally, as in the logit regressions, workforce traits are widely predictive of vertical restraints. At least one workforce characteristic exhibits relationships of the expected signs with each vertical restraint, with the exception of the product approval vertical restraint. When all workforce characteristics are included together in the LASSO regression, however, the regularization procedure does not always pick age, the best performer in the logit regressions, from among the collinear workforce characteristics.

### **3.5 Discussion and conclusion**

The literature offers several explanations for the imposition of vertical restraints in franchise contracts. Franchisors impose them to constrain franchisee free-riding and opportunistic behavior (the agency cost theory), to control franchisee decision-making under conditions of low uncertainty (the Prendergast model), or to fissure the workplace and induce franchisees to extract high effort levels from the vulnerable



workforce targeted by the franchisor (the “targeting a vulnerable workforce” theory). Until now, to my knowledge, no study has specifically examined which factors predict the likelihood of imposing vertical restraints. This paper contributes to the analysis of vertical restraint by conducting such a prediction exercise. It finds no clear evidence in support of the agency cost theory, but some evidence in favor of the Prendergast model and the targeting a vulnerable workforce theories.

As with Krueger and Ashenfelter’s paper, my results do not show causality in any statistical sense. Nonetheless, they do uncover, for the first time, an empirical relationship between workforce characteristics and vertical restraints. It will take further research, including additional data collection, to more precisely determine the nature of this connection and the direction of causal arrows. For example, a limitation of the descriptive, predictive regressions in this paper is the possibility of endogeneity issues, in particular omitted variables. The relationship between workforce traits and vertical restraints may be capturing the relationship between omitted industry-level variables that tend to vary together with the workforce traits. For example, industries could vary in terms of the intensity and types of regulation affecting them.

These results suggest that franchisors write franchise contracts in anticipation of the kind of worker they anticipate hiring. In particular, they suggest that in industries like fast food, they write highly restrictive contracts that are tailored to a high-turnover, low-skill, low-wage workforce by steering franchisees toward a high-monitoring, high-effort labor strategy. This strategy uses the incentives of franchisee residual claimancy combined with vertical restraints to focus franchisee attention on monitoring and effort extraction. However, this intense monitoring would, in turn, be likely to reduce the wage premium that must be paid to workers to induce effort, resulting in even lower wages. But then vertical restraints would not only take advantage of low wages, but also contribute to causing them, so wages could be on the left hand side as a dependent variable. Unfortunately, while my data contain

franchisor-level contract terms and characteristics, they only contain industry-level worker characteristics. Establishing the impact of vertical restraints on wages requires franchisor-level wage data, suggesting an avenue for further research.<sup>5</sup>

Of particular importance in the results is that workplace fissuring and targeting vulnerable workforce appear to be closely related with vertical restraints. While the courts initially relaxed antitrust restrictions on vertical restraints on the grounds that they might lower consumer prices in the context of the high-inflation 1970s, today the major policy problem is low wages rather than high prices. A reconsideration of the impact of vertical restraints on workers may be in order.

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<sup>5</sup>A causal analysis might be possible through matched employer-employee data such as the Census Bureau's Longitudinal Employer-Household Dynamics, available with a security clearance from the Census Bureau, or through proprietary sources like Burning Glass. I am exploring getting such data for a future paper.

### 3.6 Chapter 3 tables

**Table 3.1.** Descriptive statistics, vertical restraints

Statistic	N	Mean	St. Dev.	Min	Max
No poach (Y = 1)	529	0.552	0.498	0	1
Site approval (Y = 1)	530	0.819	0.385	0	1
Purchase restrictions (Proportion of total)	498	0.468	0.351	0	1
Product approval (Y = 1)	530	0.908	0.290	0	1
Mandatory hours (Y = 1)	529	0.643	0.480	0	1
Price fixing (Y = 1)	529	0.442	0.497	0	1

**Table 3.2.** Descriptive statistics, franchisor characteristics

Statistic	N	Mean	St. Dev.	Min	Max
Outlets	528	761	1,811	80	27,129
No. states & territories	529	37	11	1	55
Brand age	530	27	18	0	103
Training program (hours)	527	152	182	0	1,360
Franchisee investment (dollars)	523	1,527,062	6,139,976	8,468	76,558,688
Franchisor assets (000s dollars)	520	1,559,183	8,702,563	3	161,184,000
3-yr outlet turnover rate	517	0.20	0.27	0	4.16

Table 3.3: CPS industries with industry average workforce traits

CPS Industry	N	Tenure	Age	Education
Restaurants and Other Food Svcs	147	0.286	31.997	10.272
Traveler Accommodation	39	0.179	41.219	10.922
Construction	34	0.133	42.808	10.581
Other Amusements and Recreation	29	0.198	37.463	11.450
Svcs to Buildings	23	0.156	44.156	9.916
Other Schools, Instruction, and Education Support Svcs	16	0.185	42.383	13.758
Real Estate	16	0.127	48.709	12.549
Automotive Repair and Maintenance	15	0.153	42.291	10.403
Individual and Family Svcs	15	0.176	44.418	13.005
Mgmt, Tech, and Scientific Consulting	13	0.159	45.514	14.389
Nail Salons and Other Personal Care	12	0.127	41.928	11.351
Auto Equipment Rental and Leasing	8	0.167	42.117	11.765
Furniture Stores	8	0.174	43.233	11.707
Printing and Rltd Support	8	0.122	45.521	11.389
Business Support Svcs	7	0.236	39.734	12.124
Employment Svcs	7	0.303	40.223	11.663
Architectural Engineering and Rltd	6	0.134	44.646	14.038
Health and Personal Care Stores	6	0.197	39.324	12.152
Used Merchandise Stores	6	0.217	44.857	10.941
Beauty Salons	5	0.132	41.668	11.403
Landscaping Svcs	5	0.105	39.735	9.661
Travel Arrangements and Reservations	5	0.120	45.838	12.954
Waste Mgmt and Remediation	5	0.138	43.982	10.564
Accounting, Tax Prep, and Bookkeeping	4	0.147	46.205	13.784
Auto Parts and Tire Stores	4	0.165	41.517	10.823
Radio, TV, and Computer Stores	4	0.195	35.683	12.310
Sporting Goods, Camera, and Hobby Stores	4	0.229	37.340	11.889
Dry Cleaning and Laundry Svcs	3	0.167	44.932	9.990
Gasoline Stations	3	0.245	37.799	10.646
Groceries and Rltd Wholesale	3	0.119	42.982	11.120
Insurance Carriers and Rltd	3	0.114	45.263	13.325
Misc Manufacturing	3	0.162	44.686	11.387
Misc Retail Stores	3	0.198	40.204	11.693
Offices of Optometrists	3	0.108	42.702	12.998
Offices of Chiropractors	3	0.138	42.617	14.302
Other Direct Selling Ests	3	0.234	43.055	11.867
Other Health Care Svcs	3	0.162	42.457	13.059
Other Personal Svcs	3	0.190	40.756	11.678
Other Professional Svcs	3	0.123	42.543	13.475
Pharmacies and Drug Stores	3	0.141	39.305	12.701
Specialty Food Stores	3	0.178	39.751	10.806
Child Day Care Svcs	2	0.206	39.094	11.713
Computer Systems Design and Rltd	2	0.171	41.926	14.392
Electronic and Precision Equipment Repair	2	0.139	43.495	12.188
Florists	2	0.103	48.846	10.931
Investigation and Security Svcs	2	0.191	43.600	11.563
Investments	2	0.119	45.010	14.339
Personal and Household Goods Repair and Maintenance	2	0.147	49.523	11.109
Shoe Stores	2	0.318	29.860	11.214
Advertising and Rltd	1	0.193	40.654	13.666
Auto Dealers	1	0.180	42.866	11.402

Barber Shops	1	0.053	43.703	10.788
Commercial and Industrial Machinery Repair	1	0.158	43.176	10.426
Elementary and Secondary Schools	1	0.107	45.591	14.040
Furniture Wholesale	1	0.117	45.500	11.635
Gift, Novelty, and Souvenir Shops	1	0.193	47.617	12.066
Household Appliance Stores	1	0.085	42.268	11.156
Jewelry, Luggage, and Leather Stores	1	0.166	43.795	12.083
Motor Vehicle Parts Supplies Wholesale	1	0.140	45.847	11.489
Offices of Dentists	1	0.123	42.512	13.381
Offices of Other Health Practitioners	1	0.112	47.701	15.013
Other Admin and Support	1	0.172	43.903	12.353
Other Consumer Goods Rental	1	0.147	39.085	11.217
Outpatient Care Centers	1	0.176	42.390	13.829
Periodical, Book, and Directory Publishers	1	0.117	45.596	14.139
Recreational Vehicle Parks and Camps	1	0.195	38.201	10.990
Specialized Design Svcs	1	0.139	43.930	13.745
Truck Transportation	1	0.165	46.620	10.500
Vending Machine Operators	1	0.250	44.191	10.727
Warehousing and Storage	1	0.186	39.983	10.616

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Source: Flood, et al. (2018).

Table 3.4: CES industries with industry average hourly wages

CES industry	N	wage
Limited Service Restaurants	78	10.880
Snack and Non-Alcoholic Beverage Bars	40	12.210
Hotels and Motels	39	16.210
Full Service Restaurants	29	13.930
Fitness and Recreational Sports Centers	24	15.980
Education and Health Svcs	17	25.240
Janitorial Svcs	15	13.820
Offices of Real Estate Agents and Brokers	15	26.160
Svcs for the Elderly and Persons with Disabilities	14	14.040
Plumbing, Heating, and Air Conditioning Contractors	11	27.540
Administrative Management and General Management Consulting Svcs	10	42.890
Other Personal Care Svcs	10	19.010
Automotive Equipment Rental and Leasing	8	20.090
Printing and Rltd Support Activities	8	22.730
Business Service Centers	7	19.480
Barber Shops and Beauty Salons	6	17.370
Building Inspection Svcs	6	27.640
Used Merchandise Stores	6	13.310
Automotive Mechanical and Electrical Repair	5	20.220
Auto Oil Change Shops and All Other Auto Repair	5	14.680
Landscaping Svcs	5	17.400
Other Building Equipment Contractors	5	28.360
Other Health and Personal Care Stores	5	19.280
Residential Remodelers	5	23.960
Travel Agencies	5	26.310
Accounting and Bookkeeping Svcs	4	31.080
All Other Amusement and Recreation Industries	4	16.170
Automotive Parts and Accessories	4	17.910
Carpet and Upholstery Cleaning	4	17.690
Electronics Stores	4	24.850
Non-Store Retailers	4	25.830
Painting and Wall Covering Contractors	4	22.060
Remediation and Other Waste Svcs	4	25.290
Temporary Help Svcs	4	16.700
Automotive Body, Interior and Glass Repair	3	21.960
Chiropractors	3	22.710
Dry Cleaning and Laundry Svcs	3	12.210
Employment Placement Agencies	3	25.820
Exterminating and Pest Control Services	3	21.940
Finish Carpentry Contractors	3	24.800
Floor Covering Stores	3	21.790
Furniture Stores	3	20.140
Gasoline Stations with Convenience Stores	3	12.530
Grocery and Rltd Products Wholesale Trade	3	22.630
Marketing Consulting Svcs	3	36.560
Offices of Optometrists	3	22.250
Pharmacies and Drug Stores	3	23.160
Sign Manufacturing	3	21.370
Specialty Food Stores	3	14.840
All Other Home Furnishings Stores	2	16.750
Child Day Care Svcs	2	14.070

Direct Property and Casualty Insurance Carriers	2	33.780
Electronic Equipment Repair and Maintenance	2	25.800
Florists	2	12.820
General Automotive Repair	2	20.210
Hobby, Toy, and Game Stores	2	13.580
Household Goods Repair and Maintenance	2	18.500
Investment Advice	2	48.670
Medical Laboratories	2	27.570
Nail Salons	2	12.650
Other Building Finishing Contractors	2	26.260
Other Computer Related Svcs	2	40.580
Pet and Pet Supplies Stores	2	17.190
Pet Care Svcs	2	15.280
Photo Graphic Svcs	2	17.580
Shoe Stores	2	17.110
Sporting Good Stores	2	16.420
All Other Miscellaneous Ambulatory Health Care Svcs	1	27.950
All Other Miscellaneous Store Retailers	1	17.630
All Other Personal Svcs	1	15.650
All Other Specialty Trade Contractors	1	25.060
Amusement Parks and Arcades	1	13.120
Claims Adjusting	1	32.320
Commercial Machinery Repair and Maintenance	1	25.390
Cosmetics Stores	1	16.930
Direct Mail Advertising	1	25.870
Electrical Contractors and Other Wiring Installation Contractors	1	28.940
Free Standing Ambulatory Surgical and Emergency Centers	1	31.910
Furniture and Furnishings Wholesale Trade	1	24.790
General Rental Centers	1	23.340
Gift, Novelty, and Souvenir Stores	1	14.310
Glass and Glazing Contractors	1	25.330
Household Appliance Stores	1	18.770
Interior Design Svcs	1	29.290
Jewelry, Luggage and Leather Goods Stores	1	19.700
Lessors of Mini Warehouses and Self Storage	1	18.040
Misc Professional and Technical Svcs	1	31
Motor Vehicle Supplies and New Parts Merchant Wholesalers	1	24.200
Offices of Dentists	1	30.170
Offices of Real Estate Appraisers	1	26.160
Offices of Specialty Therapists	1	27.400
Other Individual and Family Svcs	1	19.980
Other Svcs to Buildings and Dwellings	1	18.560
Other Support Svcs	1	24.260
Periodical Publishers	1	37.240
RV Parks and Recreational Camps	1	15.270
Security and Armored Car Svcs	1	14.270
Security Systems Svcs	1	24.650
Siding Contractors	1	22.820
Used Car Dealers	1	20.560
Used Household and Office Goods Moving	1	20.020
Waste Collection	1	21.200

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Source: Bureau of Labor Statistics (2018).

**Table 3.5.** Correlation matrix, vertical restraints

	No-poach	Site	Purchases	Product	Hours	Price
No-poach	1	-0.001	0.156	0.250	0.112	0.072
Site	-0.001	1	0.161	0.072	0.288	0.226
Purchases	0.156	0.161	1	0.096	0.185	0.145
Product	0.250	0.072	0.096	1	0.205	0.133
Hours	0.112	0.288	0.185	0.205	1	0.198
Price	0.072	0.226	0.145	0.133	0.198	1

**Table 3.6.** Correlation matrix, franchisor characteristics

	Outlets	States	Brand age	Training	Investment	Assets	Turnover
Outlets	1	0.379	0.317	0.139	-0.021	0.083	-0.096
States	0.379	1	0.231	-0.013	0.061	0.089	0.024
Brand age	0.317	0.231	1	0.229	0.103	0.132	-0.064
Training	0.139	-0.013	0.229	1	0.067	-0.059	-0.161
Investment	-0.021	0.061	0.103	0.067	1	0.046	-0.085
Assets	0.083	0.089	0.132	-0.059	0.046	1	0.054
Turnover	-0.096	0.024	-0.064	-0.161	-0.085	0.054	1



**Table 3.7.** Correlation matrix, industry workforce traits

	Wage	New hire rate	Age	Education
Wage	1	-0.692	0.688	0.572
New hire rate	-0.692	1	-0.896	-0.393
Age	0.688	-0.896	1	0.515
Education	0.572	-0.393	0.515	1

**Table 3.8.** Vertical restraints regressed on industry average worker age, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Avg worker age)	-3.288*** (0.913)	-3.963*** (1.533)	-1.152*** (0.153)	-1.929*** (0.455)	-2.508*** (0.607)	-2.491*** (0.637)
ln(Outlets)	-0.060 (0.043)	0.480*** (0.179)	0.032*** (0.012)	0.279* (0.169)	0.193 (0.211)	-0.056 (0.146)
No. states	-0.003 (0.007)	-0.044*** (0.013)	-0.003*** (0.001)	-0.056*** (0.018)	-0.034** (0.015)	0.006 (0.010)
ln(Brand age)	-0.127 (0.102)	-0.236 (0.275)	0.030*** (0.011)	-0.802* (0.429)	-0.256 (0.218)	-0.758*** (0.169)
ln(Franchisee training)	0.246*** (0.095)	0.165 (0.107)	0.023*** (0.008)	0.340*** (0.077)	0.181** (0.075)	0.203*** (0.076)
ln(Franchisee investment)	-0.205 (0.201)	0.856*** (0.217)	-0.028 (0.019)	-0.499*** (0.119)	0.152 (0.153)	0.194*** (0.047)
ln(Franchisor assets (000s))	-0.109*** (0.026)	0.163** (0.074)	0.003 (0.005)	0.081 (0.070)	0.023 (0.046)	0.093* (0.050)
ln(Outlet turnover)	-0.054 (0.095)	-0.124 (0.145)	0.002 (0.019)	-0.314*** (0.092)	-0.264** (0.105)	-0.222*** (0.056)
Constant	15.700*** (5.044)	3.207 (8.434)	4.770*** (0.732)	16.376*** (2.614)	7.362*** (2.782)	6.549** (2.927)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.170	0.390	0.288	0.307	0.193	0.201
$\chi^2$ (df = 8)	67.283***	132.688***	159.248***	72.129***	75.017***	81.171***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Avg worker age is measured in years. It varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table 3.9.** Vertical restraints regressed on industry average worker turnover, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(New hire rate)	0.741 (0.579)	0.909 (0.706)	0.390*** (0.120)	0.739* (0.413)	1.254*** (0.355)	0.588* (0.352)
ln(Outlets)	0.023 (0.045)	0.537*** (0.192)	0.054*** (0.017)	0.311* (0.172)	0.203 (0.214)	0.006 (0.150)
No. states	-0.010 (0.008)	-0.049*** (0.015)	-0.006*** (0.001)	-0.058*** (0.019)	-0.036** (0.015)	0.0002 (0.011)
ln(Brand age)	-0.144 (0.100)	-0.253 (0.268)	0.024** (0.010)	-0.811* (0.432)	-0.273 (0.221)	-0.762*** (0.172)
ln(Franchisee training)	0.283** (0.121)	0.153 (0.105)	0.023** (0.010)	0.334*** (0.077)	0.164** (0.080)	0.234** (0.095)
ln(Franchisee investment)	-0.151 (0.220)	0.943*** (0.192)	-0.017 (0.026)	-0.492*** (0.123)	0.149 (0.151)	0.232*** (0.043)
ln(Franchisor assets (000s))	-0.116*** (0.028)	0.158** (0.071)	0.002 (0.005)	0.077 (0.070)	0.026 (0.045)	0.085 (0.054)
ln(Outlet turnover)	-0.040 (0.091)	-0.103 (0.140)	0.003 (0.018)	-0.311*** (0.104)	-0.276*** (0.096)	-0.208*** (0.058)
Constant	3.942 (3.113)	-10.936*** (4.131)	1.044** (0.491)	10.453*** (1.792)	0.362 (1.235)	-2.250 (1.464)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.143	0.378	0.233	0.306	0.202	0.187
χ <sup>2</sup> (df = 8)	56.110***	128.053***	124.429***	71.859***	78.773***	74.981***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

New hire rate = proportion of workers with less than 1 yr tenure. It varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table 3.10.** Vertical restraints regressed on industry average hourly wage, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Avg hourly wage)	-0.679* (0.375)	-0.619 (0.751)	-0.271* (0.146)	-0.143 (0.357)	-1.292*** (0.329)	-0.518 (0.433)
ln(Outlets)	0.011 (0.061)	0.508*** (0.171)	0.059*** (0.017)	0.353** (0.170)	0.167 (0.203)	-0.0005 (0.154)
No. states	-0.009 (0.010)	-0.047*** (0.016)	-0.006*** (0.002)	-0.063*** (0.016)	-0.033** (0.015)	0.001 (0.011)
ln(Brand age)	-0.147 (0.109)	-0.262 (0.262)	0.026** (0.011)	-0.791* (0.444)	-0.281 (0.232)	-0.764*** (0.180)
ln(Franchisee training)	0.307** (0.151)	0.161* (0.096)	0.031** (0.012)	0.348*** (0.077)	0.179* (0.092)	0.256** (0.100)
ln(Franchisee investment)	-0.166 (0.214)	0.942*** (0.184)	-0.017 (0.030)	-0.475*** (0.119)	0.108 (0.154)	0.222*** (0.057)
ln(Franchisor assets (000s))	-0.114*** (0.027)	0.160** (0.076)	0.002 (0.006)	0.070 (0.075)	0.034 (0.053)	0.086 (0.054)
ln(Outlet turnover)	-0.026 (0.082)	-0.088 (0.152)	0.011 (0.017)	-0.293*** (0.092)	-0.256** (0.110)	-0.196*** (0.054)
Constant	4.785 (3.004)	-10.617*** (4.038)	1.139 (0.753)	9.302*** (1.944)	2.497* (1.421)	-1.684 (2.353)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.142	0.376	0.186	0.301	0.209	0.186
$\chi^2$ (df = 8)	55.906***	127.114***	96.415***	70.756***	81.679***	74.604***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Average hourly wage varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table 3.11.** Vertical restraints regressed on industry average worker education, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Avg years schooling)	-1.965* (1.179)	0.280 (2.654)	-0.664 (0.443)	0.331 (1.370)	-0.549 (2.025)	-1.266 (1.209)
ln(Outlets)	0.053 (0.073)	0.567*** (0.177)	0.076*** (0.023)	0.372** (0.153)	0.285 (0.236)	0.035 (0.133)
No. states	-0.011 (0.012)	-0.051*** (0.014)	-0.007*** (0.002)	-0.065*** (0.016)	-0.041*** (0.016)	-0.001 (0.010)
ln(Brand age)	-0.160 (0.108)	-0.242 (0.250)	0.024** (0.011)	-0.787* (0.447)	-0.265 (0.226)	-0.780*** (0.178)
ln(Franchisee training)	0.314** (0.159)	0.173* (0.095)	0.033** (0.014)	0.355*** (0.081)	0.212** (0.105)	0.265*** (0.097)
ln(Franchisee investment)	-0.148 (0.217)	1.033*** (0.146)	-0.008 (0.031)	-0.460*** (0.110)	0.224 (0.178)	0.242*** (0.049)
ln(Franchisor assets (000s))	-0.125*** (0.026)	0.147** (0.072)	-0.002 (0.006)	0.067 (0.074)	0.007 (0.050)	0.079 (0.053)
ln(Outlet turnover)	-0.024 (0.080)	-0.077 (0.154)	0.012 (0.016)	-0.291*** (0.095)	-0.231*** (0.087)	-0.192*** (0.052)
Constant	7.318 (4.655)	-14.346** (6.891)	1.824 (1.402)	7.872** (3.303)	-1.595 (5.482)	-0.402 (3.639)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.141	0.370	0.164	0.301	0.174	0.184
$\chi^2$ (df = 8)	55.275***	125.059***	84.181***	70.732***	66.972***	73.602***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Average years of schooling varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table 3.12.** LASSO model variable selection

	No-poach	Site	Purchases	Product	Hours	Price
Outlets	0	0	0	0	+	0
States	-	0	0	-	-	0
Brand age	-	0	0	-	-	-
Franchisee training	+	+	+	0	+	0
Franchisee investment	-	0	-	-	+	+
Franchisor assets	-	0	0	0	+	+
Outlet turnover	0	0	0	0	-	-
NewHireRate	0	0	0	0	+	0
Wage	0	-	0	0	-	0
Age	-	-	-	0	0	-
Education	0	0	0	0	-	0

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0 indicates a variable was dropped by LASSO regularization. + or - indicate the sign of the variables that were selected by LASSO regularization.

## APPENDIX

### ALTERNATIVE SPECIFICATIONS

#### A.1 Krueger and Ashenfelter covariates

The main results from this paper are robust across four different, but related, explanatory variables: industry-level worker age, turnover, wage, and education. However, despite this robustness, the results could still be due to misspecification of the regression model. In particular, I could have chosen the wrong franchisor characteristics as controls. As discussed in the paper, I used the standard controls for agency problems and risk used in the existing franchising literature, as well as a measure of franchisor wealth. Krueger and Ashenfelter went a different route. Since their model was focused more narrowly on franchise employer monopsony rather than broadly on vertical restraints, their covariates were brand age, percent of employees in the industry employed at franchise establishments, and franchisor market share (measured as share of outlets). The first is also in my regression, but the last two are not.

Tables 7-10 present results for regressions using Krueger and Ashenfelter's covariates rather than my own. The results are quite similar to mine as presented in Tables 3-6. The point estimates tend to be more precise in my specification, while the magnitudes tend to be larger in this alternative, Krueger and Ashenfelter-derived specification. The results of this robustness check reinforce the conclusions drawn in the preceding chapter.

**Table A.1.** Vertical restraints regressed on industry average worker age, covariates

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Worker age)	-5.985*** (1.927)	-5.336*** (0.972)	-1.353*** (0.155)	-4.253 (3.092)	-2.357*** (0.800)	-2.612 (1.738)
Brand age	-0.013** (0.005)	0.003 (0.007)	0.001 (0.001)	-0.025*** (0.008)	-0.007 (0.011)	-0.026*** (0.007)
Pct industry franchised	-1.850* (1.014)	4.642*** (1.384)	0.037 (0.120)	-0.691 (2.040)	2.162** (1.073)	1.226*** (0.453)
Market share (outlets)	2.072 (1.476)	1.319 (2.431)	0.270 (0.185)	0.962 (0.865)	3.379** (1.430)	2.913** (1.363)
Constant	22.821*** (7.030)	20.683*** (3.611)	5.382*** (0.586)	18.776 (11.539)	9.073*** (2.788)	9.747 (6.518)
Observations	461	462	433	462	461	461
R <sup>2</sup>	0.127	0.220	0.309	0.074	0.118	0.118
$\chi^2$ (df = 4)	45.951***	61.851***	160.208***	15.981***	40.392***	42.540***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Average worker age and pct industry franchised (share of employment) vary at the industry level, all other variables at the franchisor level.

Std. errors clustered at the two-digit NAICS industry level.



**Table A.2.** Vertical restraints regressed on industry average worker turnover, co-variates

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(New hire rate)	1.860 (1.138)	1.193* (0.613)	0.446*** (0.160)	1.756 (1.154)	1.323*** (0.369)	0.618 (0.441)
Brand age	-0.013** (0.005)	0.003 (0.007)	0.0005 (0.001)	-0.025*** (0.008)	-0.008 (0.011)	-0.026*** (0.007)
Pct industry franchised	-1.097 (1.134)	5.086*** (1.410)	0.184 (0.160)	-0.603 (1.810)	1.938** (0.873)	1.705*** (0.312)
Market share (outlets)	1.655 (1.369)	1.451 (2.695)	0.187 (0.133)	1.196 (1.051)	3.905** (1.542)	2.588** (1.229)
Constant	3.804** (1.909)	2.904*** (1.125)	1.135*** (0.296)	6.094*** (2.064)	2.690*** (0.576)	1.094 (0.840)
Observations	461	462	433	462	461	461
R <sup>2</sup>	0.075	0.190	0.237	0.072	0.130	0.102
$\chi^2$ (df = 4)	26.678***	52.959***	116.870***	15.638***	44.705***	36.560***

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees ( $Y = 1$ ), franchisor site approval required ( $Y = 1$ ), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products ( $Y = 1$ ), franchisor sets mandatory hours of operation ( $Y = 1$ ), franchisor sets max or min resale price maintenance ( $Y = 1$ ).

New hire rate and pct industry franchised (share of employment) vary at the industry level, all other variables at the franchisor level.

Std. errors clustered at the two-digit NAICS industry level.

**Table A.3.** Vertical restraints regressed on industry average hourly wage, covariates

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Avg hourly wage)	-2.074** (0.992)	-0.774 (0.643)	-0.406** (0.203)	-1.397 (0.968)	-0.770 (0.654)	-0.772 (0.588)
Brand age	-0.012** (0.006)	0.003 (0.007)	0.001 (0.001)	-0.024** (0.009)	-0.007 (0.011)	-0.026*** (0.007)
Pct industry franchised	-1.336 (1.207)	5.376*** (1.470)	0.208 (0.205)	-0.326 (1.573)	2.360* (1.253)	1.549*** (0.486)
Market share (outlets)	2.016 (1.565)	1.097 (2.619)	0.223 (0.200)	1.007 (0.973)	3.349** (1.406)	2.718** (1.353)
Constant	6.582** (2.841)	3.011 (1.945)	1.529** (0.621)	6.979** (2.759)	2.547 (1.907)	2.268 (1.804)
Observations	461	462	433	462	461	461
R <sup>2</sup>	0.075	0.179	0.200	0.058	0.109	0.103
$\chi^2$ (df = 4)	26.597***	49.724***	96.458***	12.494**	37.131***	37.082***

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees ( $Y = 1$ ), franchisor site approval required ( $Y = 1$ ), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products ( $Y = 1$ ), franchisor sets mandatory hours of operation ( $Y = 1$ ), franchisor sets max or min resale price maintenance ( $Y = 1$ ).

Average hourly wage and pct industry franchised (share of employment) vary at the industry level, all other variables at the franchisor level.

Std. errors clustered at the two-digit NAICS industry level.

**Table A.4.** Vertical restraints regressed on industry average worker education, co-variates

	<i>Dependent variable:</i>					
	No-poach	Site	Purchases	Product	Hours	Price
	<i>logistic</i>	<i>logistic</i>	<i>OLS</i>	<i>logistic</i>	<i>logistic</i>	<i>logistic</i>
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Years of schooling)	-3.189* (1.904)	-1.176 (2.700)	-0.880* (0.452)	-1.546 (2.457)	1.545 (1.243)	-2.723** (1.383)
Brand age	-0.012** (0.006)	0.003 (0.007)	0.0003 (0.001)	-0.023** (0.010)	-0.005 (0.011)	-0.027*** (0.007)
Pct industry franchised (employment)	0.075 (0.576)	6.050*** (1.349)	0.456*** (0.131)	0.775 (0.934)	3.262*** (0.891)	1.862*** (0.365)
Market share (outlets)	1.003 (1.547)	0.728 (2.989)	0.083 (0.158)	0.323 (0.999)	2.344 (1.523)	2.583** (1.112)
Constant	8.152* (4.534)	3.548 (6.612)	2.465** (1.103)	6.524 (5.841)	-3.541 (3.022)	6.620* (3.379)
Observations	461	462	433	462	461	461
R <sup>2</sup>	0.033	0.175	0.177	0.043	0.105	0.109
$\chi^2$ (df = 4)	11.528**	48.488***	84.430***	9.220*	35.784***	39.094***

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees ( $Y = 1$ ), franchisor site approval required ( $Y = 1$ ), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products ( $Y = 1$ ), franchisor sets mandatory hours of operation ( $Y = 1$ ), franchisor sets max or min resale price maintenance ( $Y = 1$ ).

Average years of schooling and pct industry franchised (share of employment) vary at the industry level, all other variables at the franchisor level.

Std. errors clustered at the two-digit NAICS industry level.

## A.2 Linear Probability Model

Tables 11-15 present results for linear probability model (LPM) regressions using the covariates from the main regressions in the paper. The results are similar to those in the logit and LASSO regressions. An advantage of LPM over logit is it allows a more intuitive interpretation of regression results. From Table 17, for example, a ten percent decrease in the industry average age of workers is associated with a seven percentage point increase in the likelihood of the chain imposing a no-poaching clause, holding other variables in the model constant. This is a plausible magnitude, and the other point estimates are of similar magnitudes.

**Table A.5.** LPM: Vertical restraints regressed on industry average worker age, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach (1)	Site (2)	Purchases (3)	Product (4)	Hours (5)	Price (6)
ln(Avg worker age)	-0.765*** (0.202)	-0.341* (0.187)	-1.152*** (0.153)	-0.072*** (0.024)	-0.468*** (0.126)	-0.588*** (0.149)
ln(Outlets)	-0.016* (0.009)	0.040* (0.022)	0.032*** (0.012)	0.017 (0.011)	0.035 (0.039)	-0.015 (0.028)
No. states	-0.001 (0.002)	-0.004*** (0.002)	-0.003*** (0.001)	-0.003*** (0.001)	-0.006** (0.003)	0.001 (0.002)
ln(Brand age)	-0.024 (0.020)	-0.031 (0.021)	0.030*** (0.011)	-0.038*** (0.014)	-0.047 (0.032)	-0.123*** (0.036)
ln(Franchisee training)	0.042*** (0.010)	0.020 (0.014)	0.023*** (0.008)	0.053*** (0.012)	0.035*** (0.011)	0.029*** (0.007)
ln(Franchisee investment)	-0.045 (0.041)	0.065*** (0.023)	-0.028 (0.019)	-0.047*** (0.007)	0.031 (0.028)	0.037*** (0.013)
ln(Franchisor assets (000s))	-0.023*** (0.007)	0.017** (0.009)	0.003 (0.005)	0.003 (0.004)	0.004 (0.009)	0.019* (0.011)
ln(Outlet turnover)	-0.013 (0.020)	-0.006 (0.015)	0.002 (0.019)	-0.015*** (0.004)	-0.045*** (0.014)	-0.052*** (0.011)
Constant	4.149*** (1.073)	1.006 (0.980)	4.770*** (0.732)	1.615*** (0.153)	1.856*** (0.561)	2.123*** (0.691)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.125	0.211	0.288	0.209	0.138	0.143
$\chi^2$ (df = 8)	66.604***	118.212***	159.248***	116.811***	73.761***	77.039***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Avg worker age is measured in years. It varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table A.6.** LPM: Vertical restraints regressed on industry average worker turnover, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach (1)	Site (2)	Purchases (3)	Product (4)	Hours (5)	Price (6)
ln(New hire rate)	0.188 (0.137)	0.093 (0.107)	0.390*** (0.120)	0.028 (0.020)	0.245*** (0.082)	0.151** (0.074)
ln(Outlets)	0.003 (0.011)	0.048** (0.022)	0.054*** (0.017)	0.018 (0.012)	0.037 (0.039)	-0.001 (0.029)
No. states	-0.002 (0.002)	-0.005*** (0.002)	-0.006*** (0.001)	-0.003*** (0.001)	-0.006** (0.003)	-0.0003 (0.002)
ln(Brand age)	-0.026 (0.020)	-0.032 (0.021)	0.024** (0.010)	-0.039*** (0.013)	-0.050 (0.033)	-0.124*** (0.035)
ln(Franchisee training)	0.044*** (0.011)	0.021 (0.014)	0.023** (0.010)	0.052*** (0.012)	0.031** (0.012)	0.031*** (0.007)
ln(Franchisee investment)	-0.032 (0.047)	0.070*** (0.025)	-0.017 (0.026)	-0.047*** (0.006)	0.030 (0.027)	0.047*** (0.011)
ln(Franchisor assets (000s))	-0.025*** (0.007)	0.017** (0.008)	0.002 (0.005)	0.003 (0.004)	0.004 (0.009)	0.018 (0.012)
ln(Outlet turnover)	-0.011 (0.020)	-0.006 (0.015)	0.003 (0.018)	-0.015*** (0.004)	-0.047*** (0.013)	-0.051*** (0.011)
Constant	1.473** (0.702)	-0.160 (0.554)	1.044** (0.491)	1.392*** (0.100)	0.578** (0.252)	0.084 (0.295)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.102	0.204	0.233	0.209	0.145	0.131
$\chi^2$ (df = 8)	53.848***	113.896***	124.429***	116.719***	77.890***	69.708***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

New hire rate = proportion of workers with less than 1 yr tenure. It varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table A.7.** LPM: Vertical restraints regressed on industry average hourly wage, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach (1)	Site (2)	Purchases (3)	Product (4)	Hours (5)	Price (6)
ln(Avg hourly wage)	-0.164* (0.089)	-0.108 (0.115)	-0.271* (0.146)	-0.009 (0.018)	-0.270*** (0.065)	-0.123 (0.094)
ln(Outlets)	0.001 (0.015)	0.044** (0.022)	0.059*** (0.017)	0.019* (0.011)	0.029 (0.036)	-0.002 (0.030)
No. states	-0.002 (0.002)	-0.005** (0.002)	-0.006*** (0.002)	-0.003*** (0.001)	-0.006** (0.002)	-0.0002 (0.003)
ln(Brand age)	-0.026 (0.023)	-0.032 (0.021)	0.026** (0.011)	-0.038*** (0.014)	-0.051 (0.035)	-0.124*** (0.036)
ln(Franchisee training)	0.047*** (0.013)	0.021 (0.013)	0.031** (0.012)	0.053*** (0.012)	0.033** (0.013)	0.033*** (0.007)
ln(Franchisee investment)	-0.035 (0.045)	0.066** (0.028)	-0.017 (0.030)	-0.046*** (0.007)	0.022 (0.026)	0.045*** (0.014)
ln(Franchisor assets (000s))	-0.024*** (0.007)	0.017** (0.009)	0.002 (0.006)	0.002 (0.005)	0.006 (0.011)	0.018 (0.012)
ln(Outlet turnover)	-0.008 (0.018)	-0.004 (0.015)	0.011 (0.017)	-0.014*** (0.004)	-0.044*** (0.015)	-0.048*** (0.010)
Constant	1.657** (0.688)	0.044 (0.690)	1.139 (0.753)	1.353*** (0.137)	1.058*** (0.243)	0.193 (0.492)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.101	0.206	0.186	0.208	0.152	0.129
$\chi^2$ (df = 8)	52.914***	115.358***	96.415***	116.265***	82.238***	68.617***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Average hourly wage varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.

**Table A.8.** LPM: Vertical restraints regressed on industry average worker education, franchisor characteristics

	<i>Dependent variable:</i>					
	No-poach (1)	Site (2)	Purchases (3)	Product (4)	Hours (5)	Price (6)
ln(Avg years schooling)	-0.467 (0.284)	-0.065 (0.487)	-0.664 (0.443)	0.013 (0.050)	-0.125 (0.456)	-0.261 (0.264)
ln(Outlets)	0.010 (0.019)	0.054*** (0.019)	0.076*** (0.023)	0.020* (0.011)	0.054 (0.042)	0.006 (0.025)
No. states	-0.003 (0.003)	-0.006*** (0.002)	-0.007*** (0.002)	-0.003*** (0.001)	-0.008*** (0.002)	-0.001 (0.002)
ln(Brand age)	-0.028 (0.021)	-0.031 (0.020)	0.024** (0.011)	-0.038*** (0.014)	-0.047 (0.034)	-0.124*** (0.037)
ln(Franchisee training)	0.048*** (0.014)	0.024* (0.013)	0.033** (0.014)	0.054*** (0.012)	0.040*** (0.014)	0.035*** (0.007)
ln(Franchisee investment)	-0.030 (0.045)	0.075** (0.029)	-0.008 (0.031)	-0.045*** (0.006)	0.044 (0.033)	0.051*** (0.012)
ln(Franchisor assets (000s))	-0.027*** (0.006)	0.016* (0.009)	-0.002 (0.006)	0.002 (0.005)	0.001 (0.010)	0.016 (0.012)
ln(Outlet turnover)	-0.007 (0.017)	-0.003 (0.017)	0.012 (0.016)	-0.014*** (0.004)	-0.041*** (0.013)	-0.048*** (0.010)
Constant	2.250** (1.094)	-0.238 (1.493)	1.824 (1.402)	1.278*** (0.148)	0.246 (1.230)	0.391 (0.786)
Observations	498	499	469	499	498	498
R <sup>2</sup>	0.099	0.199	0.164	0.208	0.124	0.126
$\chi^2$ (df = 8)	51.939***	111.002***	84.181***	116.220***	66.170***	66.954***

Notes: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01.

Dep vars = (L to R), franchisee prohibited from hiring workers from other franchisees (Y = 1), franchisor site approval required (Y = 1), the proportion of franchisee operating purchases from restricted sources, franchisee can only sell approved products (Y = 1), franchisor sets mandatory hours of operation (Y = 1), franchisor sets max or min resale price maintenance (Y = 1).

Average worker years of schooling varies at the industry level, all other variables at the franchisor level. Franchisee training = length of training program (hours), Franchisee investment = average franchisee initial investment, Outlet turnover = the proportion of system outlets that closed or changed hands over the last three years.

Std. errors clustered at the two-digit NAICS industry level.



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