The Balance of Power in Franchising*

Ulrich Atz† Blake Eliason‡ Michael Lipsitz§ Peter Norlander¶

Sérgio Pinto|| Marshall Steinbaum‡

April 20, 2026

We measure how the contractual balance of power between franchisors and franchisees has shifted over 2009-2024 by analyzing a large corpus of Franchise Disclosure Documents and surveying over 300 franchisees. Coding more than 20 provisions across 4,500 chains, we find that franchisee autonomy declined systematically: exclusive territories fell from a majority of chains to around 20%, while restrictions on pricing, sourcing, product offerings, and post-term competition each rose to near-universal prevalence. Franchisees appear not to have been compensated for this loss of autonomy: franchise fees rose with franchisor control, chain growth did not increase, and complaint rates to the Federal Trade Commission did not decline. We additionally find that chains that adopt franchisor-favoring provisions became 2-5 percentage points more likely to be acquired by private equity within five years. We interpret this finding as one plausible explanation for reductions in franchisee autonomy.

JEL: J42, K21, L42, J31. **Keywords:** Vertical restraints, franchising, text analysis, survey

*The authors thank Charlie McCurdy for diligent research assistance and Lorenzo Luisetto and Evan Starr for insightful and detailed comments. Attendees at the Labor and Employment Relations Association / Allied Social Science Associations Annual Meeting (LERA/ASSA 2025), the International Industrial Organization Conference (IIOC 2025), the Western Economic Association International Annual Conference (WEAI 2025), and the Fordham Conference on Data Science and Law provided helpful comments. For document collection and computational expertise and support, we thank Yonathan Arbel, Gonçalo Costa, Kristen Harknett, Stephen Meisenbacher, Nuno Moniz, Charles Murry, Peter Newberry, Johannes Schmieder, Daniel Schneider, and Connor Williams. The authors used AI tools to assist with editing the text to prepare the manuscript for submission and to review code for errors. The NYU Institutional Review Board determined the protocol for the survey analyzed in this paper to be exempt from the federal policy following a limited IRB review under reference number IRB-FY2024-9116. Some of the work for this paper was performed while Michael Lipsitz was an employee of the Federal Trade Commission. The views expressed in this article are those of the authors, and do not necessarily reflect the views of the Federal Trade Commission or any individual Commissioner.

†Bocconi University

‡University of Utah

§University of Pennsylvania

¶Loyola University Chicago, Quinlan School of Business

||OECD

1 Introduction

Is the capacity to exercise independent business judgment becoming concentrated in fewer and fewer hands? In this paper, we adopt a novel text-based data source—standard-form franchising contracts and related mandatory disclosures—to systematically classify and interpret concepts in text corpora to answer this empirical question with respect to the franchising sector in the United States for the period 2009-2024. In 2017, franchise establishments accounted for $1.7 trillion in sales and 9.6 million workers in the United States.[1]

Business format franchising is an *outsourced* business model wherein a franchisor (a corporation that owns one or more brands or trademarks) licenses intellectual property[2] to legally vertically dis-integrated local operators (franchisees). In exchange, franchisees typically pay the franchisor an upfront fee and royalties on gross revenue. Franchisees distribute the product or service associated with the brand or trademark to local retail customers, subject to some degree of control by the franchisor, codified in standard contracts and operating manuals. That control—embodied in so-called "vertical restraints"—and how it has changed over time is the focus of this paper.

To assess the prevalence of vertical restraints in franchising relationships, we use text from Franchise Disclosure Documents (FDDs). FDDs exist due to the Franchise Rule, a regulation first promulgated by the Federal Trade Commission (FTC) in 1978. The Franchise Rule mandates that, prior to agreeing to a contract, franchisors must provide would-be franchisees with an FDD containing disclosures about some of the costs, benefits, and stipulations related to owning the franchise. The idea behind the Franchise Rule is that prospective franchise buyers can make informed decisions, thereby disciplining abusive

[1] The U.S. Census reported 498,234 franchise establishments in 2017 across 300 industries (Zamora-Appel and Jubran, 2021). Trade association estimates are substantially larger, and report that there were 832,521 establishments in 2025 (International Franchise Association, 2026).

[2] The replication-as-strategy literature (Winter and Szulanski, 2001) formalizes the benefits of such licensing: reducing franchisee discretion preserves the integrity of the organizational template that drives franchise value.

practices. In theory, this market mechanism may outperform costly ex-post litigation and ex-ante prohibitions or limitations, which may contain loopholes or have unintended consequences.

FDDs follow a standard form with 23 Items, including a structured summary of the contractual provisions, a description of the chain and its business, a description of fees and obligations, voluntary disclosures related to the financial performance of franchised outlets, and mandatory copies of the franchisor's financial statements as well as the standard franchise contract itself as an appendix. States have varying franchise regulations, and some states further require that FDDs be registered as public records. We constructed the FDD corpus analyzed in this paper primarily from those state-level filings, supplemented with other sources.

Our corpus consists of just under 46,000 documents from 2009-2024. Each franchise chain issues its chain-specific FDD annually if it is seeking new franchisees. We use computational Natural Language Processing (NLP) techniques and Large Language Models to extract chain names, dates, contractual provisions, chain-level characteristics, and key tables and items from those documents. We use these to construct an unbalanced franchise chain-level panel dataset. To the best of our knowledge, this dataset is the first of its kind, in terms of the depth and breadth of its coverage. The final dataset contains 4,500 unique franchise chains. Due to brands entering and exiting franchise offerings, this is more than the number of active chains in any given year.

Our main finding is that, over time, franchisees have become subject to an increasing number of restraints that diminish their business autonomy, shifting control in the franchising relationship up the supply chain to franchisors. We establish that this pattern holds not only in the full (unbalanced) panel but also in balanced sub-panels of chains observed consistently over time, confirming that the shift is driven at least in part by individual chains tightening their governance practices rather than by compositional change in the population of franchise chains.

Specifically, we code each FDD for the presence (or absence) of a suite of contractual provisions, including many vertical restraints. Vertical restraints are contracts or other arrangements between actors at different levels in a supply chain that preempt a material business decision by one or the other party (e.g., with whom to deal, or what prices to set), pertaining to a transaction or economic relationship other than the bilateral one between the contracting parties themselves (Paul, 2023). That broad concept characterizes most of the provisions we code for in our FDD corpus. These include Resale Price Maintenance, Exclusive Territories, Exclusive Dealing, Exclusive Supply, Full-line Forcing, and Franchisee Noncompetes, which the IO literature typically consider to be vertical restraints (see, e.g., Mathewson and Winter (1984); Rey and Tirole (1986) for discussion of vertical restraints from the IO perspective). In addition, we code contractual provisions relating to Dispute Resolution, Restrictions on Speech, Data Sharing, and Breaches of Limited Liability. The prevalence of all of the restraints that shift business autonomy from the franchisee to the franchisor has increased (or, in some cases, remained at a very high level) throughout our panel. Similarly, the prevalence of Exclusive Territories (which provide the franchisee with exclusive rights to use a franchisor's trademark in a given local area, thereby granting relatively greater power with respect to the franchisor than otherwise) has declined.

To validate and supplement our findings from the text analysis of FDDs, we conducted a survey that yielded over 300 responses from franchisees across 234 chains. The survey focused on franchisees' firsthand experience of franchisor control and perceived changes in control over time. We link these responses to each respondent's chain and find that many franchisees are subject to restrictions about which they are unaware. This mismatch suggests either a gap in franchisee understanding, grandfathered franchise contracts that confer greater autonomy than new contracts, or a gap between contractual control and its real-world enforcement.

This paper primarily explores the contractual balance of power between franchisors

and franchisees. Changes in the balance of power, however, do not necessarily indicate welfare losses for any given party. It is possible that franchisees are compensated for the reduction in their business autonomy. For example, increased franchisor control and resulting chain uniformity could increase sales, benefiting both franchisors and franchisees. The implication of such an interpretation would be that franchisees optimally trade away their autonomy in exchange for greater profitability. Alternatively, franchisors may directly compensate franchisees for losses of autonomy by altering other terms of the relationship, such as franchise fees, royalty rates, or qualitative aspects of the relationship unreported in FDDs.

We test this conjecture and conclude that it is not operative in what we observe: first, franchise fees tend to increase when franchisees have less autonomy, indicating that this monetary lever is not used to compensate franchisees for lost autonomy. Royalty rates have remained relatively stable over time, indicating that decreased royalty rates are not being used to compensate franchisees.[3] Second, analysis of complaints filed by franchisees against franchisors with the Federal Trade Commission does not support the theory that franchisees are compensated for diminished autonomy. Third, our open-ended survey results likewise indicate franchisee dissatisfaction with the loss of autonomy, which is difficult to reconcile with the idea that its transfer is mutually beneficial.

Finally, we explore one potential explanation for the decrease in franchisee autonomy documented in this paper: that franchisors seek to make themselves attractive to prospective private equity investors both by promising rapid expansion and by appropriating bargaining surplus from incumbent franchisees while making it difficult for them to disaffiliate in response (similar to the interpretation of corporate takeovers put forward by Shleifer and Summers (1988)). We find that imposing restraints on franchisees (and stipulating the right to invade their territories in the future) prefigures private equity

[3]We emphasize one limitation of our analysis. While analysis of observable components of franchisee welfare do not support the theory that franchisees are compensated for losses of autonomy, we cannot observe the most direct measure of financial success, i.e., outlet-level franchisee profits.

takeover. To do so, we track the ownership of chains by holding companies (sometimes called "platforms" in this industry), which are often publicly traded, but are increasingly held by private equity firms in our sample.

This paper contributes to a growing literature on contractual structure and changes therein. Argyres, Bercovitz and Mayer (2007) noted the lack of systematic study of the evolution of contracts in the strategic management literature (in which contract design was, at that time, not well-studied) or in the economics literature (in which analysis of contracts typically ignored their evolution), though the franchising sector is a notable exception (Lafontaine and Shaw, 1999). Since then, the strategic management literature has added to preexisting research to fill this gap (see, e.g., Bercovitz and Tyler (2014); Xing et al. (2021); Mayer and Argyres (2004); Vanneste and Puranam (2010)), including in the franchising context (Argyres, Bercovitz and Leenders, 2025). We contribute to this literature by providing a systematic overview of how franchise contracts have evolved over the past couple of decades, expanding on prior work both in depth (by examining many contractual terms, not just fees and royalties) and in breadth (by examining the near-universe of franchises over a long time horizon).

We also contribute indirectly to discussions regarding how contracts create or capture value within and across organizations (Schilke and Lumineau, 2018; Poppo and Zenger, 2002; Lumineau and Malhotra, 2011; Malhotra and Lumineau, 2011; Luo, 2002; Ryall and Sampson, 2009). This literature is highly related to a discussion in Law and Economics, as well as a body of antitrust jurisprudence, which asks whether vertical restraints in the franchising context are pro- or anti-competitive (Blair and Lafontaine, 2005; Easterbrook, 1984; Blair and Kaserman, 1983; Bernheim and Whinston, 1998; Asker and Bar-Isaac, 2014). Current antitrust jurisprudence is very permissive toward such control, generally interpreting it as pro-competitive because it realizes efficiency in distribution by aligning the incentives of franchisors and consumers. As a result, substantive regulation of the franchising relationship at the federal level has diminished considerably since the

late 1970s (Callaci, 2021*a*). In this paper, we do not directly evaluate whether vertical restraints capture or create value, nor do we directly evaluate the competitive impact of vertical restraints; however, we document changes in their prevalence over time, which inform overall competitive assessments of the franchising landscape given an assessment of the competitive impact of those restraints. Better understanding the value created by franchised businesses also informs discussions over the quality, as opposed to just the quantity, of entrepreneurial ventures (Guzman and Stern, 2020).

Finally, we contribute to a growing literature that uses FDDs as data to study franchising. This literature includes Norlander (2025), Callaci (2021*b*) and Callaci et al. (2025), who focus on a cross-section of franchise chains for which the authors obtained 2015 FDDs. The aforementioned papers identify cross-sectional chain variation in the use of various provisions affecting franchising labor markets, like the requirement that franchisees impose non-competition agreements on their workers, no-poaching or non-solicitation agreements between franchisees, and restrictions on the dissemination of trade secrets through the mechanism of workers switching jobs and/or chains.[4] Like the present paper, Lafontaine, Luisetto and Prescott (2025) has a time dimension, since those authors obtained FDDs for 297 chains from both 2010 and 2020. Lafontaine, Saattvic and Slade (2023) and Callaci et al. (2024) investigate the effect of franchise chains ceasing use of no-poach clauses on franchise workers, albeit without using FDDs specifically as their data sources. This paper shifts the focus to the bilateral relationship between franchisors and franchisees across a range of commercially relevant business decisions.

The paper proceeds as follows: Section 2 introduces the restraints we code. Section 3 explains how we analyze the FDD corpus, including how we constructed the rules that determine whether a FDD does or does not impose a given restraint or contractual provision, and how we aggregate from FDDs to the chain-level panel. This section also provides a summary of the survey protocol and the FTC complaints data. Section 4 reports

[4] As do other papers in the literature, such as Lafontaine, Luisetto and Prescott (2025), Atz (2025), Murry and Newberry (2022), Schneider and Harknett (2025), and Krueger and Ashenfelter (2022).

the prevalence of each restraint over time in the panel, as well as comparing that prevalence to the results of a survey of franchisees we conducted. Section 5 tests our interpretation of a shifting balance of power by investigating whether franchisees are compensated for the loss of their autonomy. Section 6 considers whether the corporate structure of franchise chains, and specifically the possibility of securing a private equity buyout, motivates the shift in power we document. Section 7 discusses the significance of our findings. Section 8 concludes.

2 Restraints

We began with the set of restraints covered by Callaci (2021*a*), which were initially hand-coded for a cross-section of 530 FDDs filed in Wisconsin for one year. Callaci et al. (2025) reports the prevalence of that set of restraints in the cross-section of franchise chains, both in aggregate and by industry. In the course of constructing and validating the rules associated with each of those restraints for the present, much larger FDD corpus, we formulated additional variables and associated rules to capture the subtleties related to the initial set of restraints. We also investigated aspects of the franchise relationship that are unreported in any other prior work, to our knowledge, including the degree to which franchisees are bound by non-disclosure agreements and subject to other restrictions on commercial speech.

In general, the variables we create and the rules assembled to code for them are not treated as mutually exclusive, by design, even when the meaning of one provision would seem to rule out another. We adopt this approach in light of the high frequency with which we observe contradictory or near-contradictory language in the FDDs. Language that would seem to preserve franchisee autonomy is contradicted by accompanying language that grants the relevant authority to the franchisor or imposes a restriction on the franchisee's use of that autonomy. When such apparent contradictions arise, the FDD is

categorized in both ways, with minimal researcher intervention to impose a given construction on the contract.

We organize the restraints and provisions we investigate into six categories, each corresponding to a distinct domain of business decision-making within the franchise relationship (Table 1).

Table 1. Contract Provisions in Franchise Disclosure Documents

Category	No.	Provision	Description
A. Retail Pricing	A.1	Resale Price Maintenance	Franchisors set or substantially influence retail prices, restricting franchisees' ability to capture surplus or adapt pricing to local market conditions. Coded as active if the franchisor determines the price of *any* retail transaction, e.g. an "honor all discounts" or "accept all gift cards" policy.
	A.2	Minimum Resale Price Maintenance	Franchisors retain authority to set minimum retail prices, including prohibitions on under-pricing and competing for the retail customers of rival franchisees.
B. Product and Service Offerings	B.1	Full-Line Forcing	Franchisees must carry the franchisor's complete product or service portfolio, limiting their ability to specialize based on local demand or exclude unprofitable lines of business.
	B.2	Franchisor Can Prohibit Offerings	Franchisors retain veto rights over products or services franchisees wish to offer, even if locally profitable.
	B.3	Franchisor Can Change Product Mix	Franchisors can unilaterally alter the required product or service mix during the franchise term.
	B.4	Exclusive Supply / Approved Suppliers Only	Franchisees must source inventory, ingredients, or materials from franchisor-approved (or franchisor-owned) suppliers. Coded as active if the FDD indicates that *any* input must be sourced from the franchisor's chosen supplier.
	B.5	Propose New Suppliers	Franchisees may propose new suppliers, but the franchisor retains a veto. A weaker form of exclusive supply.
C. Territory and Competition	C.1	Exclusive Territory Granted	Franchisees receive a protected local market, preventing intra-brand competition. Absence allows franchisors to intensify outlet density.
	C.2	Franchisor Reserves Right to Compete in Territory	Franchisors reserve the right to open company-owned or additional franchised outlets within franchisees' territories. Often appears alongside a nominal exclusive territory grant, effectively countermanding that grant.
	C.3	Franchisee Confined to Territory	Franchisees are confined to a given territory and prohibited from offering products or services outside it.

Continued on next page

Table 1 continued from previous page

Category	No.	Provision	Description
	C.4	Franchisor Site Approval	Franchisors have the right to choose or reject the specific location or premises of the franchise.
	C.5	Exclusive Dealing	Franchisees must deal exclusively with the franchisor's brand and cannot carry competing brands or products.
	C.6	Franchisee Noncompete	Franchisees are prohibited from operating competing businesses *after* expiration of the franchise contract, limiting outside options and exit flexibility.
D. Governance and Dispute Resolution	D.1	Mandatory Arbitration	Disputes must be resolved through binding arbitration rather than litigation, potentially limiting legal recourse and reducing transparency.
	D.2	Non-disparagement Clause	Franchisees are prohibited from making negative statements about the brand to media, regulators, or prospective franchisees.
	D.3	Goodwill Clause	Franchisees are obligated to protect the goodwill of the brand (more general/less restrictive version of a Non-disparagement clause).
	D.4	Restrictions on Franchisee Speech	Franchisor discloses that it has extant non-disclosure agreements with franchisees in place, and hence existing franchisees are not at liberty to speak freely with prospective franchisees. (This does not refer to language protecting the franchisor's trade secrets.)
	D.5	Independent Franchisee Organization	Whether an independent franchisee organization is recognized by the franchisor, enabling collective voice in governance.
	D.6	Franchisor Right to Purchase Assets/Right of First Refusal	Franchisors can acquire franchisee businesses or exercise a right of first refusal on proposed sales, potentially limiting exit options and secondary-market prices.
E. Information and Monitoring	E.1	Franchisor Access to Franchisee Data	Franchisors require access to operational and customer data, often through mandated point-of-sale systems. May mitigate information asymmetries but also increases franchisee operating costs.
F. Legal and Financial Obligations	F.1	Franchisee Personal Guarantee	Franchisees or their principals provide personal guarantees, piercing limited liability protections and exposing personal assets.
	F.2	Additional Guarantor	The franchisee's spouse, children, and/or business partners must also guarantee obligations to the franchisor.

Each of these six domains represents an area in which the franchise contract allocates decision-making authority between the franchisor and the franchisee. Taken together, they describe much of the governance structure of the franchise relationship: who de-

cides what products to sell, at what prices, from which suppliers, where, and subject to what oversight; dispute resolution mechanisms; and financial obligations. Provisions that shift authority to the franchisor reduce the scope of the franchisee's independent business judgment, while provisions like exclusive territories that grant the franchisee a protected local market do the reverse.

We note that franchise contracts also contain provisions that could plausibly benefit franchisees, such as chain-level advertising funded by the franchisor or passive ownership clauses that allow franchisees to function as investors rather than owner-operators. We do not code these provisions in the present analysis. The omission is a limitation: our set of coded provisions is weighted toward those that restrict franchisee autonomy, and our principal franchisee-favoring provision is the exclusive territory. However, the provisions we do code correspond to the traditional categories of vertical restraints studied in both the industrial organization and strategic management literatures, supplemented by franchising-specific governance provisions (such as speech restrictions, personal guarantees, and franchisee associations) that have received less systematic attention.

3 Data and Methods

We built a franchise-chain-level panel dataset from a corpus of FDDs representative of the franchise sector in the United States. We acquired collections of FDDs first obtained by Norlander (2025), Atz (2025), Schneider and Harknett (2025), Murry and Newberry (2022), and Arbel (2023). We acquired additional FDDs for the largest franchisors for the year 2009 to improve historical coverage. Fourteen states require franchisors to file their FDD annually if operating in the jurisdiction; some states exempt small or inoperative chains from filing (Norlander, 2025). We requested FDDs from Minnesota, Wisconsin, Indiana, and Washington, where they are public records. The corpus of FDDs includes 45,892 documents sourced primarily from state-level filings in California, Washington,

Wisconsin, and Minnesota (Table A.1 in Appendix A).

We construct the panel dataset from this restraint-coded document-level output by means of document metadata we also extract, which includes the franchise chain that issued the FDD, the year it corresponds to, and other document-level characteristics. We then fuzzy match the document-level chain-identifying metadata to a master list of franchise chains we obtained from FRANdata.[5] Once a franchise chain identifier (as well as a year) has been assigned to each document, we construct the panel dataset by taking the modal value for each binary restraint variable across all the FDDs corresponding to that franchise chain and year. This implicitly allows the text of a chain's FDD for a given year to vary across our various data sources, since there are frequently multiple documents corresponding to each franchise chain-year cell. In principle, the FDD is supposed to be invariant for each chain-year, though there are clauses that stipulate certain provisions do or do not apply in different jurisdictions given variations in state law related to franchising. However, in practice, the FDD for a given chain may not scan identically across sources and repositories, hence the need to aggregate within each chain-year cell.

Finally, given the general invariance of FDD provisions over time and the fact that chains that do not change their FDD are not necessarily obligated to re-file with state agencies in every year, we fill in missing chain-year observations by carrying forward the value of a given restraint-coding binary variable observed for the chain in a previous year, if any. If the FRANdata master list indicates that the chain is active in 2024, it is carried forward to that date. We do not do the same going backward in time. To give an example: if the chain's oldest FDD in the document corpus is dated 2013, then the chain appears again in 2017 and every year thereafter, that chain will have missing data for 2009–2012, the 2013 values for each restraint-coding binary variable will be carried forward to 2014–2016, and then the true values assigned based on each subsequent year's FDD. Almost all chains remain in the panel through 2024, the final year for which we have FDDs. The

[5]FRANdata is a leading provider of data and market research in the franchising sector. The detailed protocol is available at https://github.com/statzhero/franchise-fruns.

only reason a chain disappears prior to that are: (1) it has no FDD in that year, and (2) the FRANdata master list identifies it as "no longer franchising."

The full, unbalanced panel dataset covers 16 years of data for over 4,500 unique franchises. Data for 18,886 chain-year observations is traced to a specific FDD. By carrying forward FDD-derived observations from earlier years, our unbalanced panel data covers a total of 26,960 chain-years.

Figure 1(A) reports the count of distinct franchise chains and outlets in each year of the complete panel data, and Table 2 reports aggregated chain-level data at an annual frequency. The panel grows over time. Particularly in the early years, this is most likely because of the increasing availability of machine-readable state-registered FDDs since online repositories were created in the early 2010s. Franchising is also a growing business model, so the upward trend in the size of the panel may partly reflect the entry of new franchise chains and the growth of existing ones (International Franchise Association, 2026).

3.1 Text Analysis and Data Construction Methods

We identify the presence or absence of the restraints listed in Section 2 using a mixture of text-as-data methods applied to the FDD corpus, including keyword-in-context extraction with iteratively developed classification rules (Meisenbacher and Norlander, 2023), table extraction via vision language models (Wei et al., 2023, 2024), and LLM-assisted extraction (Carlson and Burbano, 2026) to extract document-level metadata (see Appendix D). The output is document-level data in which each restraint is represented as a binary variable. We also extract semi-structured data from Item 20 of each FDD, including outlet counts and projected openings, and match chains to their corporate owners, including holding companies and private equity firms. As described above, we aggregate these document-level codings to the chain-year level and match chains to their corporate owners, including holding companies and private equity firms.

A separate research assistant then manually classified a random sample of 39 FDDs with respect to each restraint, without having seen the automated rules. In 84% of the 858 cells of the comparison sample (39 chains $\times$ 22 indicators), the two approaches agreed. For disagreements, the authors adjudicated and revised the rules accordingly. The full methodology, including the rule-construction process, ownership-matching procedure, and validation is described in Appendix A.

3.2 Survey Protocol

We surveyed current and former franchisees using contact information listed in Item 20 of FDDs. The survey was administered in two waves (September 2024 and April 2025) via SMS, interactive voice response, and email. We asked franchisees about post-term noncompetes, exclusive territories, retail pricing authority, supplier choice, restrictions on selling the franchise, product mandates, expected sale price, and whether franchisor control had gotten more onerous over time.

The combined sampling frame included over 393,000 phone numbers and 74,000 email addresses, stratified by franchise size. The survey yielded 350 total responses (309 chain-identifiable) across 234 distinct chains, with a blended response rate estimated between 0.2% and 1.2%, consistent with other business-owner surveys relying on unsolicited contact (Minnis and Shroff, 2017). Respondents disproportionately came from larger chains. The full protocol, including sampling procedures and response bias analysis, is described in Appendix C.

3.3 Complaints to the FTC

We use complaints filed with the Federal Trade Commission to proxy for franchisee dissatisfaction. The FTC administers a website through which individuals may report grievances against businesses (reportfraud.ftc.gov). We begin with all complaints reported from January 2014 to September 2023. To identify complaints likely about the

franchising relationship, we restrict to those with violation codes plausibly related to franchising (e.g., "Deficient franchise disclosure," "Breach of contract") whose complained-against party name-matches a known franchisor. This "full matched complaint set" comprises 72,186 complaints. We also consider more restrictive subsamples requiring the "Franchises & Distributorships" product code (1,327 complaints) or the presence of the words "franchisee" or "franchisor" in complaint text (461 complaints, available only from January 2019). The detailed methodology and robustness checks are reported in Appendix G.

4 Results

4.1 Results in the Unbalanced Panel

Figure 2 reports the baseline results: the prevalence of each of the contractual provisions described in Section 2 in the unbalanced franchise chain panel. The main finding is that provisions shifting decision-making authority to the franchisor have increased in prevalence over time, while the principal provision granting the franchisee a protected stake in the relationship—the exclusive territory—has diminished. We discuss each category in turn.

A. Retail pricing (Figure 2(A)). There are substantial increases in the prevalence of both retail price restraints: Resale Price Maintenance (which does not specify whether it is setting maximum or minimum prices, except in the cases where it is recording an "honor all discounts" policy, since that sets a maximum price for a specific transaction or set of transactions) as well as Minimum Resale Price Maintenance (which includes prohibitions on under-pricing and competing for the retail customers of rival franchisees or the franchisor). We record any degree of franchisor involvement in retail price-setting as constituting Resale Price Maintenance because either promoting or prohibiting certain pricing

conduct can rule out entire business models, or else impose them on the franchisee. For example, "honor all discounts" means the franchisee is obligated to implement the franchisor's policy of price discrimination, which may be against the franchisee's interest but not the franchisor's. It is also worth noting that the legal environment for retail price restraints shifted just prior to our panel period: the U.S. Supreme Court's 2007 decision in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.* changed the Sherman Act jurisprudence of minimum resale price maintenance from per se illegality to analysis under the Rule of Reason, potentially reducing the legal risk franchisors face from imposing pricing controls and contributing to their increased prevalence over the period we document.

Franchisor control over retail pricing also functions as a complement to other provisions. The franchisee may want to steer customers away from products on which it earns a loss; franchisor control over retail pricing prevents this, and is thereby necessary to enforce full-line forcing and exclusive supply. In this sense, the various facets of franchisor control are not independent but reinforce each other as a system.

B. Product and service offerings (Figure 2(B)). Exclusive supply and full-line forcing are arguably constitutive of the franchising business model, and both have high prevalence over the length of the panel. Exclusive supply is at nearly complete prevalence throughout.[6] Full-line forcing starts at over 90% prevalence and increases from there. Together, these provisions require that franchisees source their inputs from franchisor-approved suppliers and offer the franchisor's complete product or service portfolio, not only the profitable items. Altogether, it is perhaps unsurprising that most chains include some form of each. What is more notable is the trend in the franchisor's discretionary authority over the product mix: the prevalence of the franchisor's right to prohibit the franchisee from carrying specific products increases from around 80% to over 90%, and the prevalence of the franchisor's right to change the mix of products the franchisees are obligated

[6] As stated previously, we code this restraint as in operation if it pertains to *any* input purchased by the franchisee.

to offer during the franchise term increases from 50% to over 60%. These provisions go beyond the baseline uniformity that the franchise model requires; they grant the franchisor unilateral authority to reshape the franchisee's operations on an ongoing basis. The prevalence of the right to propose new suppliers also increases over the panel, but as we discuss in the survey results below, franchisees interpret this provision as a form of franchisor control rather than a grant of flexibility.

C. Territory and competition (Figure 2(C)). The most striking result concerns exclusive territories, which diminish considerably over the course of the panel, from a majority of chains at the beginning to around 20% by the end. Moreover, "Franchisor Reserves Right to Compete" is at almost complete prevalence by the end of the panel, suggesting that even the 20% of ostensible exclusive territory-granting chains that persist are nonetheless offering less than an ironclad guarantee of a protected local market.

This finding is significant for understanding the governance of the franchise relationship. The traditional account holds that the overall brand value is enhanced if franchisees conform to the franchisor's business model, including by not competing against one another. The exclusive territory is the quid pro quo in that arrangement: an exclusive license to share in the value of the brand in a local area. That exclusive territories are no longer being granted implies that franchisors can enforce the chain uniformity they need to operate without conceding protected markets to franchisees in return. Combined with the simultaneous increase in pricing restraints documented above (Category A), this pattern raises questions about the applicability of models in which restraints serve primarily to share franchisor rents with franchisees in exchange for cooperation (cf. Asker and Bar-Isaac, 2014). Whether and how franchisors are able to secure franchisee compliance across multiple dimensions of business conduct without offering protected markets in return is an important question that we take up in Section 5.[7]

[7]The decline in exclusive territories may interact with the growth of area development agreements and multi-unit franchising. Franchisees operating multiple outlets may accept weaker territorial protections in exchange for flexibility to expand across locations. Our data do not permit us to distinguish between single-

The restraints that prevent franchisees from offering products outside their territory, as well as the franchisor's veto over the specific location of the franchisee's premises, have increased gradually over time. Many franchise chains apparently both confine their franchisees to operating in a specific designated geography and do not guarantee them an exclusive distributorship within that geography. The combination effectively constrains the franchisee's competitive options.

Exclusive dealing—the requirement that franchisees deal only with the franchisor's brand and not carry competing brands or products—is at nearly complete prevalence throughout the panel. This is arguably constitutive of the franchise model itself, but its interaction with the decline of exclusive territories is notable: franchisees are bound to a single brand but increasingly lack a protected market in which to sell it.

Post-term franchise noncompete clauses are also noteworthy in this context. The prevalence of noncompetes starts at 80% in the panel and increases to around 90% by the end. If the franchisee is bound by a post-term noncompete, the prospective franchisee faces a free choice of brand affiliation only once, at the outset, which is also when he or she would be least knowledgeable about the true commercial value of alternative franchise brands. Moreover, if the franchisor's right to purchase assets acts to inhibit the secondary market for franchise businesses, then the assumption that franchisees freely choose with which brand to affiliate is further undermined. In the language of organizational economics, these provisions raise the cost of exit from the relationship, shifting bargaining power to the franchisor over the life of the contract. Whether this power shift with respect to the option to exit is compensated with other franchisee-favoring changes in the terms of the relationship is what we investigate in section 5.

D. Governance and dispute resolution (Figure 2(D)). The findings with regard to nondisclosure and speech restrictions imposed on franchisees are interesting and, to our knowledge, novel. Around 40% of chains disclose that at least some franchisees are bound

and multi-unit franchisees, but this interaction is an important avenue for future research.

by NDAs (with a slight upward trend over time), while about the same number state explicitly that franchisees are not bound by NDAs. Almost 80% of chains include a requirement that franchisees not jeopardize the franchisor's goodwill. The more extreme form of speech restriction, a non-disparagement clause imposed on the franchisee and/or its employees, applies to only a small minority of chains, but that too shows an increasing trend over time, reaching 20% of the panel by the end. About 60% of chains utilize a mandatory arbitration clause for franchisor-franchisee disputes.

Very few chains have an independent association of franchisees that is recognized by the franchisor, and the share that explicitly states they do not have one is rising, currently above 60%. From a governance perspective, these provisions collectively limit the mechanisms through which franchisees can voice dissatisfaction, coordinate with one another (although even with an association they are barred from collectively bargaining the terms of the franchise relationship), or escalate disputes to public fora. They restrict not just what franchisees can do operationally but what they can say about the relationship, narrowing the channels through which the balance of the relationship might be contested.

E. Information and monitoring (Figure 2(E)). About 90% of chains require franchisees to share point-of-sale data, up from 70% at the start of the panel. This is often enforced by requiring franchisees to use a specific data system licensed by the franchisor. The rise in data-sharing requirements reflects a broader trend toward franchisor monitoring of franchisee operations, enabled by advances in information technology. This creates an information asymmetry in which the franchisor observes the franchisee's operations in real time while the franchisee has no reciprocal visibility into the franchisor's decision-making—an asymmetry that may be consequential when the franchisor is simultaneously deciding whether to open competing outlets in the franchisee's market, as they are increasingly at liberty to do.

F. Legal and financial obligations (Figure 2(F)). Breaches of limited liability are common and increasingly prevalent. Over 90% of chains make the franchisee put up a personal

guarantee of obligations to the franchisor, and over 80% extend that to the franchisee's family and/or business associates. If limited liability is a constituent of the corporate form, then ostensibly independent franchise businesses are not fully able to avail themselves of it.[8] These provisions raise the personal stakes of the franchise relationship for the franchisee while doing nothing comparable for the franchisor. Combined with noncompete clauses and restrictions on the sale of the franchise business, they increase the cost of exit and thereby tilt the ongoing balance of bargaining power within the relationship.

Summary. Taken together, the trends documented in this subsection describe a coherent shift in the governance structure of franchise relationships. It is not the case that franchisors are gaining control in one domain while ceding it in another; rather, the movement is consistently in one direction across all six categories of contractual provisions. Franchisors are simultaneously tightening control over pricing, product mix, territory, information, speech, and financial exposure, while the principal concession to franchisees—the exclusive territory—is being withdrawn. This pattern of across-the-board tightening, rather than domain-specific adjustment, is what motivates the analysis in Section 5, where we test whether franchisees are compensated for the loss of autonomy we document here.

These patterns are not driven by compositional change in the panel. We construct two balanced sub-panels of chains observed consistently over time (170 chains for 2009–2024 and 686 chains for 2013–2024) and find the same or more pronounced trends, confirming that individual chains tightened their governance practices over the sample period (Appendix B). The patterns also hold across all 10 of the most common four-digit NAICS industries in the panel, ranging from restaurants to personal care services to residential construction, indicating that the shift is sector-wide rather than industry-specific (Appendix E).

[8] One of our (phone) survey responses raised a novel variant of this, at least to us: the franchisor treats the franchisee's business assets as its own collateral when obtaining bank loans—hence the franchisor's right to purchase assets may be required by any lender taking the franchisee's assets as collateral for a loan to the franchisor—which impairs the franchisee's ability to obtain business loans on its own account, and thus binds them to obtain financing *only* from the franchisor on unfavorable terms.

4.2 Franchisee Survey Results

We received 309 chain-identifiable survey responses covering 234 distinct chains. Table 3 reports the results, and Figure 3 gives the distribution of respondent size and tenure. Overall, respondents are young, small franchisees who evince dissatisfaction with the level of franchisor control: 61% report that control has gotten more onerous over time, with this share stable at 60–70% across all tenure levels above one year (Figure 3(C)). The open-ended responses report a range of intense to moderate dissatisfaction, with only two respondents indicating they felt the franchisor benefited their business (see Table C.2 for the full text of all open-ended survey responses).

We compare each survey response to the prevalence of the corresponding restraint in the respondent's chain FDD (Figure 4). Several patterns emerge. First, survey responses broadly validate our FDD codings: franchisees who report being bound by a noncompete, lacking an exclusive territory, or facing franchisor-chosen suppliers are more likely to have these provisions in their FDDs. Second, the survey reveals the limits of our coding. Exclusive supply registers at near-complete prevalence in the FDD data regardless of how franchisees answered, likely because we code this restraint as present if *any* input is franchisor-sourced, whereas franchisees perceive variation in the degree of supplier control. Notably, the provision allowing franchisees to propose new suppliers—which we initially interpreted as a grant of flexibility—is more prevalent among franchisees who report that the franchisor controls sourcing, suggesting franchisees view it as a form of control rather than autonomy.

Third, and most strikingly, the survey reveals a gap between exclusive territories as perceived by franchisees and as documented in FDDs. While 75% of respondents report having an exclusive territory, nearly all are subject to language reserving the franchisor's right to compete in that territory (98–100% prevalence across both groups). Many of the open-ended responses express extreme dissatisfaction with territorial encroachment.

More broadly, franchisees who believe themselves not to be bound by various provisions are often bound by them according to the applicable FDD.

The gap between formal and perceived authority. This gap admits three interpretations. The first is that franchisees are less autonomous than they realize, and that the Franchise Rule may not be doing an adequate job informing prospective franchisees about the true terms of the relationship—or that the terms have changed and, due to rising exit costs, franchisees have no recourse. The second is that the contractual authority we measure does not correspond to the practical exercise of control: in organizational terms, a distinction between formal and real authority (Aghion and Tirole, 1997). Under this interpretation, the provisions we document represent a reservoir of latent authority that can be deployed selectively—for example, against franchisees who resist new initiatives or become targets of acquisition—without being exercised against the entire system simultaneously. The third is that long-tenured franchisees operate under older, less restrictive contracts. However, most of our respondents are new and small franchisees, suggesting this explanation is unlikely to account for the gap.

5 Analysis of Franchisee Welfare

The results in Section 4 document an across-the-board shift in the allocation of decision-making authority from franchisees to franchisors. A natural question is whether this shift represents a transfer of surplus from franchisees to franchisors, or whether it instead reflects a jointly beneficial reorganization of the franchise relationship. The latter interpretation finds substantial theoretical support in the literature on vertical relationships: greater franchisor control may limit free-riding, eliminate double margins, incentivize franchisor investment in new products or services, or realize other efficiencies from chain uniformity. If such mechanisms are operative, the overall "pie" shared between the franchisor and franchisee may grow, and we would subsequently expect surplus to be shared

with franchisees (so-called "*compensating differentials*"): reductions in franchisee autonomy would be offset by improvements in other terms of the bilateral relationship that benefit franchisees.

One scenario consistent with compensating differentials is a competitive market at the franchisee-contracting stage. If the franchisor exerts greater control, that disincentive to affiliate must be offset by more generous terms in order to secure a flow of incoming franchisees. Alternatively, if prospective franchisees do not exert free choice at the contracting stage—because of information asymmetries, noncompete clauses binding them to the brand, or thin outside options—franchisors can make the terms more onerous without offering anything to compensate.

While we cannot measure an inclusive concept of franchisee welfare, we can estimate the relationship between the increased franchisor control documented in Section 4 and observable indicia of franchisee welfare. That is what we do in this section. We first reduce the dimensionality of the restraints to a single index of franchisor control, and then relate that measure—as well as the individual restraints—to three sets of outcomes: franchise fees, chain size and outlet dynamics, and complaints filed with the FTC. A positive correlation between franchisor control and franchise fees (or complaints) indicates *increasing differentials*: franchisee welfare is reduced in both qualitative and quantitative dimensions. The absence of a positive correlation between franchisor control and chain growth would indicate that the "growing the pie" rationale does not hold (or, at least, that franchisees do not receive a larger share of the pie in compensation for their lost autonomy). Conversely, a negative correlation between franchisor control and fees or complaints, combined with positive effects on chain size, would indicate compensating differentials.

While we employ two-way fixed effects regressions in this section, we emphasize that the goal is not to generate estimates of a causal relationship using a difference-in-differences framework. Causality may run in either or both directions in this case, and

since the adoption or removal of restraints is not necessarily an exogenous event, our estimates cannot be interpreted causally. However, our estimates allow us the ability to rule out one possibility: that franchisees receive additional compensation (in some form) following franchisor adoption of new restraints.

5.1 Franchisor Control as a Latent Trait Variable

To reduce the dimensionality of the restraint indicators, we estimate a two-parameter logistic item-response model in which a latent trait θ_{jt} captures overall franchisor control for chain j in year t. Each restraint k has a difficulty parameter β_k (how common the restraint is) and a discrimination parameter α_k (how responsive the restraint is to the underlying control trait). We estimate the model via Maximum Likelihood on the set of autonomy-reducing restraints plus the inverse of Exclusive Territory Granted. The resulting $\hat{\theta}_{jt}$ serves as a single summary measure of franchisor control in subsequent analyses. The item characteristic curves confirm that all autonomy-reducing restraints load positively on θ while exclusive territories load negatively (Figure 5(A)), and the distribution of $\hat{\theta}$ shifts rightward over the panel, consistent with increasing franchisor control (Figure 5(C)). Full details of the estimation are reported in Appendix F.

5.2 Relating Franchisor Control to Observable Outcomes

We relate both franchisor control as latent trait ($\hat{\theta}$) and the individual restraints (X) to three sets of outcomes indicative of franchisee welfare (y): franchise fees, chain size and outlet dynamics, and complaints filed with the FTC. For each outcome and each contractual provision (as well as $\hat{\theta}$), we estimate:

$$y_{jt} = \beta \cdot X_{jt} + \gamma_j + \lambda_t + \varepsilon_{jt} \tag{5.1}$$

where γ_j and λ_t are chain and year fixed effects, and standard errors are clustered at the chain level. For count outcomes we use Poisson pseudo-maximum likelihood; for the log of the initial franchise fee we use OLS. We report 95% confidence intervals and Bonferroni-corrected intervals to account for multiple testing.[9] Chain fixed effects ensure that β is identified from within-chain variation, so that it captures the effect of *adopting* a provision, not cross-sectional differences between chains. We emphasize that these estimates are not causal; they allow us to determine whether franchisees receive compensation following adoption of new restraints.

Initial franchise fees. Initial fees are a dollar amount payable as a start-up cost; royalties are a percentage of gross revenue.[10] Both are rising over time, though royalties cluster around focal norms of 6% (base) and 2% (advertising) (Figure 6). The estimated effect of $\hat{\theta}$ on the log initial fee is positive and statistically significant: chains that increase franchisor control also raise their entry costs (Figure 7(A)). This finding is inconsistent with compensating differentials and instead indicates *increasing differentials*—franchisees face both less autonomy and higher fees. One notable exception is the coefficient on Independent Franchisee Association, which is negative, suggesting that organized franchisee bodies may limit fee increases.

Chain size and outlet dynamics. If greater control "grows the pie," we would expect it to be associated with larger chains, more new outlets, and fewer terminations. We find no such evidence (Figure 7(B)). The pattern for terminated versus signed-but-unopened outlets is suggestive—terminations tend to be lower where control is greater, while signed-but-unopened outlets tend to be higher (Figures 7(C)–7(D))—but these effects do not survive Bonferroni correction. The absence of a positive relationship between franchisor control and chain growth undermines the efficiency rationale for the shift in authority we

[9] The Bonferroni correction adjusts the significance level to α/k, where k is the number of restraints tested (including $\hat{\theta}$).

[10] We source royalty data from *Entrepreneur* magazine's annual Franchise 500 ranking, linked to our panel data. This is also the source for the franchise fee panel dataset on which Lafontaine and Shaw (1999) is based.

document.

FTC complaints. Franchise complaints to the FTC have risen over time, broadly tracking overall complaint trends (Figure 8; for a full accounting of our methodology, see Appendix G). Regressing complaint counts on restraint adoption, most estimated effects are statistically indistinguishable from zero (Figure 9). The estimate on $\hat{\theta}$ is precise enough to rule out large reductions: the lower bound of the 95% confidence interval implies at most a 4.1% decline in complaints per within-chain-standard-deviation increase in $\hat{\theta}$.[11] The quality of the franchising relationship, as proxied by complaints, does not improve to compensate for decreased autonomy.

Summary. The three sets of results point in the same direction: franchise fees rise with franchisor control, chain growth does not increase, and complaint rates do not decline. Franchisees lose autonomy, pay more, and are not compensated through growth or improved relationship quality. This motivates the question we take up in Section 6: what drives this shift?

6 Corporate Structure and Ownership by Private Equity

Having established that the shift in franchisor control is not compensated by improvements in franchisee welfare, we now investigate what drives it. Many franchise chains are part of holding companies, consolidated either through mergers of pre-existing chains or originated by holding companies to enter new markets or launch new brands. We assign holding company ownership codes to the chains comprising the panel dataset[12] and compute the Herfindahl-Hirschman Index (HHI) at the four-digit NAICS industry level for each of the top 10 industries in the panel, both at the individual chain level and at the holding company level. Market shares are computed from holding-company-level

[11] Calculated as $\exp(-0.0861 \times 0.4915) - 1$.

[12] The codes are identical to the chain code of the chain is not holding-company-owned according to our research.

outlet counts. We find no pronounced time trend in industry-level concentration despite increasing ownership by holding companies (Miller, 2024), most likely because entry by new franchise chains counterbalances the consolidation of incumbents (Figure H.1). We can therefore rule out increased franchisor consolidation as an explanation for the trend toward declining franchisee autonomy.

A more promising—though by no means exclusive—explanation emerges from the rising prevalence of private equity involvement in the ownership of franchise brands. Private equity firms acquire franchise chains either directly or through holding companies that are themselves private-equity-owned (Figure 1(B)). In Figure H.2, we plot the prevalence of each restraint among chains that are and are not owned by private equity firms, over time. In general, each restraint is more prevalent among private-equity-owned chains, and the gap becomes increasingly clear as private equity ownership grows in the second half of the 2010s. Figure H.3 makes this pattern visible in terms of the franchisor control latent trait: higher values of $\hat{\theta}$ are associated with a greater likelihood of private equity ownership.

This cross-sectional correlation could reflect either selection (private equity firms acquire chains that already exercise greater franchisor control) or treatment (private equity ownership causes chains to tighten control, or alternatively tighter control conduces to private equity ownership). To shed light on the direction, we estimate an event study testing whether private equity acquisition responds to the prior adoption of individual restraints:

$$\mathbb{I}\{\textit{Chain } j \textit{ is PE owned at time } t\}_{jt} = \sum_{\tau=-4}^{5} \beta_{k\tau} \cdot \textit{restraint } k_{j,(t-\hat{t}=\tau)} + \gamma_j + \lambda_t + \epsilon_{jt} \qquad (6.1)$$

where the outcome is an indicator for whether chain j is owned by a private equity firm at time t, and the regressors are leads and lags relative to the year $\hat{t}$ in which chain j adopted (or, in the case of exclusive territories, removed) restraint k. Chain and year fixed effects

are included, so identification comes from within-chain variation in the timing of restraint adoption. Standard errors are clustered at the chain level.

The results are reported in Figure 10. The post-adoption coefficients are generally positive, indicating that adopting autonomy-reducing provisions is associated with a 2–5 percentage point increase in the probability of private equity ownership within five years. The restraints most strongly associated with subsequent private equity acquisition are the revocation of exclusive territories and the assertion of the franchisor's right to invade the franchisee's territory, franchisor control over site selection, resale price maintenance (both maximum and minimum), mandatory arbitration, and restrictions on franchisee speech.

Two caveats are important. First, in some cases the pre-treatment coefficients trend positively, indicating that chains that eventually adopt these restraints did so after they were acquired by private equity firms. This means the event study should not be interpreted as establishing that restraint adoption *causes* private equity buyout, since the causality may run in the opposite direction. We leave resolving that question to future research. Second, the confidence intervals are wide for several restraints, so we do not want to overstate the precision of the individual estimates. The more robust finding is the consistent direction of the pattern: adopting these restrictive restraints is positively correlated with private equity buyouts.

These results suggest a coherent strategic logic connecting the contractual changes we document to the ownership changes occurring in the franchise sector. From the perspective of a franchisor (or its current owners) seeking to attract private equity investment, stripping franchisees of exclusive territories signals capacity for rapid outlet expansion. Such a growth narrative is attractive to prospective investors (and this interpretation is corroborated by Miller (2024)). Resale price maintenance standardizes the brand and signals that franchisor-mandated price increases are an available profitability lever. Restrictions on what franchisees can say to prospective buyers, media, or regulators reduce the risk that incumbent franchisee dissatisfaction will complicate a transaction or

dampen post-acquisition growth. Mandatory arbitration limits the legal exposure that a new owner would inherit. And the absence of exclusive territories means that new franchise licenses can be offered in existing markets without running afoul of incumbent franchisees' contractual protections.

From the acquirer's perspective, these features make the chain a more attractive target: the franchisor has already centralized the decision rights needed to implement the kinds of operational changes—rapid expansion, cost rationalization, pricing adjustments—that private equity's value-creation playbook typically requires. The reduction in franchisee autonomy we document can thus be understood, at least in part, as franchisors positioning their brands for a capital market transaction by pre-emptively resolving the governance frictions that would otherwise constrain a new owner.

Whether this dynamic benefits or harms the parties involved depends on one's vantage point. For franchisors and their investors, the demonstrated ability to centralize control and expand the system is a source of value. For franchisees, the same changes represent a loss of autonomy, protected markets, and bargaining leverage that—as Section 5 established—is not offset by compensating improvements in other terms of the relationship. The coincidence of declining franchisee autonomy and rising private equity involvement in the franchise sector is a pattern that warrants further investigation as private equity's role in franchising continues to grow.

We note two caveats regarding alternative explanations. First, private equity involvement in franchising is not limited to the franchisor side: PE-backed multi-unit franchisees have become increasingly prominent, and whether their bargaining leverage alters the dynamics we document is an important question for future research. Second, factors other than private equity may contribute to the shifts we document, including the permissive trajectory of antitrust jurisprudence toward vertical restraints since the late 1970s (Callaci, 2021*a*)—notably the Supreme Court's 2007 *Leegin* decision, which reduced the legal risk of resale price maintenance—and the professionalization of franchise law prac-

tice, through which lawyers advising multiple chains may propagate restrictive provisions across their client base. These mechanisms may operate alongside, or independently of, the ownership dynamics documented above.

7 Discussion

Our central contribution is documenting a systematic, uncompensated shift in bargaining power within an established vertical relationship—a finding that engages with foundational questions in organizational economics about surplus allocation in inter-firm relationships (Brandenburger and Stuart, 1996). The franchising literature has generally assumed that a competitive market for franchisees disciplines franchisor behavior (Blair and Lafontaine, 2005). Our findings challenge this view: franchisors have extracted greater control and higher fees without offering offsetting benefits, and this pattern has persisted for over a decade across the near-universe of U.S. franchise chains.

Several mechanisms could sustain this asymmetry. *Information asymmetries*: our survey reveals that 75% of respondents report having an exclusive territory, yet nearly all are subject to language reserving the franchisor's right to compete in that territory, suggesting the "informed choice" mechanism underlying the Franchise Rule is impaired. *Hold-up*: once a franchisee has committed capital to a specific location and brand identity, disaffiliation becomes costly, and post-term noncompete clauses (approaching 90% prevalence) further constrain exit. *Collective action constraints*: very few chains recognize an independent franchisee association, and such associations are barred from collective bargaining by Section 1 of the Sherman Act (Mancini, Steinbaum and Stutchbury, 2025). *Network effects*: as a brand grows, individual franchisees become more dependent on chain-level brand equity they cannot replicate independently. Investigating which mechanism most contributes to sustained power asymmetries is a promising direction for future research.

Our contribution to the debate over whether vertical restraints create or capture value

(Blair and Lafontaine, 2005; Easterbrook, 1984; Asker and Bar-Isaac, 2014; Bernheim and Whinston, 1998; Schilke and Lumineau, 2018; Poppo and Zenger, 2002) is not to resolve it but to show that, whatever efficiency gains these restraints may produce, the distribution of surplus has shifted. This asymmetric contractual evolution suggests restraints are not adopted through bilateral negotiation that shares the gains, and connects to our finding that private equity acquisition follows restraint adoption (Shleifer and Summers, 1988).

Organizational boundaries and entrepreneurship. Our findings raise fundamental questions about the boundary between franchisor and franchisee. Franchisors increasingly exercise de facto control over pricing, product mix, supplier choice, site selection, and operational data, while preserving the legal claim that franchisees are independent businesses. Bidwell (2012) demonstrates that power dynamics, not only efficiency considerations, shape firm boundary decisions, a finding consistent with our evidence that the surplus distribution has shifted even if efficiency gains exist. Over 90% of chains require personal guarantees that pierce limited liability. This creates a governance arrangement in which franchisors obtain the control benefits of vertical integration without bearing the capital costs or employment-related obligations of the unitary corporate form (Dirlam and Kahn, 1954). This finding also challenges conventional theories of the firm that treat the integration decision as binary, consistent with the power conception of organizational boundaries developed by Santos and Eisenhardt (2005). It also has implications for the entrepreneurship literature: franchising is frequently characterized as a path to business ownership (Combs et al., 2011; Michael, 1996). Yes Lakhani and Ouyang (2022) show that franchisee-owned units already underinvest in human resources relative to company-owned units, a gap that reduced franchisee autonomy may widen. If franchisees lack meaningful discretion over pricing, sourcing, product offerings, location, and even the ability to exit the relationship, the entrepreneurial content of franchise ownership is substantially diminished.

Contract design and evolution. We demonstrate that franchise contracts, typically viewed as highly standardized and stable (Lafontaine and Shaw, 1999), have evolved substantially. Unlike bilateral contracts studied in prior work (Argyres, Bercovitz and Mayer, 2007; Mayer and Argyres, 2004; Xing et al., 2021; Vanneste and Puranam, 2010; Bercovitz and Tyler, 2014; Argyres, Bercovitz and Leenders, 2025), franchise contracts are predominantly one-sided templates offered on a take-it-or-leave-it basis. Shane (2001) shows that the design of these templates matters: contractual incentive structures predict franchisee unit survival, suggesting that the one-sided evolution we document has real consequences beyond the allocation of decision rights. This institutional feature may explain why contractual evolution is not accompanied by compensating adjustments: franchisees lack the bargaining power to demand better terms when contracts change.

Implications for policy and practice. The FTC's Franchise Rule requires detailed disclosure but does not regulate substantive contract terms, on the theory that informed franchisees will discipline franchisor behavior through their affiliation decisions. Our evidence suggests this approach may be insufficient: disclosure does not reliably produce informed decision-making, and relationship-specific investments, switching costs, and post-term noncompetes may prevent franchisees from disciplining franchisor behavior ex post. Recent enforcement activity underscores these issues: in March 2026, the FTC secured a $17 million settlement against Xponential Fitness, the largest consumer redress in the agency's history for a Franchise Rule violation (Federal Trade Commission, 2026). FTC Chairman Andrew N. Ferguson noted the "onerous noncompete clauses" and substantial transfer fees that constrained franchisee exit (Ferguson, 2026). Some states have adopted "relationship laws" providing substantive protections; our findings suggest such protections may be economically justified if they offset bargaining power asymmetries that disclosure alone cannot remedy.

8 Conclusion

Using a comprehensive corpus of Franchise Disclosure Documents spanning 2009–2024, we document a systematic shift in the balance of power within franchise relationships. Franchisee autonomy has declined across multiple dimensions—pricing, product offerings, territory, governance, information, and financial obligations—while franchisor control has increased. This decline in autonomy is not compensated by improvements in fees, support, or relationship quality, which supports our finding that bargaining power has shifted toward franchisors.

We identify private equity ownership as one explanation for this shift: chains that adopt franchisor-favoring provisions become substantially more likely to be acquired by private equity within five years. We interpret this pattern as reflecting franchisors' strategic efforts to signal growth potential and operational control to investors, even when doing so extracts surplus from franchisees.

These findings contribute to research on contract evolution, vertical relationships, and organizational boundaries by demonstrating that bargaining power in established interfirm relationships can shift dramatically, that vertical restraints may serve rent extraction and/or efficiency, and that ownership structure influences governance in ways that affect surplus distribution. Our approach—treating the balance of power as a quantifiable, empirical phenomenon rather than an abstract concept—offers a template for studying power dynamics in other vertical relationships governed by standardized contracts. The scale of the changes we document, affecting hundreds of thousands of franchise establishments across diverse industries, merits continued attention from scholars, practitioners, and policymakers.

References

Aghion, Philippe, and Jean Tirole. 1997. "Formal and Real Authority in Organizations." *Journal of Political Economy*, 105(1): 1–29.

Arbel, Y. A. 2023. "The Readability of Contracts: Big Data Analysis."

Argyres, Nicholas, Janet Bercovitz, and Hugo Leenders. 2025. "Entitlement Constraints on Franchise Systems: Evidence from System Acquisitions." *Strategy Science*, 10(2): 166–184.

Argyres, Nicholas S, Janet Bercovitz, and Kyle J Mayer. 2007. "Complementarity and evolution of contractual provisions: An empirical study of IT services contracts." *Organization science*, 18(1): 3–19.

Asker, John, and Heski Bar-Isaac. 2014. "Raising Retailers' Profits: On Vertical Practices and the Exclusion of Rivals." *American Economic Review*, 104(2): 672–686.

Atz, Ulrich. 2025. "Voluntary Disclosures and Investor Naïveté: Evidence from Franchising." *Social Science Research Network, https://www.ssrn.com/abstract=5381656*.

Bercovitz, Janet EL, and Beverly B Tyler. 2014. "Who I am and how I contract: The effect of contractors' roles on the evolution of contract structure in university–industry research agreements." *Organization Science*, 25(6): 1840–1859.

Bernheim, B. Douglas, and Michael Whinston. 1998. "Exclusive Dealing." *Journal of Political Economy*, 106(1): 64–103.

Bidwell, Matthew J. 2012. "Politics and Firm Boundaries: How Organizational Structure, Group Interests, and Resources Affect Outsourcing." *Organization Science*, 23(6): 1622–1642.

Blair, Roger D., and David L. Kaserman. 1983. *Law and Economics of Vertical Integration and Control.* New York:Academic Press.

Blair, Roger D., and Francine Lafontaine. 2005. *The Economics of Franchising.* New York:Cambridge University Press.

Brandenburger, Adam M., and Harborne Stuart. 1996. "Value-based Business Strategy." *Journal of Economcs & Management Strategy*, 5(1): 5–24.

Callaci, Brian. 2021*a*. "Control without Responsibility: The Legal Creation of Franchising 1960-1980." *Enterprise & Society*, 22(1): 156–182.

Callaci, Brian. 2021*b*. "What Do Franchisees Do? Vertical Restraints as Workplace Fissuring and Labor Discipline Devices." *Journal of Law and Political Economy*, 1(3): 397–444.

Callaci, Brian, Matthew Gibson, Sérgio Pinto, Marshall Steinbaum, and Matt Walsh. 2024. "The Effect of Franchise No-poaching Restrictions on Worker Earnings." *Review of Economics and Statistics*. Accepted.

Callaci, Brian, Sérgio Pinto, Marshall Steinbaum, and Matt Walsh. 2025. "Vertical Restraints and Labor Markets in Franchised Industries." *Research in Labor Economics*, 52B: 255–305.

Carlson, Natalie A., and Vanessa Burbano. 2026. "The use of LLMs to annotate data in management research: Foundational guidelines and warnings." *Strategic Management Journal*, 47(3): 699–725. _eprint: https://sms.onlinelibrary.wiley.com/doi/pdf/10.1002/smj.70023.

Combs, James G., David J. Ketchen, Christopher L. Shook, and Jeremy C. Short. 2011. "Antecedents and Consequences of Franchising: Past Accomplishments and Future Challenges." *Journal of Management*, 37(1): 99–126.

Dirlam, Joel B., and Alfred E. Kahn. 1954. *Fair Competition: the Law and Economics of Antitrust Policy.* Westport, CT:Greenwood Press.

Easterbrook, Frank H. 1984. "Vertical Arrangements and the Rule of Reason." *Antitrust Law Journal*, 53(1): 135–173.

Federal Trade Commission. 2026. "FTC Secures Settlement Against Xponential Fitness for Franchise Rule Violations." Press Release.

Ferguson, Andrew N. 2026. "Concurring Statement of Chairman Andrew N. Ferguson in Matter of Xponential."

Grosz, Michel, and Devesh Raval. 2025. "Amplifying Consumers' Voice: The Federal Trade Commission's Report Fraud Website Redesign." *Marketing Science*, 44(3): 525–545.

Guzman, Jorge, and Scott Stern. 2020. "The state of American entrepreneurship: New estimates of the quantity and quality of entrepreneurship for 32 US States, 1988–2014." *American Economic Journal: Economic Policy*, 12(4): 212–243.

International Franchise Association. 2026. "Franchising Economic Outlook."

Krueger, Alan B, and Orley Ashenfelter. 2022. "Theory and Evidence on Employer Collusion in the Franchise Sector." *Journal of Human Resources*, 57.

Lafontaine, Francine, and Kathryn L. Shaw. 1999. "The Dynamics of Franchise Contracting: Evidence from Panel Data." *Journal of Political Economy*, 107(5): 1041–1080.

Lafontaine, Francine, Lorenzo Luisetto, and J.J. Prescott. 2025. "Mobility-Restricting Covenants in Business Contracts: the Case of Franchising." Working Paper.

Lafontaine, Francine, Saattvic, and Margaret Slade. 2023. "No-Poaching Clauses in Franchise Contracts: Anticompetitive or Efficiency Enhancing?"

Lakhani, Tashlin, and Can Ouyang. 2022. "Chain Affiliation and Human Resource Investments: Evidence from the Restaurant Industry." *Organization Science*, 33(6): 2209–2225.

Luhn, Hans Peter. 1960. "Key word-in-context index for technical literature (kwic index)." *American documentation*, 11(4): 288–295.

Lumineau, Fabrice, and Deepak Malhotra. 2011. "Shadow of the contract: How contract structure shapes interfirm dispute resolution." *Strategic management journal*, 32(5): 532–555.

Luo, Yadong. 2002. "Contract, cooperation, and performance in international joint ventures." *Strategic management journal*, 23(10): 903–919.

Malhotra, Deepak, and Fabrice Lumineau. 2011. "Trust and collaboration in the aftermath of conflict: The effects of contract structure." *Academy of management Journal*, 54(5): 981–998.

Mancini, Vincent, Marshall Steinbaum, and Robert Stutchbury. 2025. "An Antitrust Exemption for Collective Bargaining by Independent Contractors." *Antitrust Law Journal*. Forthcoming.

Mathewson, G Frank, and Ralph A Winter. 1984. "An economic theory of vertical restraints." *The RAND Journal of Economics*, 27–38.

Mayer, Kyle J, and Nicholas S Argyres. 2004. "Learning to contract: Evidence from the personal computer industry." *Organization science*, 15(4): 394–410.

Meisenbacher, Stephen, and Peter Norlander. 2023. "Transforming Unstructured Text into Data with Context Rule Assisted Machine Learning (CRAML)."

Michael, Steven C. 1996. "To Franchise or Not to Franchise: An Analysis of Decision Rights and Organizational Form." *Journal of Business Venturing*, 11(1): 57–71.

Miller, Alicia. 2024. *Big Money in Franchising: Scaling Your Enterprise in the Era of Private Equity.* Figure 1 Publishing.

Minnis, Michael, and Nemit Shroff. 2017. "Why regulate private firm disclosure and auditing?" *Accounting and Business Research*, 47(5): 473–502.

Murry, Charles, and Peter Newberry. 2022. "Franchise Contract Regulations and Local Market Structure." *The Journal of Law and Economics*, 65(1): 105–130. Publisher: The University of Chicago Press.

Norlander, Peter. 2025. "New Evidence on Employee Noncompete, No Poach, and No Hire Agreements in the Franchise Sector." *Research in Labor Economics*, 52B.

Paul, Sanjukta. 2023. "On Firms." *University of Chicago Law Review*, 90(2): 579–621.

Poppo, Laura, and Todd Zenger. 2002. "Do formal contracts and relational governance function as substitutes or complements?" *Strategic management journal*, 23(8): 707–725.

Rey, Patrick, and Jean Tirole. 1986. "The logic of vertical restraints." *The American economic review*, 921–939.

Ryall, Michael D, and Rachelle C Sampson. 2009. "Formal contracts in the presence of relational enforcement mechanisms: Evidence from technology development projects." *Management science*, 55(6): 906–925.

Santos, Filipe M., and Kathleen M. Eisenhardt. 2005. "Organizational Boundaries and Theories of Organization." *Organization Science*, 16(5): 491–508.

Schilke, Oliver, and Fabrice Lumineau. 2018. "The double-edged effect of contracts on alliance performance." *Journal of Management*, 44(7): 2827–2858.

Schneider, Daniel, and Kristen Harknett. 2025. "The Shift Project." *https://shift.hks.harvard.edu/about/team/*.

Shane, Scott. 2001. "Organizational Incentives and Organizational Mortality." *Organization Science*, 12(2): 136–160.

Shleifer, Andrei, and Lawrence H. Summers. 1988. "Breach of Trust in Hostile Takeovers." In *Corporate Takeovers: Causes and Consequences*. 33–68. Chicago:University of Chicago Press.

Stantcheva, Stefanie. 2023. "How to Run Surveys: A Guide to Creating Your Own Identifying Variation and Revealing the Invisible." *Annual Review of Economics*, 15(Volume 15, 2023): 205–234.

Vanneste, Bart S, and Phanish Puranam. 2010. "Repeated interactions and contractual detail: Identifying the learning effect." *Organization science*, 21(1): 186–201.

Wei, Haoran, Chenglong Liu, Jinyue Chen, Jia Wang, Lingyu Kong, Yanming Xu, Zheng Ge, Liang Zhao, Jianjian Sun, Yuang Peng, et al. 2024. "General OCR Theory: Towards OCR-2.0 via a Unified End-to-end Model." *arXiv preprint arXiv:2409.01704*.

Wei, Haoran, Lingyu Kong, Jinyue Chen, Liang Zhao, Zheng Ge, Jinrong Yang, Jianjian Sun, Chunrui Han, and Xiangyu Zhang. 2023. "Vary: Scaling up the Vision Vocabulary for Large Vision-Language Models." *arXiv preprint arXiv:2312.06109*.

Winter, Sidney G., and Gabriel Szulanski. 2001. "Replication as Strategy." *Organization Science*, 12(6): 730–743.

Xing, Zhe, Kyle J Mayer, Xuanli Xie, Jeffrey J Reuer, and Elko Klijn. 2021. "The effects of contract detail and prior ties on contract change: A learning perspective." *Organization Science*, 32(2): 480–499.

Zamora-Appel, Barbara, and Nidaal Jubran. 2021. "Nearly 300 Industries Offer Franchise Opportunities."

Tables

Table 2. Summary Statistics for the Franchise Chain Panel. Outlet counts are reported on a retrospective basis. Outlet counts are unavailable for 2023 and 2024. The share of chain observations derived from an FDD for a given year means the share of franchise chains for which we have an FDD for that year and hence an original observation for our binary variables indicating each restraint, as opposed to carried forward from an observation for the same chain in a previous year.

Year	Number of Chains	Total Number of Outlets	Average Outlets per Chain	Median Initial Fee ($)	Median Royalty Rate (%)	Median Ad Royalty Rate (%)	Share of Chain Observations Derived from an FDD (%)
2009	186	292409	524	28925	5.75	2	100
2010	215	345154	515	25000	6	2	14.88
2011	693	360357	404	25000	5.5	2.25	85.57
2012	817	394867	321	29900	5.5	2	69.65
2013	1397	394380	293	30000	6	2	87.47
2014	1596	394662	268	30000	6	2	66.79
2015	1860	406161	264	32000	6	2	78.06
2016	1902	404521	260	32500	6	2	68.98
2017	1978	405578	253	34500	6	2	62.89
2018	2067	401007	245	35000	6	2	62.94
2019	2055	413387	238	35000	6	2	57.37
2020	2029	414928	236	35000	6	2	53.87
2021	2156	414410	241	35000	6	2	63.17
2022	2732	332099	277	36440	6	2	88.58
2023	2705			37500	6	2	85.58
2024	2572						73.13

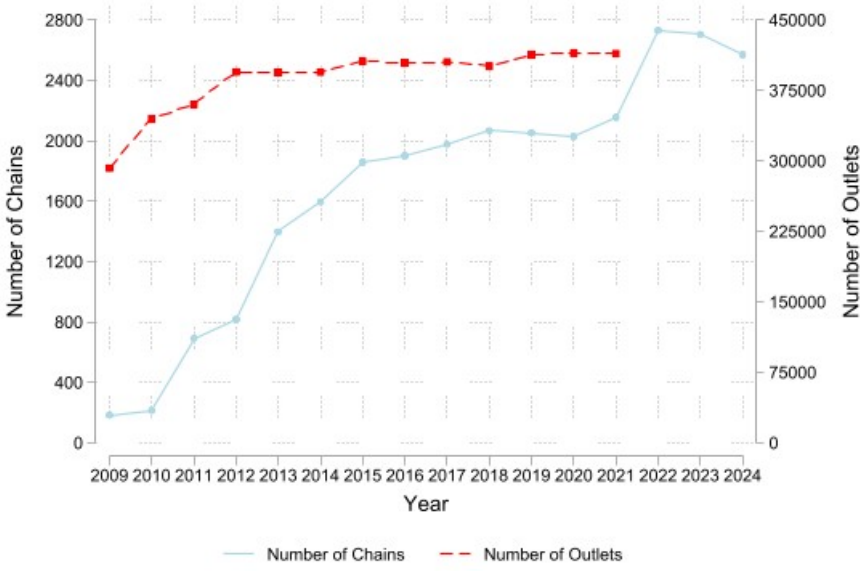
Table 3. Survey Responses

Question	Answer	Share	N
Is your franchise business still operating?	No	20.9%	325
	Yes	79.1%	
Do you decide retail prices?	I decide	73.7%	262
	The franchisor decides	19.8%	
	I decide, but the franchisor can overrule	6.5%	
Franchisor Control Over Retail Prices	Complete	13%	162
	A lot	24.1%	
	Medium	17.9%	
	Low	24.1%	
	None	21%	
Do you choose your suppliers?	I choose	20.1%	259
	The franchisor chooses	39.4%	
	A mix	40.5%	
Does the franchisor mandate the products/services you sell?	I can choose which products or services I sell	42.5%	259
	I cannot pick and choose which products or services I sell	40.9%	
	I must sell some products, but I am allowed to choose others	16.6%	
Do you have a post-term noncompete?	No Noncompete	15.2%	257
	Noncompete	84.8%	
Does the franchisor restrict franchise sales?	I can sell to whomever I want	25.6%	258
	The franchisor restricts whom I can sell to	72.9%	
	I can only sell to the franchisor	1.6%	
If you sold your franchise, would you receive a fair price?	Highly unlikely	28.7%	160
	Somewhat unlikely	23.1%	
	Uncertain	15%	
	Likely	26.3%	
	Certain	6.9%	
Do you have an exclusive franchise territory?	No	24.7%	263
	Yes	75.3%	
Has the franchisor's overall control gotten more onerous over time?	Franchisor's control gotten more onerous	60.9%	161
	Franchisor's control gotten less onerous	8.1%	
	Franchisor's control stayed the same	31.1%	

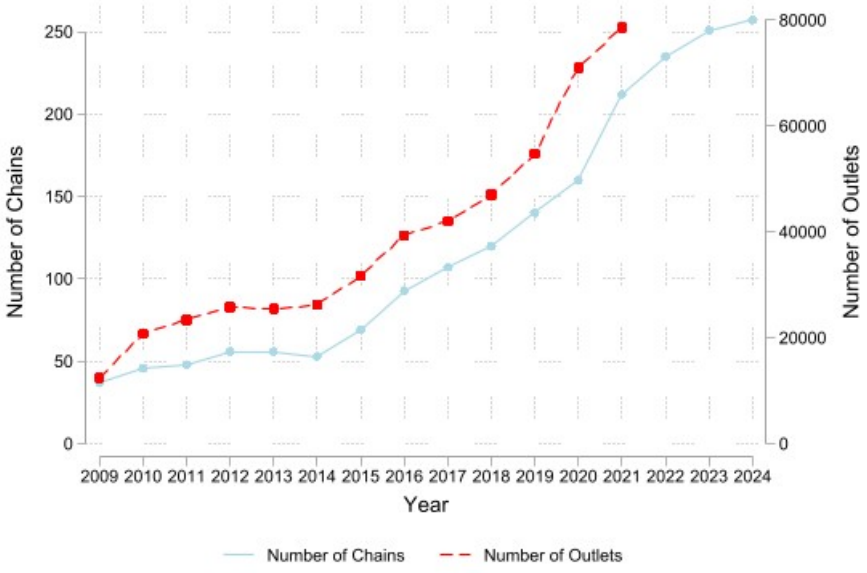
Note: The two scaled questions, *Franchisor Control Over Retail Prices* and *If You Sold Your Franchise Business, Would You Receive a Fair Price?* were asked on the second wave of the survey only, as was the final question assessing the overall trend in franchisor control.

Figures

Figure 1. Count of Franchise Chains and Outlets, 2009-2024. The number of chains per year refers to the width of the panel dataset, which is growing over time due to the increasing number of documents in the FDD corpus (as well as the growth of the franchising sector overall). The count of outlets derives from Item 20, Table 1 of the FDD, which reports the chain-level outlet count in the previous three years before the FDD was filed. Panel B shows the trends at the level of private equity ownership.

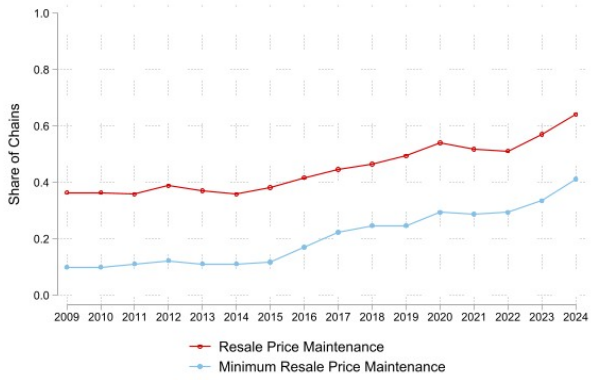


(A) All Chains

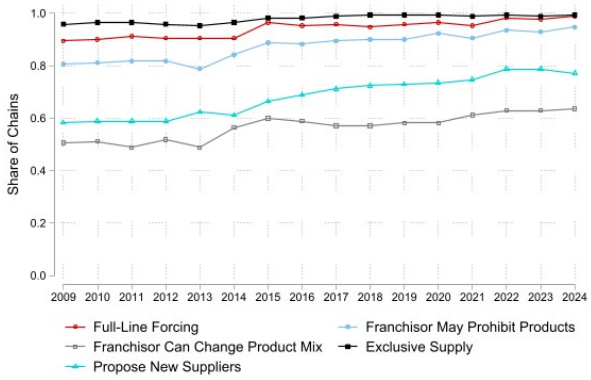


(B) Private Equity-Owned Chains

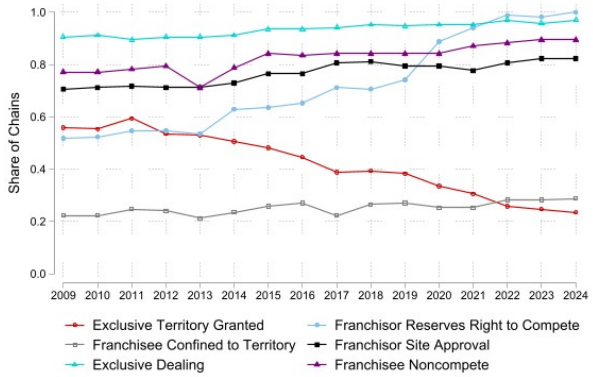
Figure 2. Time Series of the Prevalence of Each Franchise Restraint in the Panel Dataset. These figures report the prevalence of each of the six sets of franchise restraints and contractual provisions described in section 2 in the unbalanced franchise chain panel dataset, 2009-2024.



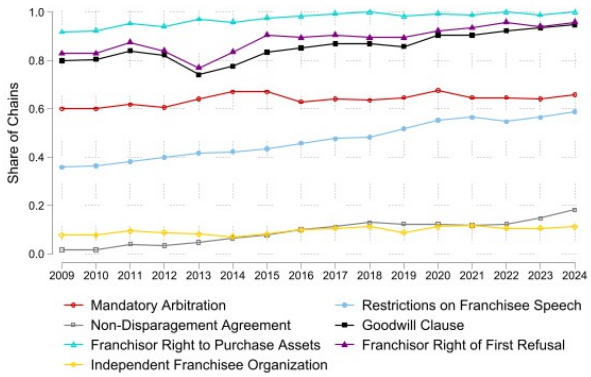
(A) Retail Pricing



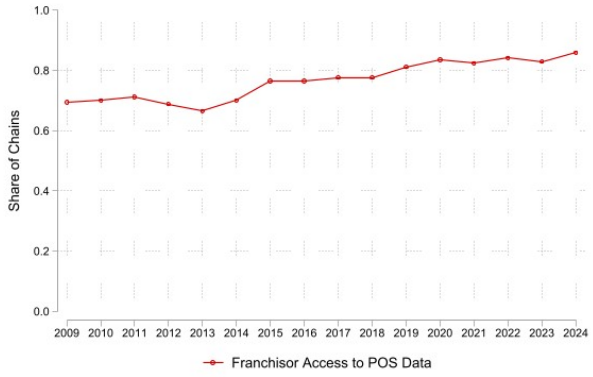
(B) Product & Service Offerings



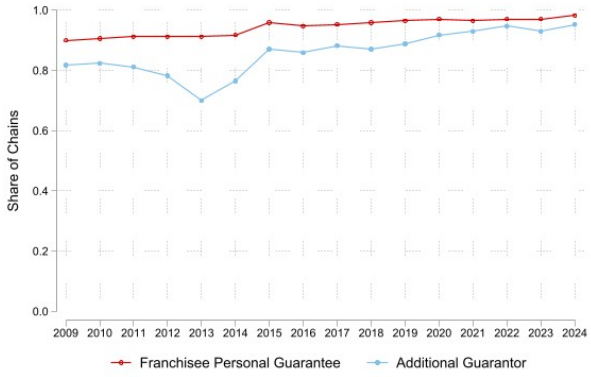
(C) Territory & Competition



(D) Governance & Dispute Resolution

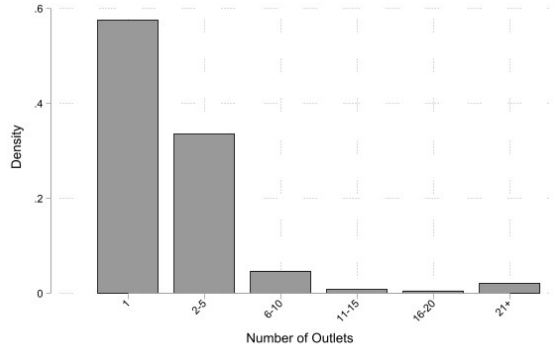


(E) Information & Monitoring

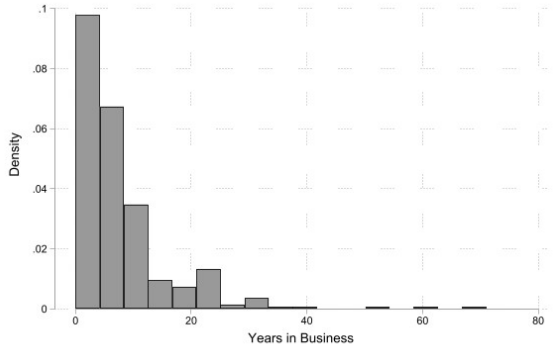


(F) Legal & Financial Obligations

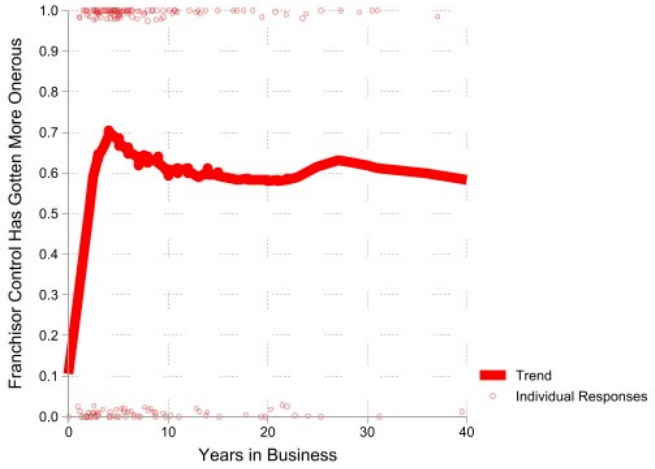
Figure 3. Summary Statistics from the Survey Responses. These figures display the distribution of franchise size (outlet count) and time in business reported by survey respondents described in section 4.2, as well as the share of respondents reporting the franchisor's control has gotten more onerous as a function of tenure in the business.



(A) Survey responses by number of franchised outlets owned by the respondent.

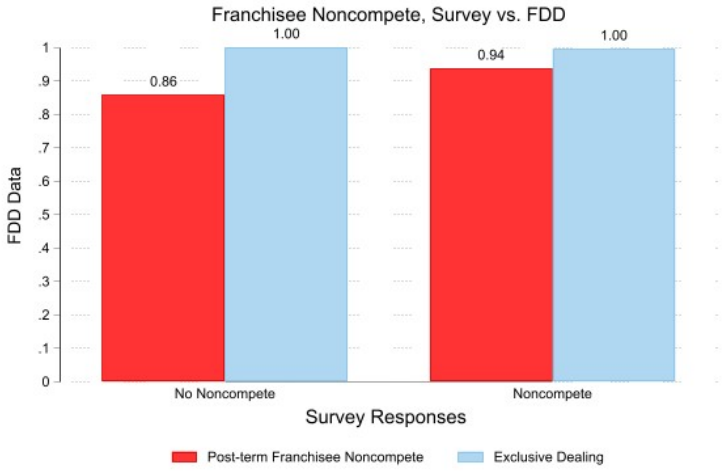


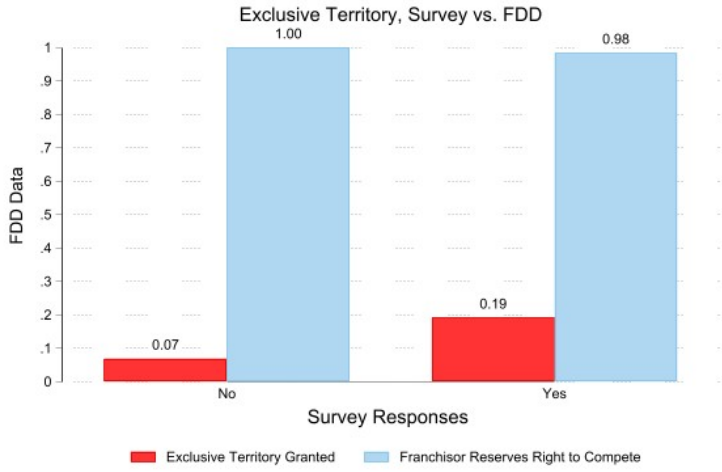
(B) Survey responses by franchisee tenure in the business.

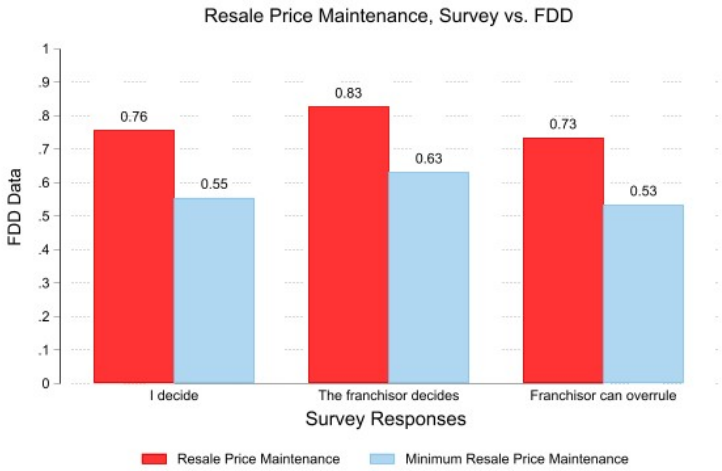


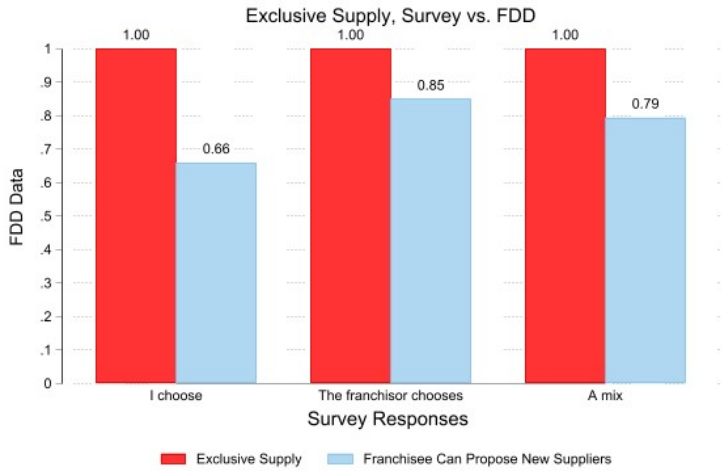
(C) Share answering "franchisor's control has gotten more onerous" by tenure in business.

Figure 4. Comparison Between Franchisee Survey Responses and Chain-level Data from FDDs. These figures compare the responses to the survey reported in section 4.2 to the franchise-chain-level data gathered from FDDs. For each survey response, the share of chains with a given restraint among the franchisees who gave that response is reported on the vertical axis. The relevant comparison is within restraint, across survey responses, i.e. comparing bars with the same color in each sub-figure.









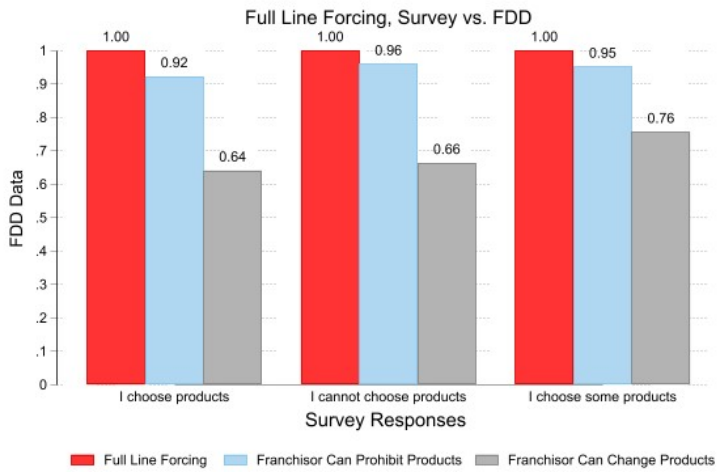
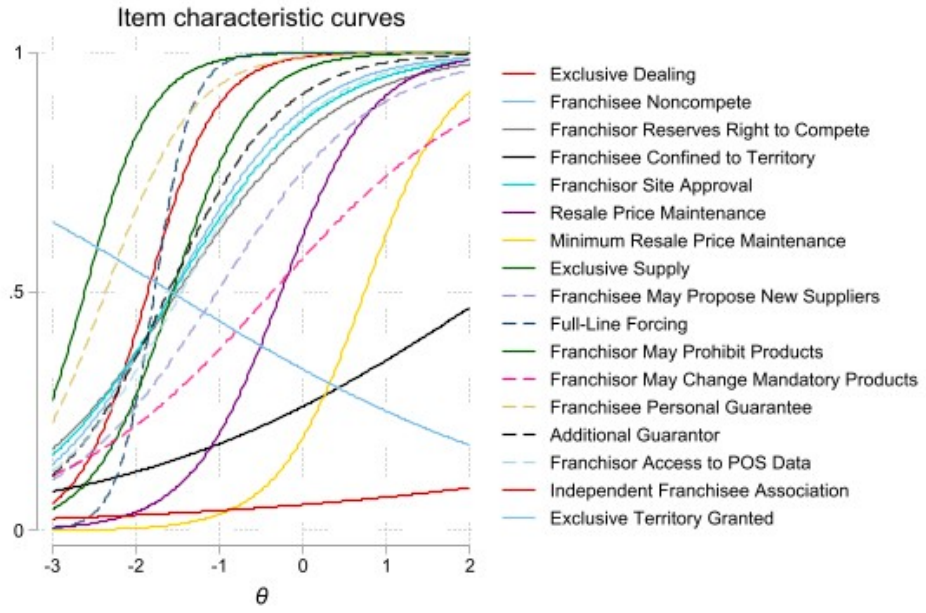
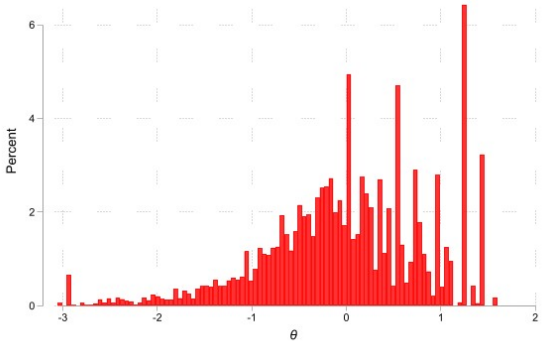


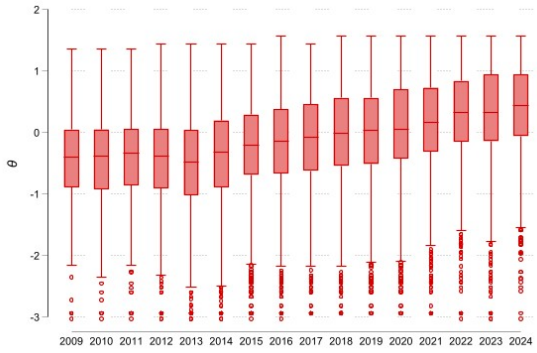
Figure 5. Item Response Analysis Results. (A) Item characteristic curves plotting predicted values for $\{y_{jtk}\}$ from equation F.1. (B) Histogram of estimated $\hat{\theta}$ for the panel as a whole. (C) Time series of $\hat{\theta}$ distribution. In (C), the box marks the 25th, median, and 75th percentiles. 98% of observations lie between the whiskers, and outliers are represented by the points.



(A) Plot of predicted probability functions, $y_{jtk}(\theta)$, for each restraint k

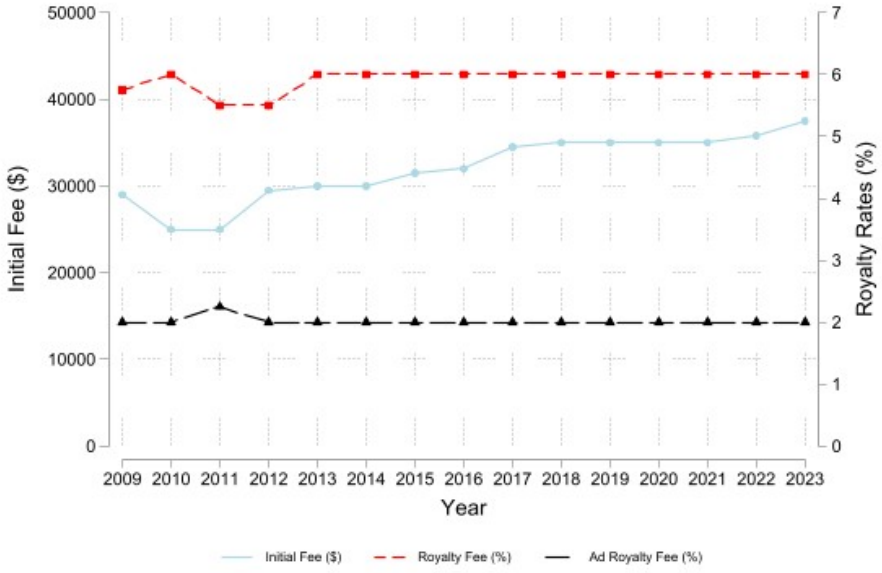


(B) Histogram of estimated $\hat{\theta}$

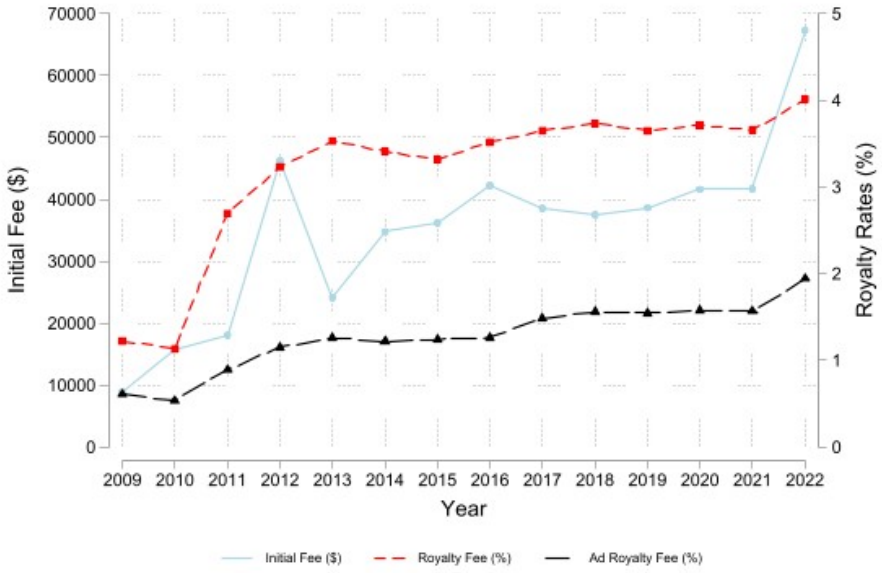


(C) Time series of $\hat{\theta}$ distribution.

Figure 6. Initial Fees and Royalties. These figures report chain-level upfront fees (left axis) and royalty rates (right axis), aggregated alternatively as annual medians and weighted averages in which the weight is the chain's outlet count in that year. The initial fee is a flat dollar amount paid to the franchisor to license the brand. Royalties are specified as a percentage of gross revenue. Ad royalty fees are additional royalties payable to the franchisor for chain-wide advertising. Initial fee data is sourced from FDDs. Royalty data is sourced from *Entrepreneur* magazine's annual Franchise 500 ranking and comparison data. Weighted average results in Panel B indicate royalty rates are skewed to the left as a function of chain size, while initial fees are skewed to the right.

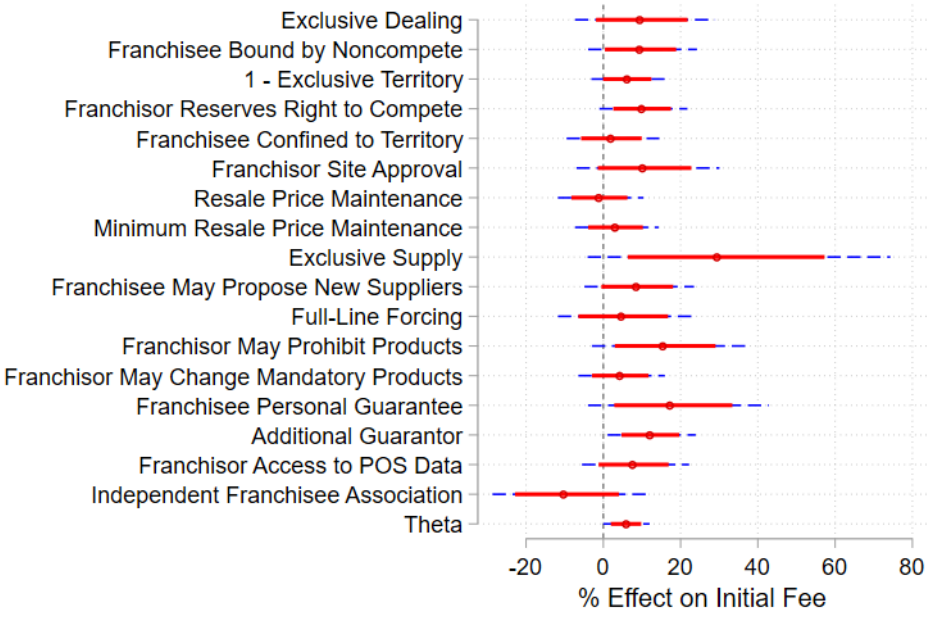


(A) Median Fees and Royalties

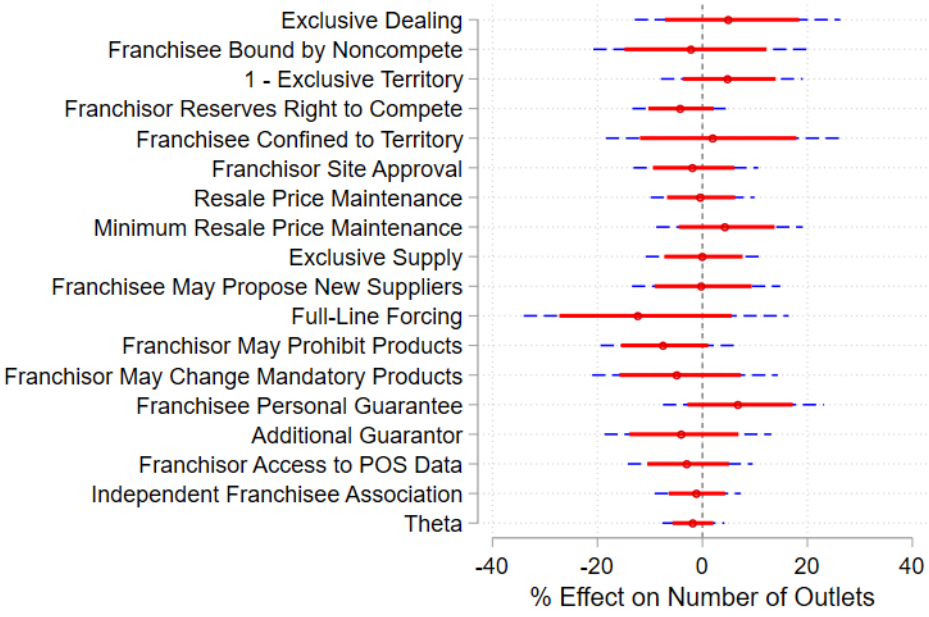


(B) Weighted Average Fees and Royalties

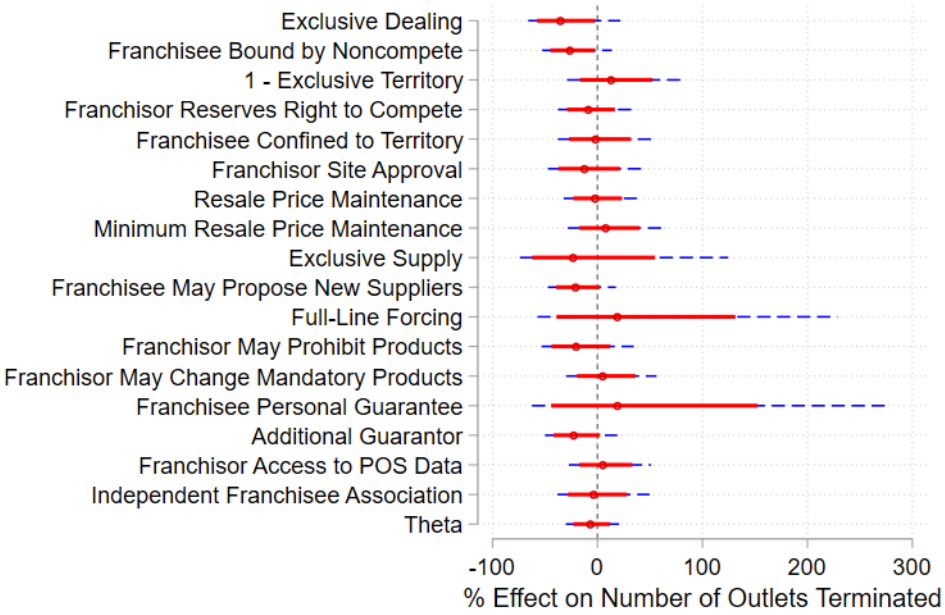
Figure 7. Correlation between franchisor control and indicia of franchisee welfare and chain growth. Each panel below shows the estimated relationship between a given continuous measure of franchisee welfare or chain growth and the given contractual restraint, as well as the estimated $\hat{\theta}$ from equation F.1. Estimation is performed via Poisson pseudo-maximum likelihood for count outcomes and two-way fixed effects for continuous outcomes. Standard errors are clustered at the chain level. Coefficients and confidence interval are transformed into percentage effects. Blue confidence interval is corrected for multiple hypothesis testing using a Bonferroni correction.



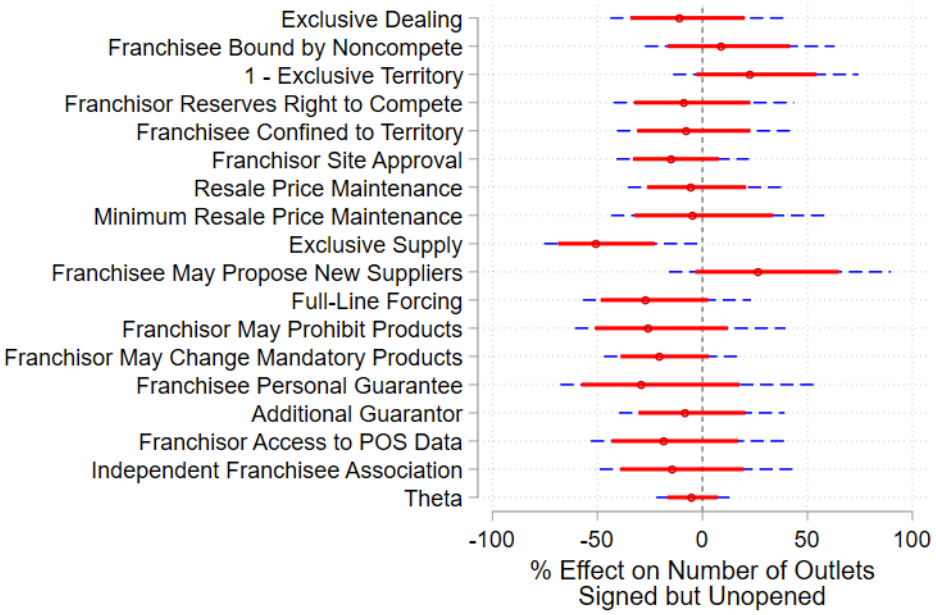
(A) Initial Franchise Fee



(B) Total Outlet Count

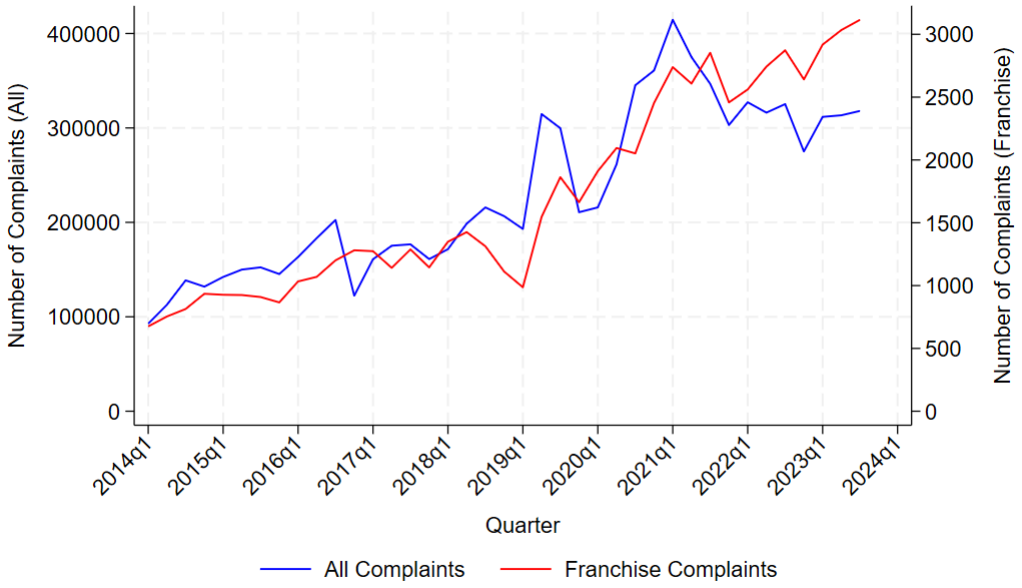


(C) Outlets Terminated

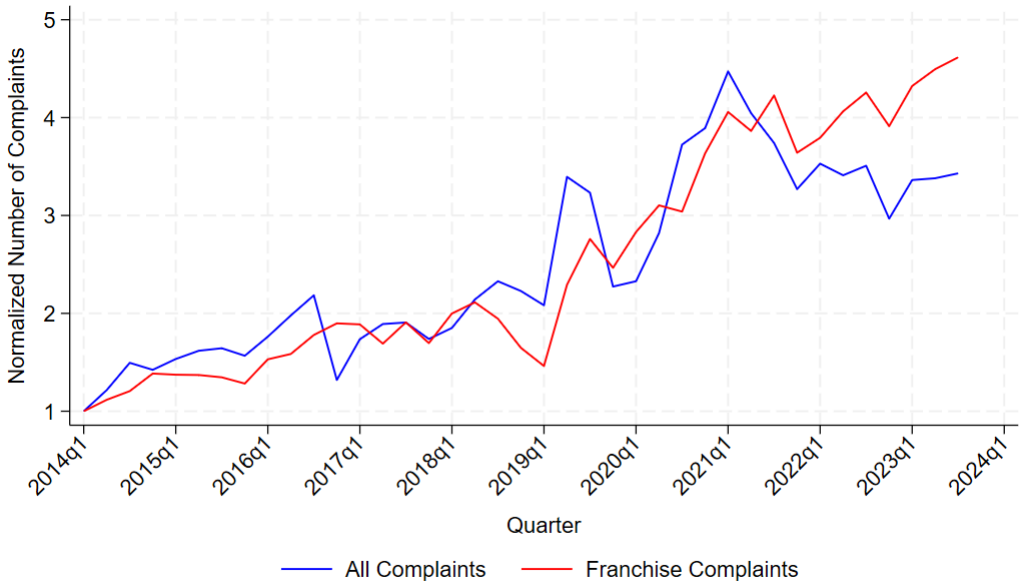


(D) Outlets Signed but Not Opened

Figure 8. Time Series of Complaints Filed with FTC (All Complaints vs. Franchise Complaints). Each figure contains two time series: first, a time series of all complaints filed with the FTC, and second, a time series of complaints related to franchising. Complaints are classified as relating to franchising if they are name-matched to a known franchisor and are lodged under a violation code likely to pertain to the franchising relationship. Complaint counts in panel (b) are normalized to 1 in the first quarter of 2014



(A) Raw Counts of Complaints



(B) Normalized Counts of Complaints

Figure 9. Regression Results: Association Between Complaint Counts and Use of Contractual Terms. The figure contains the estimated association between use of the listed contractual restraint and the number of complaints received by the FTC. Estimation is performed via Poisson pseudo-maximum likelihood and standard errors are clustered at the firm level. Coefficients and confidence intervals are transformed into percentage effects. Dashed blue confidence interval is corrected for multiple hypothesis testing using a Bonferroni correction.

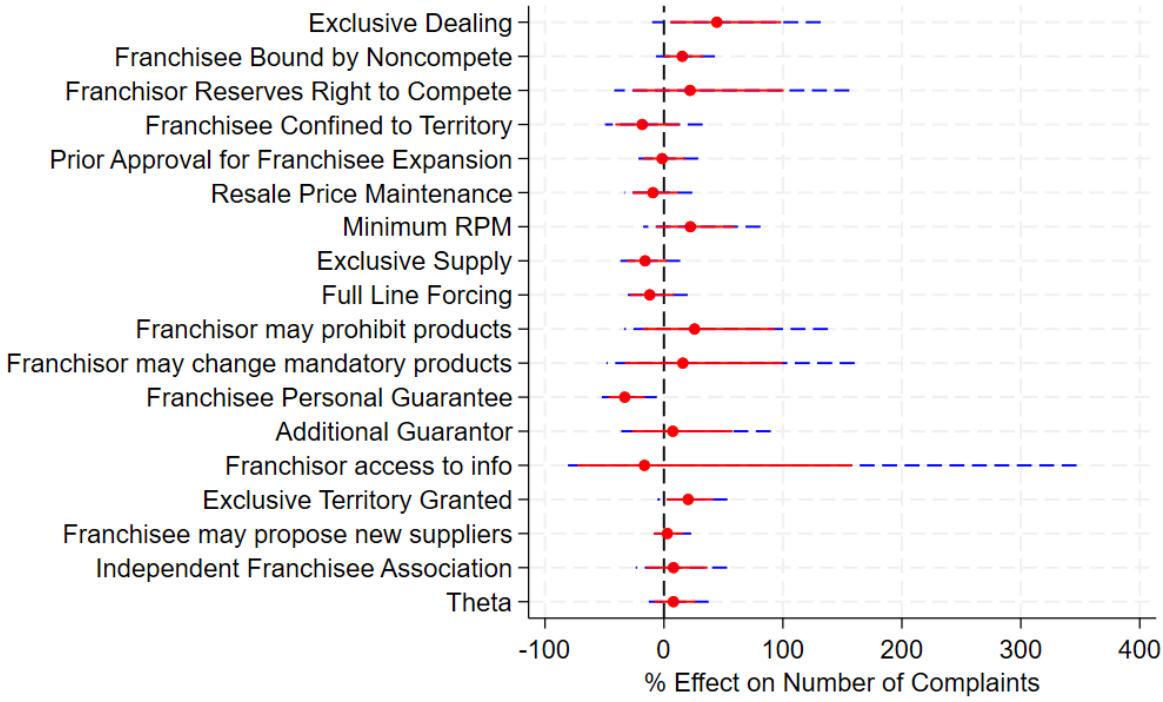
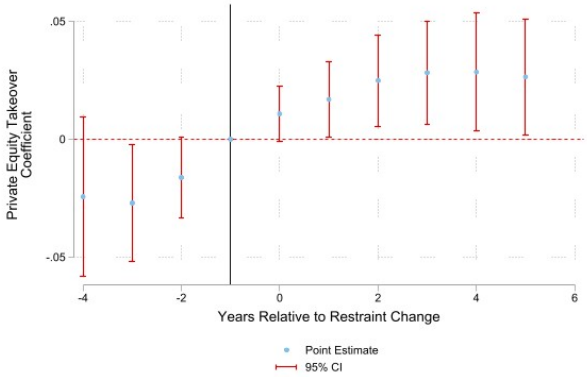
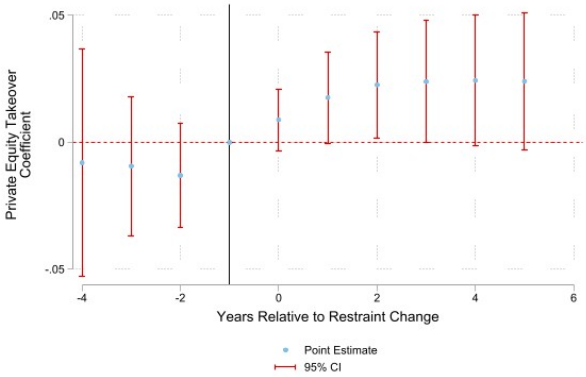


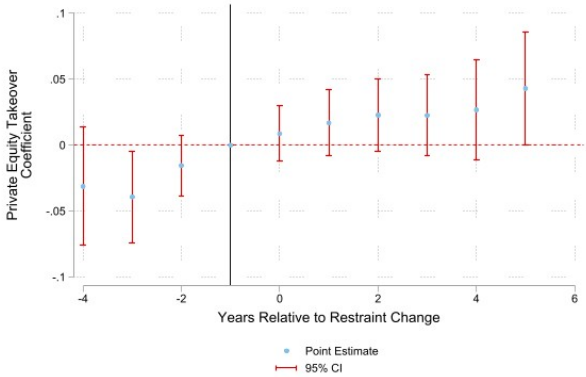
Figure 10. Event Study Plots showing the Acquisition by a Private Equity Firm as the Outcome of a Given Restraint Changing. These figures display the estimated coefficient $\hat{\beta}$ from year of restraint change from equation 6.1. Standard errors are clustered at the chain level.



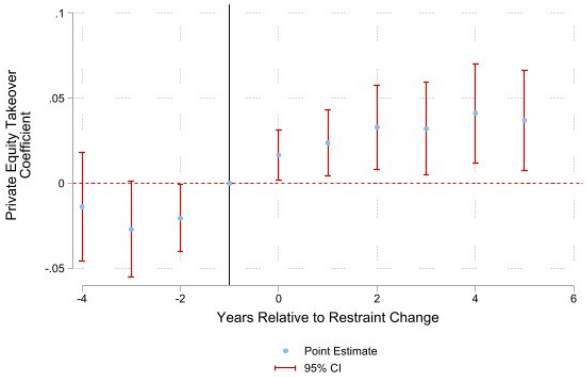
(A) Removal of Exclusive Territory Granted



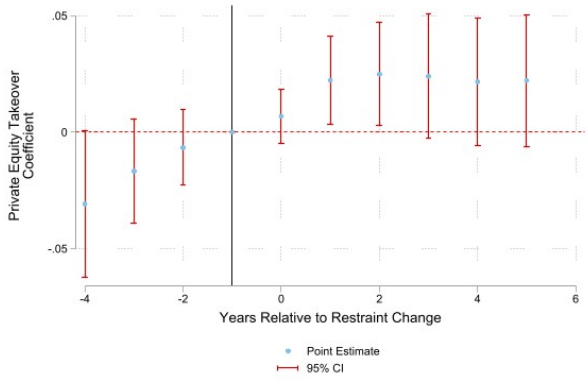
(B) Franchisor Reserves Right to Compete



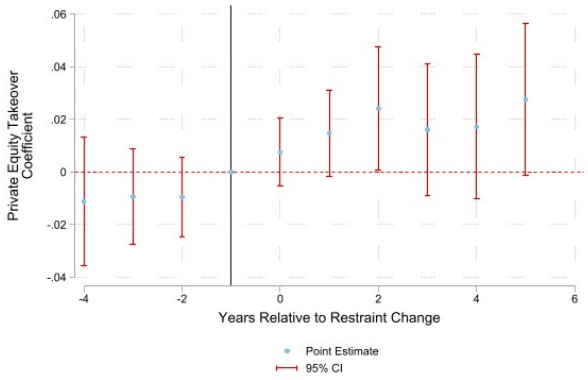
(C) Franchisor Site Approval



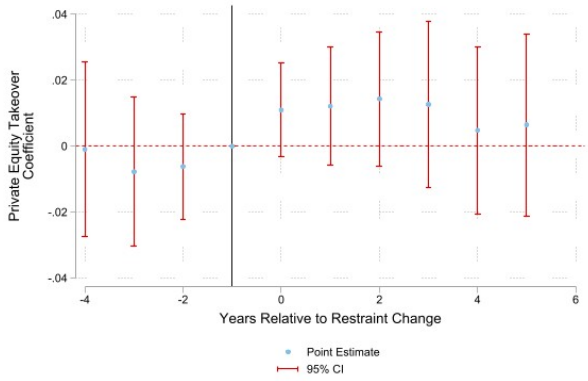
(D) No Franchisee Association



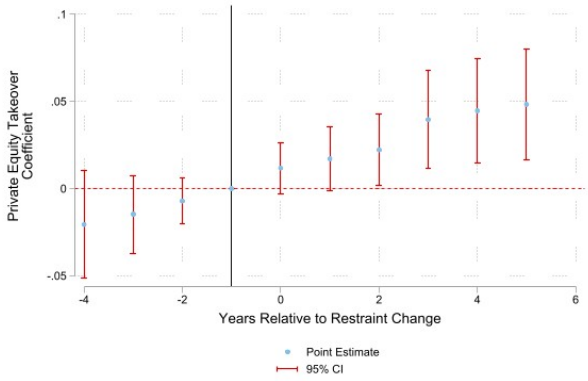
(E) Retail Price Maintenance



(F) Minimum RPM



(G) Mandatory Arbitration



(H) Speech Restrictions

Appendix

A Text Analysis and Data Construction Methods

Table A.1. List of FDD sources

Source	Share (%)
California Department of Financial Protection and Innovation	43.0
Washington Department of Financial Institutions	17.5
Wisconsin Department of Financial Institutions	14.3
Minnesota Department of Commerce	8.1
Indiana Securities Division	3.4
North Dakota Securities Department	3.2
New York Office of the Attorney General	2.8
All other sources (each)	<2.0

The methodology we employ for constructing novel concept classifiers uses open-source software introduced in Meisenbacher and Norlander (2023), and engages domain experts in iteratively developing rules that encode text automatically across a large document corpus. We first identify and locate 'keywords' in the text that plausibly correspond to a given meaning (a contractual provision in our case). We examine keywords-in-context by excerpting the text surrounding the specified keywords (Luhn, 1960). We subject the extracted keyword-containing context windows to a set of rules that denote that the text in question has a given meaning—in our case, the presence or absence of a given restraint or contractual provision, encoded as a binary variable. Rules are given priority such that the presence of a higher-priority rule in a given context window overrides a lower-priority rule that would otherwise classify the document with respect to one or more restraints.

We construct the list of rules corresponding to each binary variable by drawing a random sample of context windows corresponding to each keyword and rule from the corpus and classifying the random sample. Once a stable list of rules is constructed (i.e.,

further sampling yields no change to the list of rules or their prioritization), we run the completed rules on the entire document corpus to generate a binary classification of each document in the corpus for each variable. We then spot-check the coding of individual FDDs to ensure that our rules generated the correct interpretation of that document's meaning.

We also extract semi-structured data from the FDDs. Item 20 Table 1 reports the number of company-owned and franchisee-owned outlets for the prior three years. Item 20 Table 5 reports projected openings, including agreements signed with no outlet opened to date. We search for Item 20 in the text of each PDF, identify the page location of Tables 1 and 5, and use a variety of table extraction, vision language models, and post-processing cleaning to retrieve structured data (Wei et al., 2023, 2024).

Finally, we match structured information from FDDs to identifications at the level of their owners, including holding companies and private equity firms. This data was manually acquired through press releases made public on industry media websites or directly from franchised chains and their owners. We code the date of acquisition so that, for example, a brand acquired by an investor halfway through our panel is not tagged as owned by the investor throughout our entire panel.

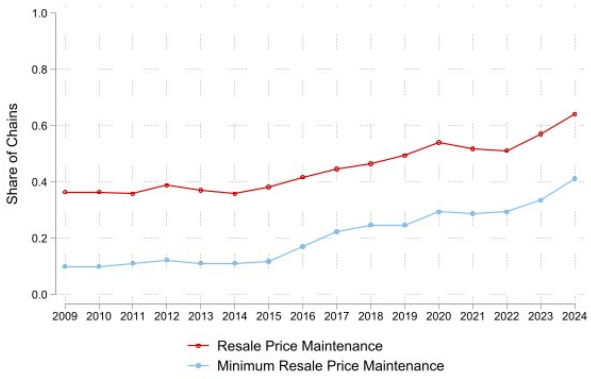
In order to further validate our restraint codings and the rules that generate them, we employed a separate research assistant to manually classify a random sample of 39 FDDs with respect to each of the restraints, without having seen the list of rules that generate them, based on knowledge of franchising and the restraint definitions in Section 2. We then compared the results in the panel dataset whose construction was just described to those 39 hand-coded FDDs. The construction of the panel dataset relies not only on the automated rules ascribing meaning to the text of the FDD and the underlying contract, but also the correct assignment of franchise chain identity to a given document and the carry-forward procedure to "fill in" otherwise-missing cells of the panel. In 84% of the 858 cells of the comparison sample (39 chains $\times$ 22 vertical restraints indicators), the two ap-

proaches agreed. For the 16% of cases in which the panel disagreed with the hand-coded sample, the authors adjudicated. If the panel was deemed to have incorrectly coded a given chain-restraint cell, we edited the rules in order to accord with the hand-coded sample.

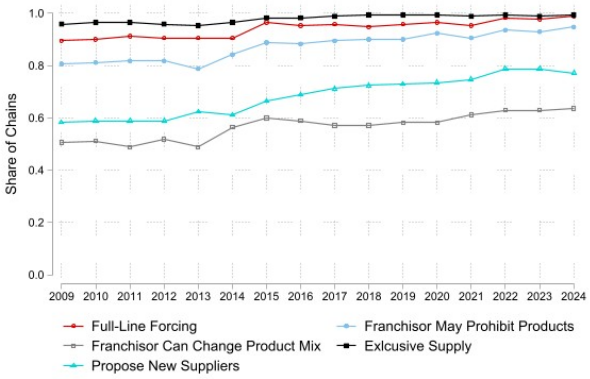
B Restraint Prevalence in the Balanced Panels

In this appendix we report figures equivalent to figure 2 for balanced sub-panels of the overall unbalanced panel dataset, spanning 2009-2024 (170 chains) and 2013-2024 (686 chains). This demonstrates that the overall reduction in franchisee autonomy is due at least in part to changes on the intensive margin, i.e. individual chains observed consistently reduce franchisee autonomy over time, rather than new, less-autonomous chains entering.

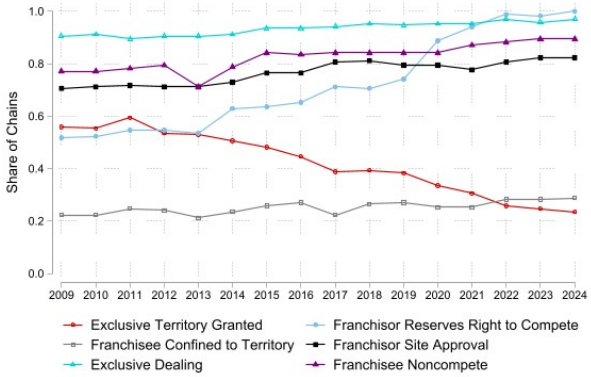
Figure B.1. Time Series of the Prevalence of Each Franchise Restraint in the Panel Dataset. These figures report the prevalence of each of the six sets of franchise restraints and contractual provisions described in section 2 in the balanced franchise chain panel dataset, 2009-2024. There are 170 chains represented in this balanced panel.



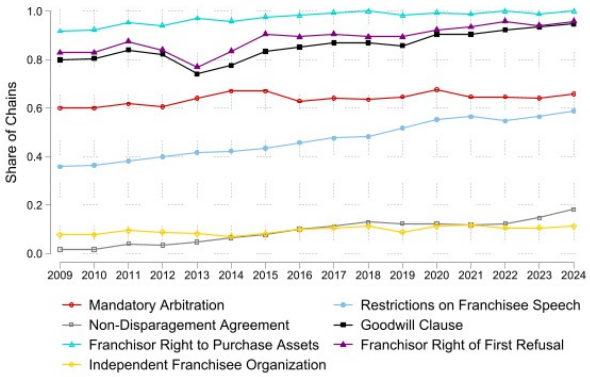
(A) Pricing



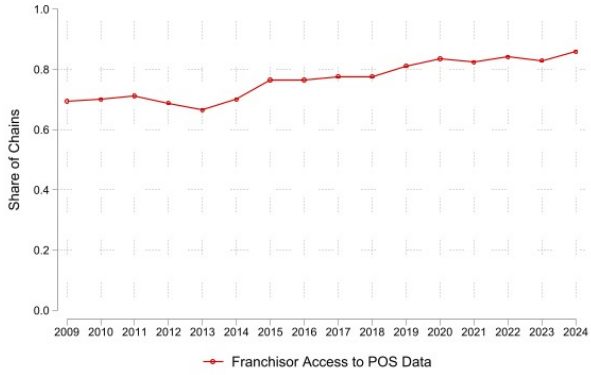
(B) Product and Service Offering



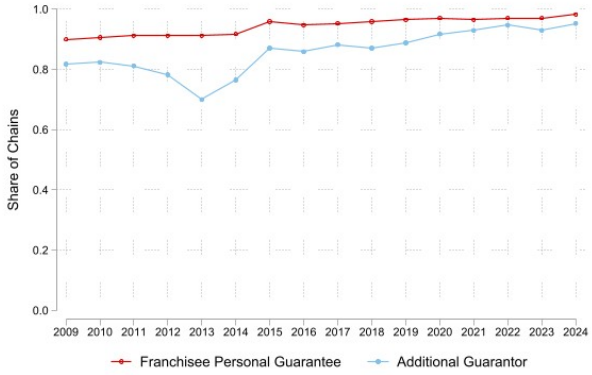
(C) Territory and Competition



(D) Governance and Dispute Resolution

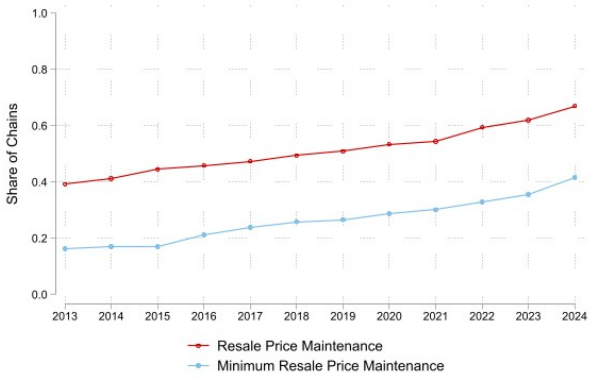


(E) Information and Monitoring

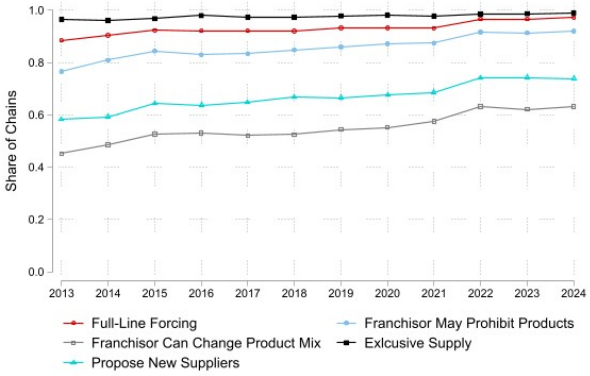


(F) Legal and Financial Obligations

Figure B.2. Time Series of the Prevalence of Each Franchise Restraint in the Panel Dataset. These figures report the prevalence of each of the six sets of franchise restraints and contractual provisions described in section 2 in the balanced franchise chain panel dataset, 2013-2024. There are 686 chains represented in this balanced panel.

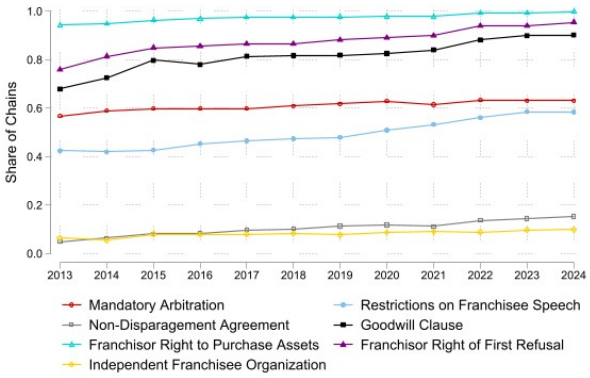


(A) Pricing

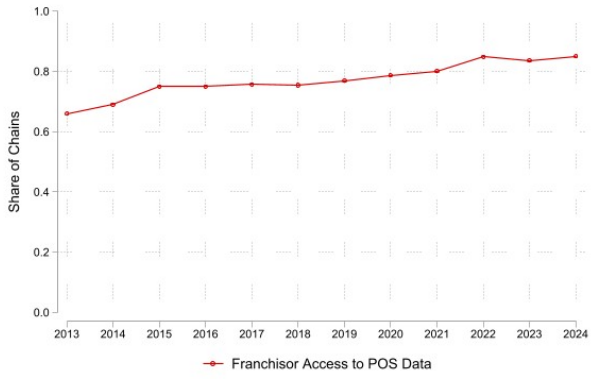


(B) Product and Service Offering

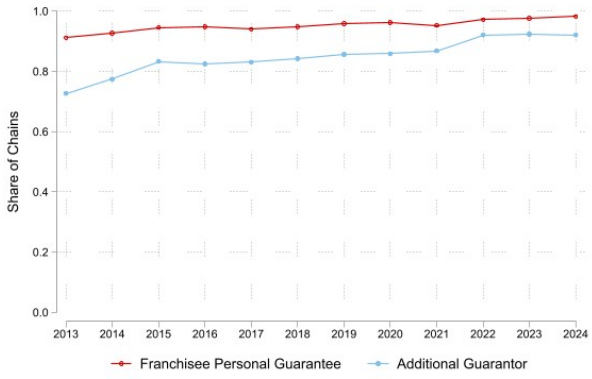
(C) Territory and Competition



(D) Governance and Dispute Resolution



(E) Information and Monitoring



(F) Legal and Financial Obligations

C Survey protocol

Note: The survey protocol was first described in Atz (2025) and is reproduced below.

C.1 Overall scope

The survey aimed to elicit responses from current or previous franchisees to questions about Item 19 and vertical restraints. Participants were identified through a self-constructed database of franchise businesses' contact information from publicly available Franchise Disclosure Documents. Contact information, i.e., phone numbers, emails, and business addresses, is publicized in the FDD with the expressed purpose of contacting franchise businesses. These documents are made available through various U.S. states' commerce websites. Item 20 contains a list of current and former franchise owners with their contact information. The FTC "Franchise Rule" governs the disclosure and use of this information (Federal Register/Vol. 72, No. 61/March 30, 2007/Rules and Regulations). The NYU Institutional Review Board determined the protocol to be exempt from the federal policy following a limited IRB review under reference number IRB-FY2024-9116.

The study contacted franchisees via three modes:

1. For mobile phone numbers, a text (SMS) recruited participants for an online survey via a link. The questionnaire was administered via Qualtrics.

2. For landline phone numbers, the study used interactive voice response (IVR) technology, which allowed participants to choose whether they wanted to access the online survey or answer the questions on the phone via the keypad. The latter used an abridged version of the survey to avoid survey fatigue.

3. For email addresses, the study sent a link by email, with a follow-up message after one week if there was no response. The questionnaire was administered via

Qualtrics.

The survey included two waves and a pilot phase. The pilot phase ran from 2024-09-13 to 2024-09-18, and the responses were included in the final sample. The first wave was conducted between 2024-09-24 and 2024-09-30. The second wave was conducted between 2025-03-31 and 2025-04-21. The questionnaire for wave 2 was changed slightly and included an expanded section on vertical restraints. Distributions were sent at varying times during local U.S. business hours including one Saturday. Email addresses and mobile numbers were contacted up to two times; landlines were contacted up to three times if they were busy or reached an answering machine.

C.2 Sampling

The sampling frame was based on 393,453 phone numbers and 74,335 email addresses from the latest FDD of each franchise.

The regular expression to extract phone numbers was:

```
\b\(?[0-9]{3}\)?[\.\-\s]?[0-9]{3}[\.\-\s]?[0-9]{4}
```

Note that there is no word boundary at the end because of possible phone number extensions. Additionally, phone numbers were validated in terms of length and their location in the FDD (i.e., Item 20). Phone numbers starting with 800 or 866 were excluded due to the high likelihood of encountering an answering machine.

The regular expression to extract email addresses was:

```
\b[A-Za-z0-9\.\_\%+-]+@[A-Za-z0-9\.-]+\.[A-Za-z]{2,}\b
```

Additionally, email addresses were validated in terms of OCR errors and screened for government and non-U.S. top level domains. Franchisor or corporate emails were filtered out where possible.

Cost constraints determined the planned sample size. Stantcheva (2023) recommends "sampling for range", which in this case meant stratifying the sample based on franchise size. Wave 1 included 96,995 phone numbers from all available franchises, with a maximum number of 60 phone numbers per chain. The type of phone line was split into mobile with 30,178 (31%) phone numbers, landline with 55,060 (57%) numbers, VoIP with 8752 (9%), and other types for the rest. Mobile numbers were used for the SMS distribution and landline numbers for the IVR. Wave 2 included 43,937 phone numbers, of which roughly half were numbers not previously contacted, and used all available email addresses.

C.3 Response rate and potential response biases

The total number of valid responses was 350. The number of chain-identifiable responses for the analyses in this study is 309. The three modes—phone, SMS, and email—achieved different response rates, where the highest success rates was from text messages.

Most of the landline phone numbers reached an answering machine (45%) or were otherwise busy, unavailable, or yielded a carrier error (together 39%). Live answers accounted for 16% of all calls. The response rate was low, with 0.2% of live answers resulting in participation. An additional 12 participants chose to enroll in the survey via text. For the SMS distribution, it was less clear which messages were delivered to the intended target. The overall response rate was 2%, which, however, includes a large number of incomplete surveys. Moreover, it was likely that a substantial number of SMS did not reach a live phone numbers (as with landlines). Email outreach also resulted in a large number of undelivered surveys, where over 50% of survey invites bounced at the server. The email response rate for completed surveys was 0.4%. Thus, the blended response rate is estimated somewhere between 0.2% and 1.2%, which is in line with other studies that reached out via an unsolicited email or call (e.g., Minnis and Shroff (2017)).

The main concern for this survey protocol is a potential nonresponse error. There is

a substantial challenge in reaching the target population, the franchisees, by using business phone numbers or email addresses, even though the contact information in Item 20 was meant to facilitate reaching current or past outlet owners. At least three reasons make a large share of the phone numbers unsuitable: first, the phone number may not be monitored or may no longer be in use. Second, calling the number may only reach an answering machine or automated system. Third, even in the case of a live answer, depending on the franchise, it may be a frontline employee who receives the call or text instead of the franchisee. The latter is mitigated by a screening question. Email addresses are not required by the franchise regulation and are, therefore, included voluntarily. This mode of contact also suffers from a large share of inactive or unreachable email addresses.

There are several additional caveats. First, attrition is a serious concern, and the questionnaire was optimized to be as short as possible in the pre-pilot phase. Second, behavioral biases related to content and formatting ought to be reduced by modern survey design. Third, given the response rate, we should expect some form of selection in addition to coverage error. For example, it might be that disgruntled franchisees are more likely to participate in a survey about pre-sale earnings information. In general, franchisees who complete the survey could be systematically different from those who did not, which would undermine any generalizations to all franchisees. It seems plausible that small and unsophisticated franchisees are easier to reach with this survey protocol (e.g., they are more likely to put down a "personal" phone number) and more likely to be available (e.g., as the active manager) than sophisticated franchisees, which should work in favor of making inferences from the survey responses. Table C.1 compares the franchise chains in the survey with those that did not participate. The survey includes on average franchises that are larger in outlet size and more often part of the Entrepreneur 500 ranking. Franchises with few or no outlets are harder to reach and are, therefore, underrepresented.

Table C.1. Comparison of Franchises In Survey vs. Not In Survey. This table compares the franchises that participated in the survey with those that did not participate, based on the last available FDD. The variables *Size* (number of outlets) and *Initial fee* (in USD) are log-transformed. E500 stands for the Entrepreneur 500 ranking. Significance thresholds: * p<0.05.

	In Survey		Not In Survey		Diff. in Means	Std. Error
	Mean	Std. Dev.	Mean	Std. Dev.		
Size (log)	2.1	0.67	1.1	0.91	-1*	0.047
Initial fee (log)	4.6	0.41	4.5	0.43	-0.1*	0.028
Royalty fee (%)	7.3	3.6	6.3	3.4	-1*	0.39
Ad Royalty fee (%)	2.9	2.1	2.5	1.8	-0.41	0.25
Top 100 by E500	0.091	0.29	0.022	0.15	-0.069*	0.019
Unranked by E500	0.51	0.50	0.88	0.32	0.37*	0.033

C.4 Detailed Comparison of Survey Responses to FDD Data

For each survey question, we compare the distribution of responses to the prevalence of the corresponding restraint(s) in the respondent's chain FDD (Figure 4). Since the survey was conducted in late 2024 and early 2025, we retain the most recent year observation for each chain in the panel dataset, which is usually 2024.

Franchisee Noncompete (Figure 4(A)). The survey asked: "Are you bound by a noncompete clause that would prevent you from affiliating with a different corporate headquarter after your current franchise agreement expires?" As written, this refers specifically to post-term noncompetes, but we compare the prevalence of both that and Exclusive Dealing (which prohibits affiliation with a rival chain during the term of the franchise) across the two response groups. 84.8% of respondents said they were bound by a noncompete, versus 15.2% who said they were not. Of those who said they were, we code 94% as having a noncompete in their FDD, versus 86% for those who said they were not—a gap that is consistent with the broader pattern of franchisees underestimating their contractual constraints.

Exclusive Territory (Figure 4(B)). The survey asked: "Do you have an exclusive franchise territory?" We compare responses to two provisions: whether an exclusive territory is granted, and whether there is language reserving the franchisor's right to invade the territory. 75.3% of respondents said they had an exclusive territory—higher than the prevalence we find in FDDs by the end of the panel. Franchisees who indicated they have an exclusive territory are more likely to have one per the FDD data, but the difference is only 12 percentage points (19% versus 7%). Strikingly, language reserving the franchisor's right to compete is at near-complete prevalence in both groups: 100% for those who said they lack an exclusive territory, versus 98% for those who said they have one. This finding validates our interpretation of this language as countermanding the upfront promise of an exclusive territory, and is confirmed by the many open-ended responses expressing extreme dissatisfaction with territorial encroachment.

Resale Price Maintenance (Figure 4(C)). The survey asked: "Do you decide the prices you charge customers for your goods or services, or does the corporate headquarter decide that?" We compare FDD-coded Resale Price Maintenance and Minimum Resale Price Maintenance across respondents who answered "I decide" (73.7%), "The corporate headquarter decides" (19.8%), or "I decide, but the corporate headquarter can overrule if they want" (6.5%). The prevalence of both restraints is higher among respondents who said the franchisor sets prices, but lower among those who said the franchisor can overrule—a somewhat counterintuitive pattern that may reflect franchisees who have not yet experienced the exercise of that overrule authority. In the second wave, a follow-up scaled question asked how much control the franchisor exercises over retail prices. The responses are nearly uniformly distributed across five levels, with slightly fewer (13%) reporting complete franchisor control and the other four options each receiving around 20% support.

Exclusive Supply (Figure 4(D)). The survey asked: "Do you decide which supplier(s) you buy from, does the franchisor decide, or is it a mix?" The prevalence of Exclusive Supply in FDD data is complete and uniform across all three responses, likely because we

assign the binary if *any* input is franchisor-sourced, whereas franchisees perceive variation in the degree of supplier control. 20.1% said they choose suppliers, 39.4% said the franchisor does, and 40.5% said it was a mix. The finding with respect to Franchisee Can Propose New Suppliers is particularly suggestive: 66% prevalence among respondents who said they choose their own suppliers, 85% among those who said the franchisor chooses, and 79% among those who answered "A mix." We initially interpreted this provision as a weaker form of exclusive supply—franchisees can identify alternative sources but the franchisor retains a veto. The survey pattern indicates that franchisees do not see it the same way: having to ask permission to source from a new supplier indicates franchisor control, not its absence. Having experience requesting approval may be what informs franchisees' understanding of whether they are bound by exclusive supply, as opposed to the text of the contract or the habit of obtaining supply through franchisor-negotiated channels.

Restrictions on Franchise Sales (Figure 4(E)). The survey asked: "If you wanted to sell your franchise business, can you sell to whomever you want, does the corporate headquarter restrict whom you can sell to, or are you obligated to sell only to the corporate headquarter?" We compare responses to Franchisor Right to Purchase Assets and Franchisor Right of First Refusal. There is little variation in restraint prevalence across answers, likely because there is little variation in the FDD data on these two restraints. The likely explanation is that most respondents are still active franchisees who have not had practical experience selling a franchise business. 72.9% said the franchisor restricts whom they can sell to. In the second wave, we asked a scaled question: "If you were to sell your franchise business, would you receive a fair price?" Most franchisees indicated they would not, consistent with the high prevalence of sale restrictions.

Full-Line Forcing (Figure 4(F)). The survey asked: "Can you pick and choose which products or services to sell, or must you sell all of the products or services mandated by the corporate headquarter?" We compare responses—"I can choose" (42.5%), "I cannot

choose" (40.9%), and "I can choose some products, but the franchisor requires others" (16.6%)—to Full-Line Forcing, Franchisor Can Prohibit Products, and Franchisor Can Change Product Mix. There is virtually no difference in FDD data across the three responses, although a slightly higher share of those who gave the third answer are subject to franchisor discretion about the product mix.

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
1	Franchisor's control stayed the same	No support, no new products, everything offered is a way they can make money from the franchisees since our sales don't provide the increased in royalties
2	Franchisor's control stayed the same	Their job is to support. They do a good job supporting
3	Franchisor's control gotten less onerous	HQ control is minimal- I'm not sure if they are even around. It's horrible
4	Franchisor's control gotten more onerous	If I knew now what I didn't know when I joined I would have not expanded due to the. Control
5	Franchisor's control gotten more onerous	In my experience the franchisor has had little success bringing traffic into the individual stores. They rely on price increases brought on by minimum wage increases as a way to market their success to new investors.
6	Franchisor's control gotten more onerous	They are totally out of touch and do not consider how regions operate differently. My state of Florida is drastically different than the rest of the country.
7	Franchisor's control gotten more onerous	They love to micromanage the franchisees
8	Franchisor's control gotten more onerous	They stink
9	Franchisor's control gotten less onerous	"Franchise" was a great franchise 10 years ago but now they don't care about one owner shops they only want to cater owners that have 6 or more stores.
10	Franchisor's control stayed the same	Good corporate structure
11	Franchisor's control gotten more onerous	They are very involved when it comes to getting their %. They are disinterested in helping the Indvidual franchisees.
12	Franchisor's control stayed the same	I've had a great experience w/ my franchise.
13	Franchisor's control gotten more onerous	Headquarters forces agreements on us where they receive a kickback. They also force agreements with businesses that are owned by HQ employees.

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
14	Franchisor's control gotten more onerous	Communication is poor at best. No clear standards, training was a joke, no help offered from headquarters
15	Franchisor's control stayed the same	Corporate headquarters has proven that they have no clue what they're doing
16	Franchisor's control gotten less onerous	Essentially none. They only exert control over future buyers due to the fact that the future buyer would need to enter into a new franchise agreement. Otherwise, HQ merely fulfills an advisory role, so we stay in business and continue paying the monthly fee.
17	Franchisor's control gotten more onerous	It seems inconsistent depending upon when you came into the system.
18	Franchisor's control gotten more onerous	Our primary service offering relies on supplies that are sole sourced from one vendor. The franchise organization and this vendor have become increasingly tied at the hip to the point where the supplies were are mandated to purchase have increased in cost by nearly 200% in the past 3 years. Over that period of time an additional service was bundle into the supplies's cost, however, the addition of that service should have increased the cost of those supplies by about 20-25% and that's being generous.
19	Franchisor's control gotten more onerous	Headquarter is run by a family. Restrictive on comments on franconnect. Not open to new ideas. Nickel and diming franchisees.
20	Franchisor's control gotten more onerous	I original signed up for territory development but became in possible with economics (location, rent, labor (doubled in 10 years), product, services, etc.) cost to develop in the time frame allotted.
21	Franchisor's control gotten more onerous	Corporate do not listen to there franchise owners.
22	Franchisor's control gotten more onerous	They are thief's
23	Franchisor's control stayed the same	Very little interaction with them

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
24	Franchisor's control gotten more onerous	I feel like corporate control is like similar with communism or Dictatorship
25	Franchisor's control gotten more onerous	jsut that their rules are crappy and it sucks to own but not own a business.
26	Franchisor's control gotten less onerous	They are the reason my business failed. The advertising was outrageously priced and ineffective.
27	Franchisor's control stayed the same	I wanted to sell my franchise business, But, my corporate headquarter restrict to sell. whom i can sell to, or are i obligated to sell only to the my territory. headquarter can not helping me to sell. So, I am frustrated and lost more than $70,000
28	Franchisor's control gotten more onerous	"Franchise" is the perfect example of what people dread as a franchisee - they are WAY TOO involved in the "independently owned" franchisee operations
29	Franchisor's control gotten more onerous	They suck at running the business. They keep making changes that are not helpful or worse, hurtful.
30	Franchisor's control gotten more onerous	It sucks. My franchisor makes horrible decisions that benefit them while hurting us.
31	Franchisor's control stayed the same	there is a law in place regarding who owns the employees that places a check on franchisors' desire to increase control. Also there have been law suites against franchisors dictating vendor mandates that have also kept a check on franchisor greed and control.
32	Franchisor's control gotten more onerous	When they sell to private equity it's a crap shoot...
33	Franchisor's control stayed the same	They do a great job for me
34	Franchisor's control gotten more onerous	They make more money off their mandatory vendors and mandatory marketing spend through them than they do from royalties.
35	Franchisor's control gotten more onerous	Required marketing spends are putting franchisees out of business

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
36	Franchisor's control gotten more onerous	They were horrible and made horrible decisions
37	Franchisor's control gotten more onerous	Corporate headquarters also committed fraud against me by price fixing my services, which is illegal in California- where I operated my location. They also instructed me to break labor laws and not pay my employees full wages to "reduce payroll" which I refused and chose not to follow to said instructions. The best way to describe this franchise is predatory.
38	Franchisor's control gotten more onerous	The control is able to get more onerous because the FDD allows the headquarters to change the manual. If the manual is static than headquarters would not be able to as much. This is referring to an external document that can change in the FDD should be disallowed.
39	Franchisor's control gotten more onerous	Yes, the franchise has been implementing changes in the operation manual which supposedly supersedes, existing franchise agreement and franchise disclosure documents.
40	Franchisor's control gotten more onerous	They don't care about individual territories; what works for one area doesn't always work for another
41	Franchisor's control stayed the same	Our Corporate headquarters do not do a lot for the franchisees. They are disengaged and not very helpful.
42	Franchisor's control stayed the same	They give us great latitude to run our business
43	Franchisor's control gotten more onerous	The more corporate discovers that franchisees are not in compliance, the more onerous their control becomes.
44	Franchisor's control gotten more onerous	They do not allow you to sell to private equity groups or companies. That could be restrict the pool of available buyers.
45	Franchisor's control gotten more onerous	Rise takes but gives little

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
46	Franchisor's control gotten more onerous	We are measured (KPIs) and go out of favor at the individual franchisor's will (he is founder, owner and CEO). The KPIs are not mentioned in the FDD or FA. Over the past year or two the franchisor has executed new FAs that require 20% of sale price go to franchisor. This is up from $5K when we first joined, and in a $2M biz is $400K. Also the franchisor has escalated the franchise fee to $1.50/pop (is saying will be $2.50 soon, and was $0.37 when we purchased), making a new franchise purchase of one lot cost $\tilde{\$}$375K in franchise fee alone. The franchisor recruits new franchisees by loaning them the $375K and often the franchisee cannot make enough in profit to stay in business. So the CEO resells the lot.
47	Franchisor's control gotten more onerous	Once the Franchisor bought out his partners, the Franchise has turned into a dictatorship, ruled by threats and lack of HQ help. HQ only helps a few top performers. Their new software is a POS. Nothing works and we all fear we will lose clients and employees.
48	Franchisor's control gotten more onerous	"Franchise" was acquired by "Franchise" which has been a net negative for my business results, relationships, and operations.
49	Franchisor's control stayed the same	The Franchisor micromanages and does not understand differences in geography (hot weather vs snowy areas), local cultures et.
50	Franchisor's control gotten more onerous	While I can set prices, they run the advertising, often offering large discounts.
51	Franchisor's control gotten less onerous	No support and bo profitability education for new comers
52	Franchisor's control gotten less onerous	Covid changed things - online zoom calls and service delivery. control lightened up
53	Franchisor's control stayed the same	HQ's approach has been to work with minimal controls and to maintain a very high level of involvement with the Franchisees.
54	Franchisor's control gotten more onerous	See following links to comments submitted to the FTC

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
55	Franchisor's control gotten more onerous	We were purchased by an umbrella company, "Franchise". They have a few franchises related to children. They have put all the businesses on the same software. This is an example of control that makes it much harder to do business since they took over.
56	Franchisor's control gotten more onerous	The parent company "Franchise" doesn't understand our business model at all, which makes it difficult for new owners to be successful.
57	Franchisor's control gotten more onerous	Purchasing equipment above fair market value has caused extreme distress
58	Franchisor's control gotten more onerous	It is a balance and really depends on the type of franchise, the market, the maturity of the brand and the company, and a number of other factors.
59	Franchisor's control gotten more onerous	My franchise was acquired in part by work In 2019. Things have significantly changed for the worst since then.
60	Franchisor's control gotten more onerous	Economically I cannot afford to market for myself. And the franchisee holds total control over marketing and can and has cut off my sales leads at a moments notice without notice or cause.
61	Franchisor's control gotten more onerous	Some of these questions I'm unable to answer because I've never explored selling for instance.
62	Franchisor's control stayed the same	Some items are "restricted" not by corporate requirements but by general lack of options or by corporate recommendations. We are not strictly required to order from certain vendors or to carry certain products but we are expected to carry branded items of which there are only certain vendors that offer them and limited selection of them so we end up being somewhat restricted in who we can order and what we can carry. This is not necessarily a bad thing as it helps maintain our brand across the board but it does come at some risk that something would happen with those vendors and our business would be harmed by that even though we technically can carry products from outside companies that compete with our own branded items.

Continued on next page...

Table C.2. Open-ended Survey Responses. This table reports all of the open-ended survey responses we received, as well as their answer to the final structured question about time trends in franchisor control. Named franchise brands were anonymized by replacing them with "franchise".

#	Franchisor Control	Other Comments
63	Franchisor's control gotten more onerous	To me, corporate oversteps their boundaries
64	Franchisor's control stayed the same	Corporate has almost total control build costs including negotiating unfavorable contracts with suppliers/vendors that corporate benefits from by taking a cut of the inflated prices. In all their corporate contracts, Corporate uses their bargaining power to enrich themselves (by inflating costs to take a cut) instead of to benefit franchisees.
65	Franchisor's control gotten more onerous	ineffective

D LLM-assisted data extraction

Note: The data extraction protocol was first described in Atz (2025) and is reproduced below.

This study uses a large language model (OpenAI's GPT4o model) to analyze text. LLM-assisted coding was used to extract metadata (e.g., the name of the franchise), data from the cover page (e.g., the upfront fee), and statistics disclosed in Item 20 (e.g., number of outlets in a state). The advantage of extracting data with the help of a large language model consists of its flexibility. It is, for example, not necessary to spell out every possible type of date format to capture a date. A critical concern is the potentially unreliable output – after all, we require structured data that fits into a column-variable schema. Another concern is "hallucinations", that is, responses that are factually incorrect or nonsensical. This issue seems to be most pressing when inputs are ambiguous, there is complex multi-step reasoning, or when highly niche questions are involved, and not during an information-retrieval task. I use OpenAI's GPT model because it allows the API user to use "function calling" (also known as *Structured Outputs*), which generates valid JSON outputs. This functionality is different from the more commonly-used ChatGPT interface. The reliability of function calling is close to 100% and can, in principle, even be set to 100%. The machine would take a prompt and return a structured output that provides document-level data. It also allows me to specify and vary prompts that can react to issues on the fly. For instance, when a document was missing data for uncommon reasons (such as PDF scanning errors), the model might be more inclined to fill in the gap with its best guess, but we would prefer a NA (not available) entry.

The latest iteration of the LLM-assisted document coding task was done in the second half of August 2024. The model at the time was called "gpt-4o-mini". We used mostly the preset parameters, such as a temperature of 0.1. Key to this approach is the right prompt. We rely on the recommendations and "tactics" provided by OpenAI to fine-tune

the coding strategy.[13] In particular, gpt-4o-mini was instructed to (1) adopt a persona, (2) follow the delimiters to clearly indicate distinct parts of the input, and (3) be given access to specific functions (JSON variable schemas). The instructions for one prompt read as follows:

> "You are a business analyst collecting specific data points from a franchise disclosure document. Only refer to the information in the text. In the text delimited by triple quotes extract the following six fields: 1 franchisor, parent firm, corporation or corporate owner doing business or operating a franchise (find it usually at the very beginning); 2 the franchise or brand name the document refers to (find it usually after the corporate owner); 3 the 'initial franchise fee' paid to the franchisor; 4 the lower total investment necessary; 5 the upper total investment necessary; 6 date of the franchise disclosure document (find it usually as month day, year format) formatted as ISO yyyy-mm-dd, use NA if missing;"

The relevant part of each FDD was appended to these instructions. The text typically included the cover page of an FDD, but was optimized to exclude state cover pages and used the maximum token length if the presence of the cover page was uncertain. A JSON schema, provided as part of the message, described the six data fields in this prompt. The queries were run in batches to mitigate the effect of any API error. A conservative estimate of the total number of tokens is 300 million across all prompts with a total number of requests around 100,000.

Validation of the response was done in three steps: first, there was a manual inspection for a feasible number of documents that compared the LLM response with the correct response from the FDD. Second, results were inspected based on aggregate statistics. For example, it became obvious from year counts that many dates that were actually missing were coded as 2023. This was later rectified. Third, the Entrepreneur magazine Franchise

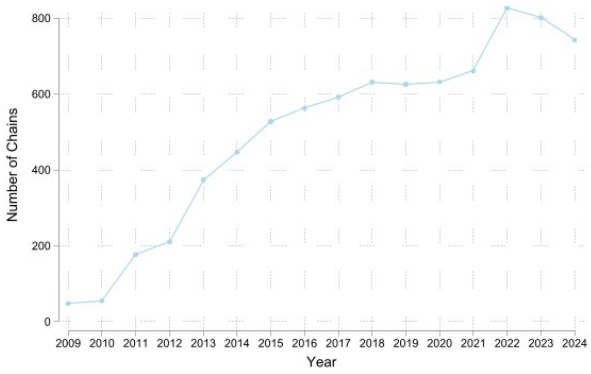
[13] https://platform.openai.com/docs/guides/prompt-engineering

500 ranking provided their own data points for a subset of franchises, which were used to detect any aberrations in the LLM results. An alternative source of ground truth came from the FDDs themselves by means of regular expressions.

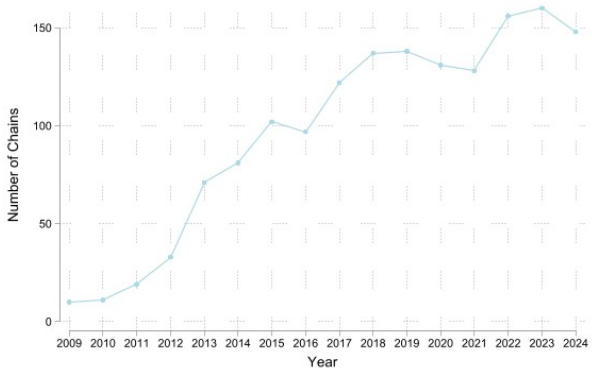
E Restraint Prevalence by Industry

We report restraint prevalence by industry in this appendix, in addition to the count of chains for each of the top 10 industries in the panel over time.

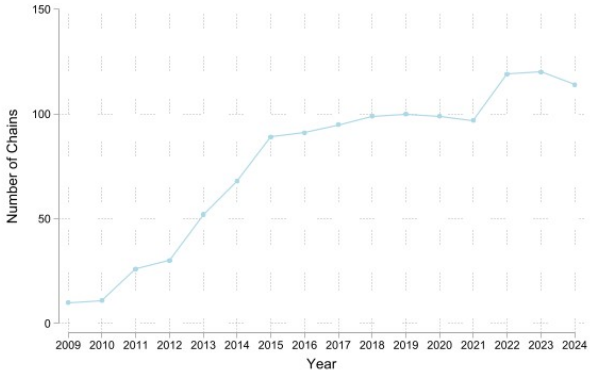
Figure E.1. Count of Chains in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



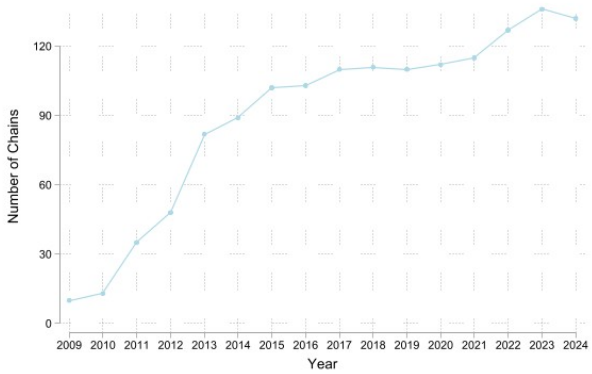
(A) Restaurants & Other Eating Places



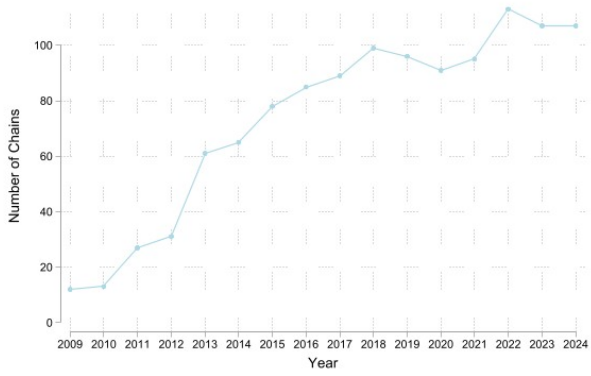
(B) Other Amusement & Recreation



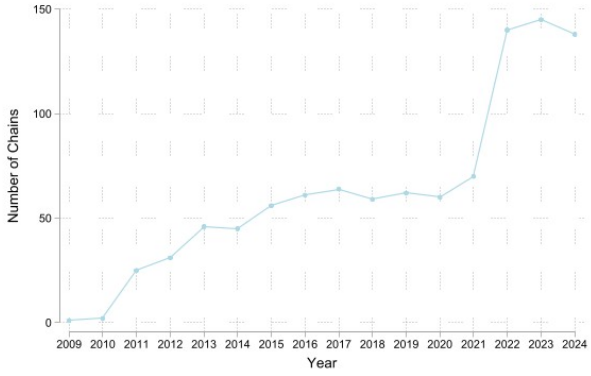
(C) Personal Care Services



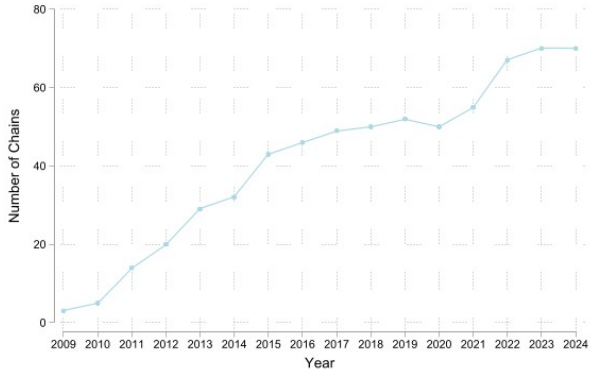
(D) Services to Buildings & Dwellings



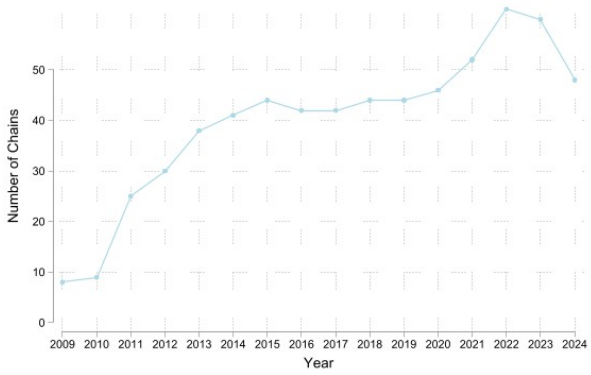
(E) Other Schools & Instruction



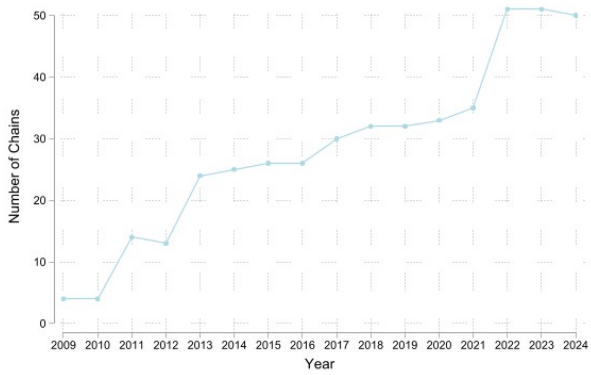
(F) Traveler Accommodation



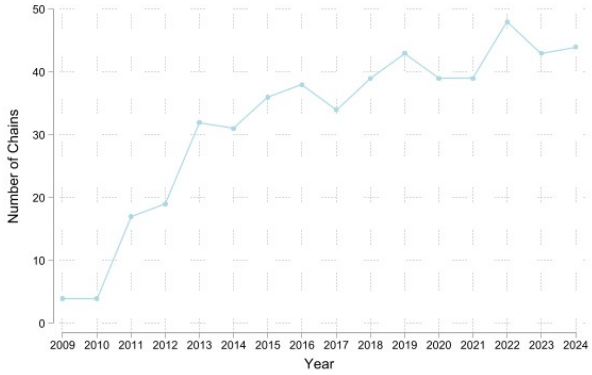
(G) Residential Building Construction



(H) Automotive Repair & Maintenance

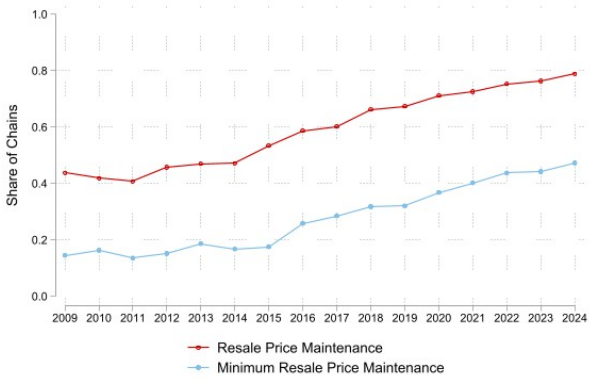


(I) Other Personal Services

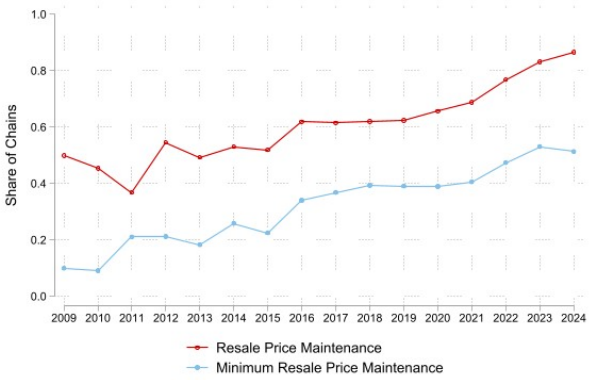


(J) Real Estate Agents

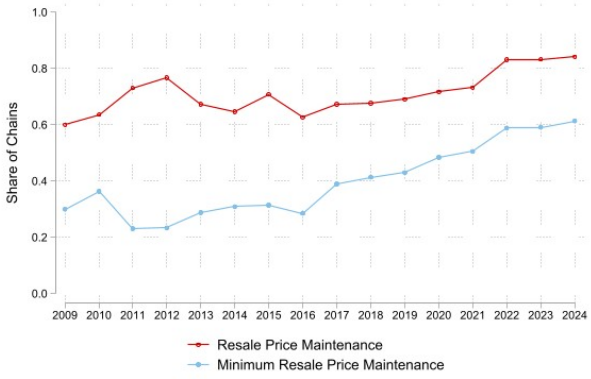
Figure E.2. Pricing Restraint Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



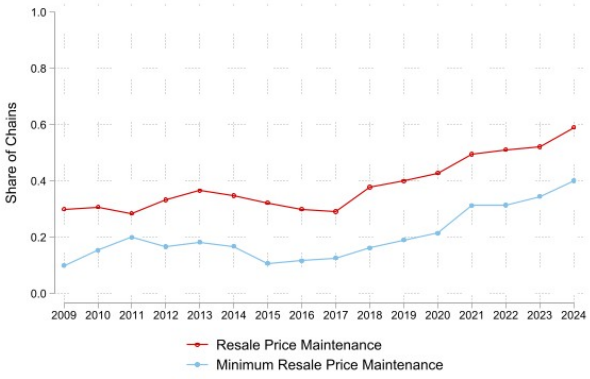
(A) Restaurants & Other Eating Places



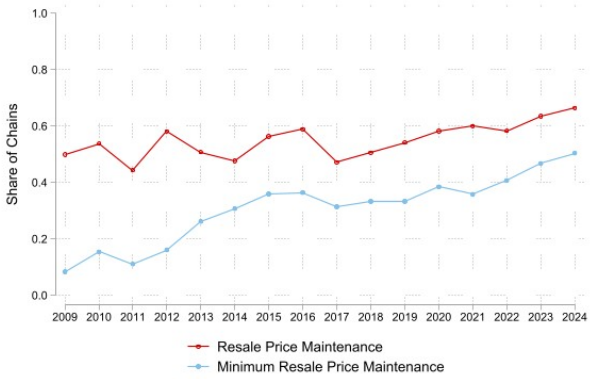
(B) Other Amusement & Recreation Industries



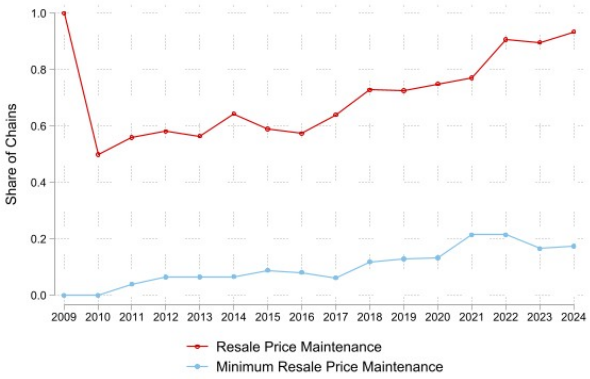
(C) Personal Care Services



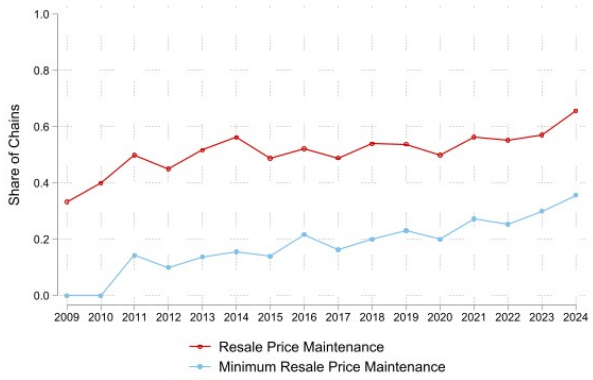
(D) Services to Buildings and Dwellings



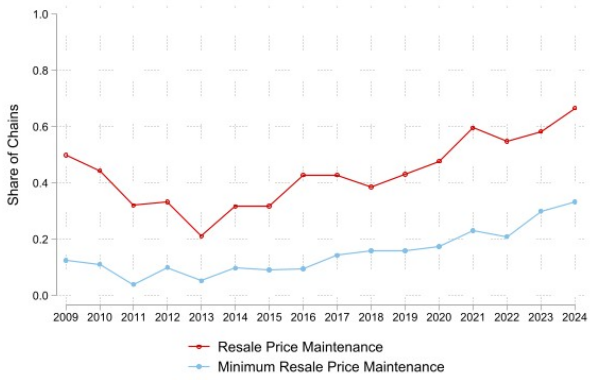
(E) Other Schools and Instruction



(F) Traveler Accommodation

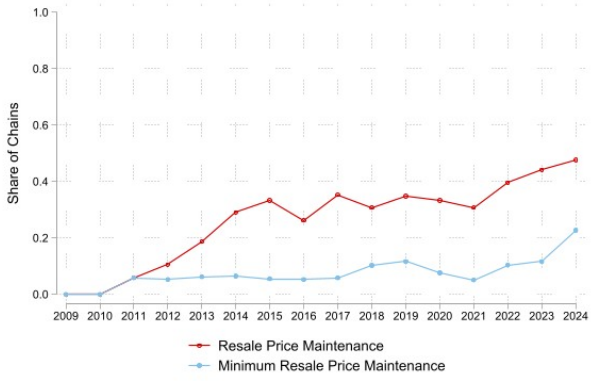


(G) Residential Building Construction



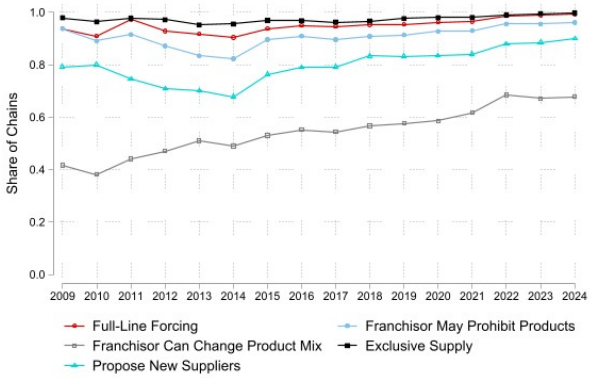
(H) Automotive Repair and Maintenance

(I) Other Personal Services

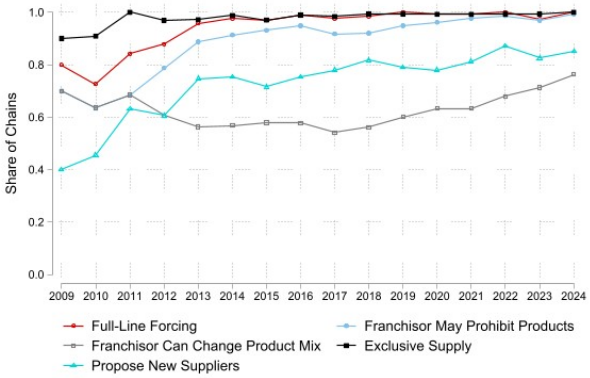


(J) Offices of Real Estate Agents and Brokers

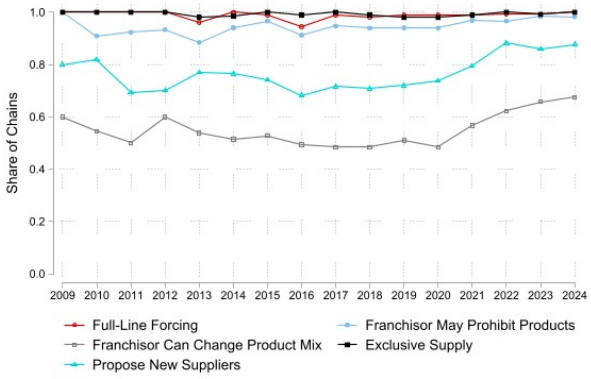
Figure E.3. Product and Service Offering Restraint Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



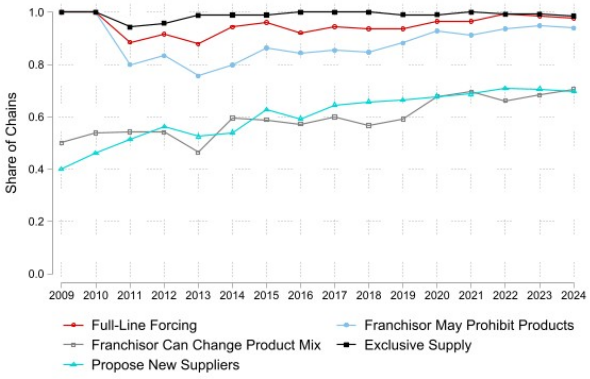
(A) Restaurants & Other Eating Places



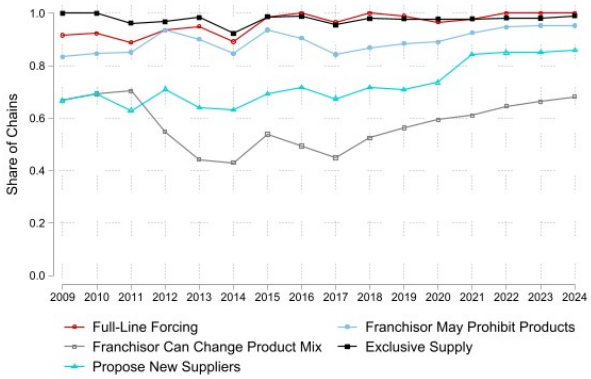
(B) Other Amusement & Recreation Industries



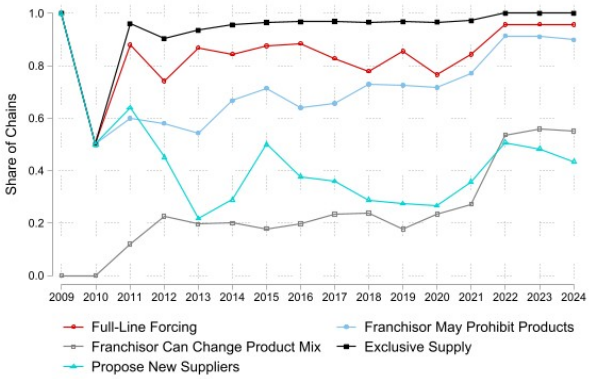
(C) Personal Care Services



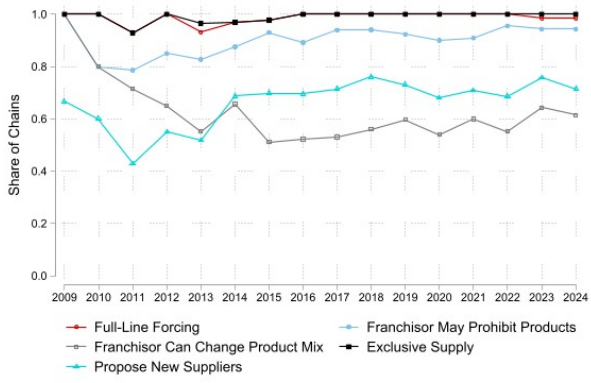
(D) Services to Buildings and Dwellings



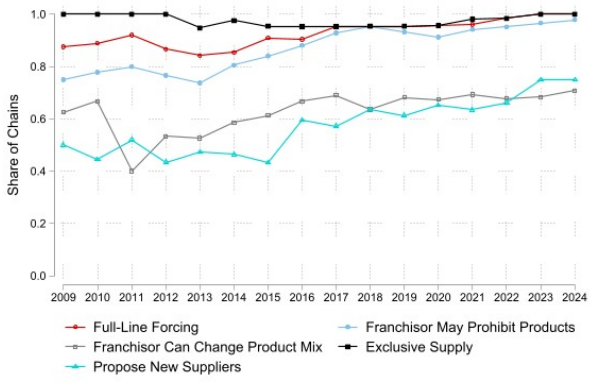
(E) Other Schools and Instruction



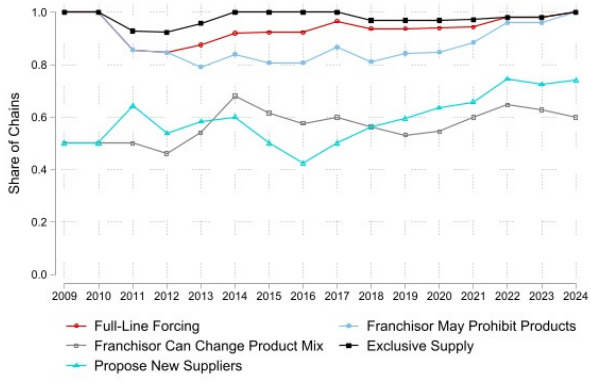
(F) Traveler Accommodation



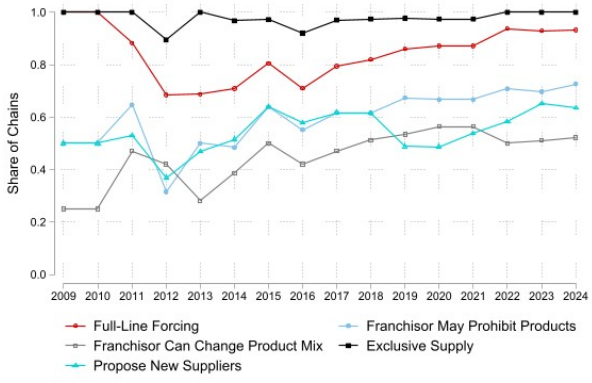
(G) Residential Building Construction



(H) Automotive Repair and Maintenance

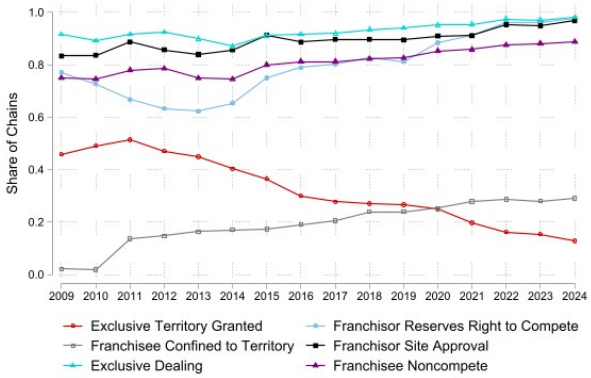


(I) Other Personal Services

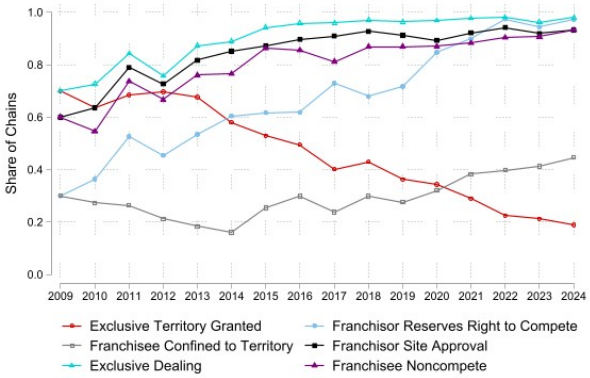


(J) Offices of Real Estate Agents and Brokers

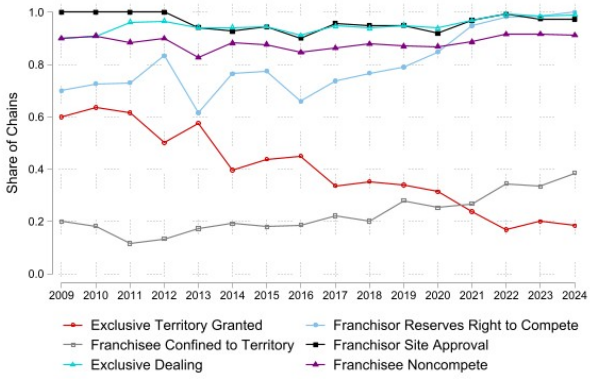
Figure E.4. Territory and Price Restraint Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



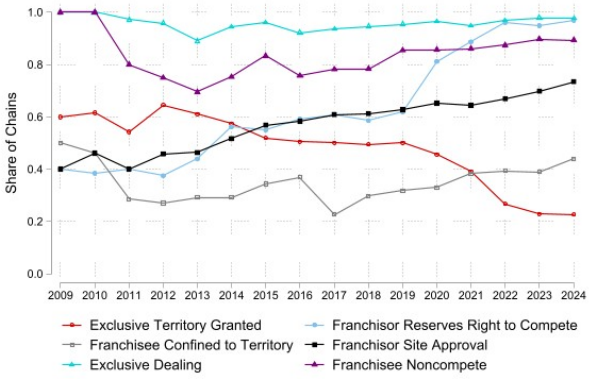
(A) Restaurants & Other Eating Places



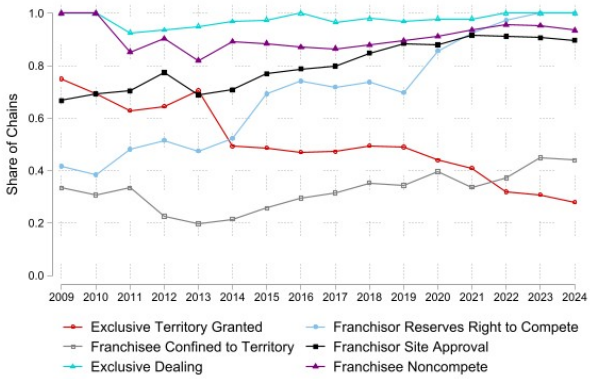
(B) Other Amusement & Recreation Industries



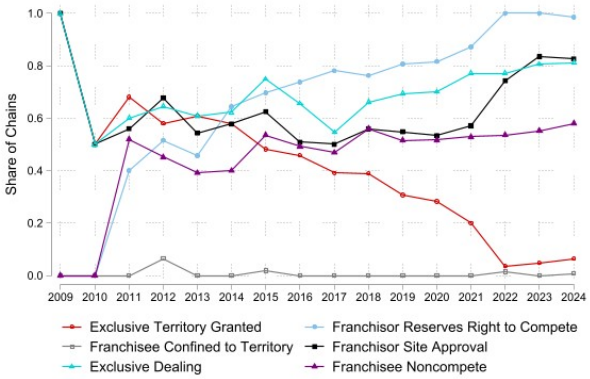
(C) Personal Care Services



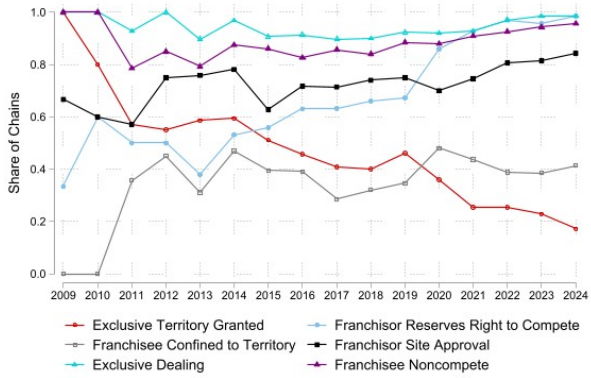
(D) Services to Buildings and Dwellings



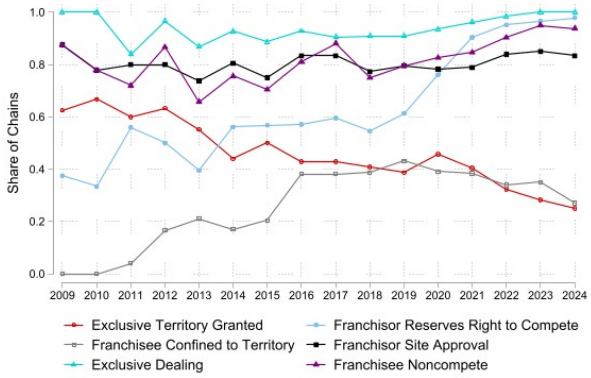
(E) Other Schools and Instruction



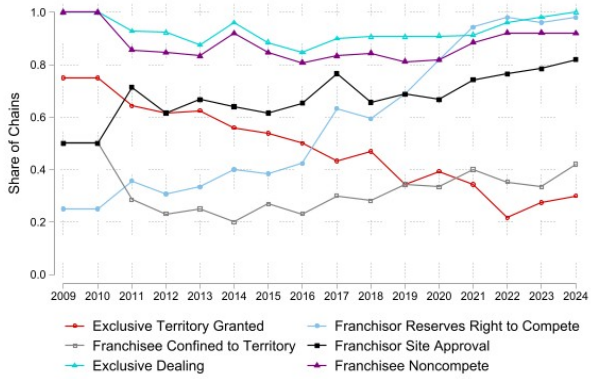
(F) Traveler Accommodation



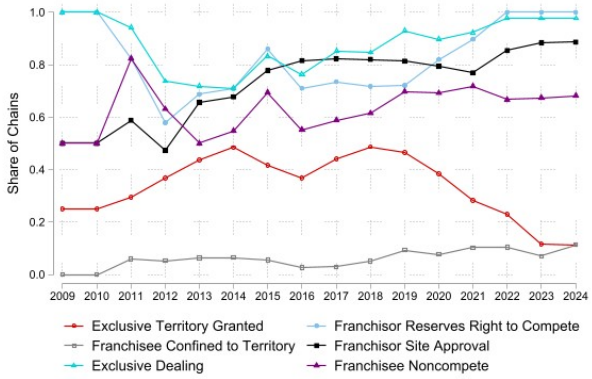
(G) Residential Building Construction



(H) Automotive Repair and Maintenance

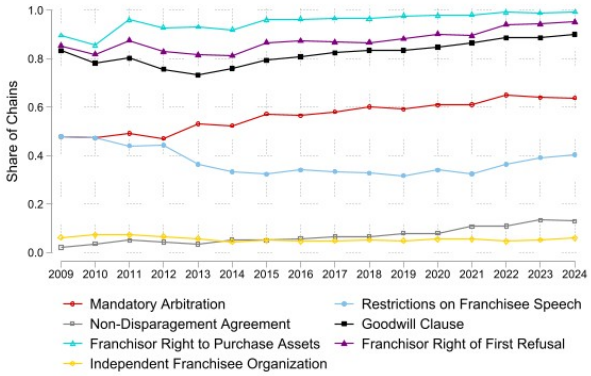


(I) Other Personal Services

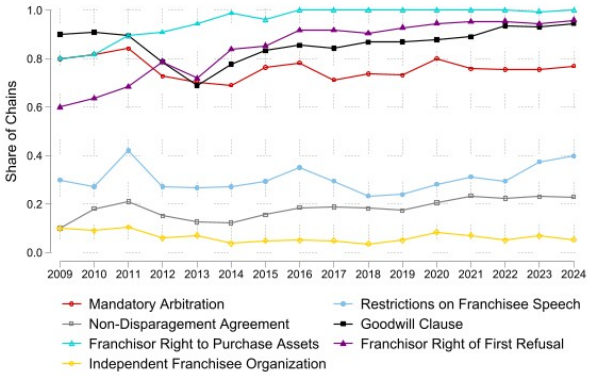


(J) Offices of Real Estate Agents and Brokers

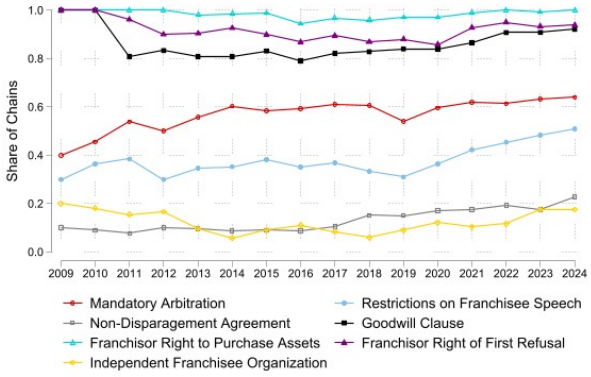
Figure E.5. Governance and Dispute Resolution Restraint Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



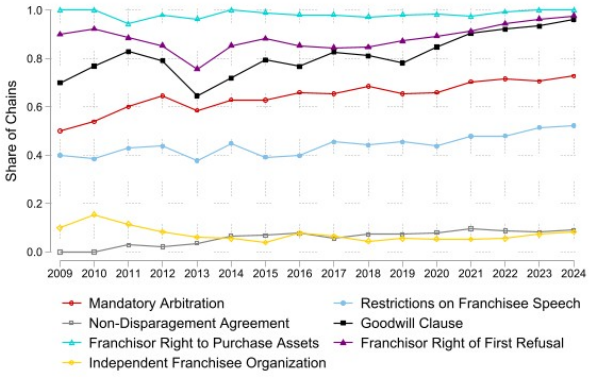
(A) Restaurants & Other Eating Places



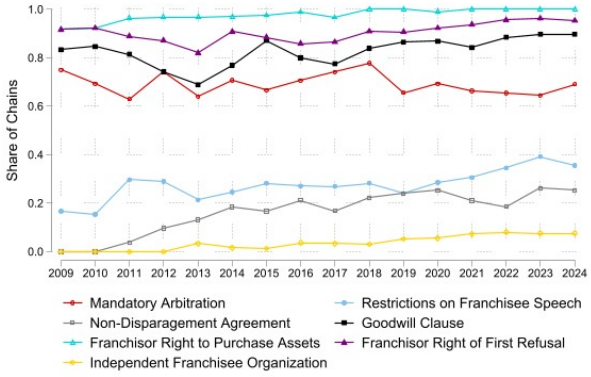
(B) Other Amusement & Recreation Industries



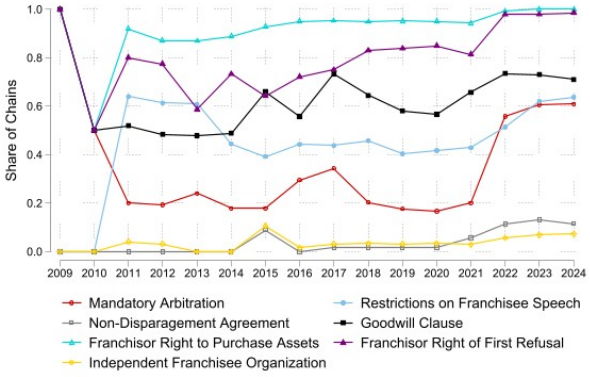
(C) Personal Care Services



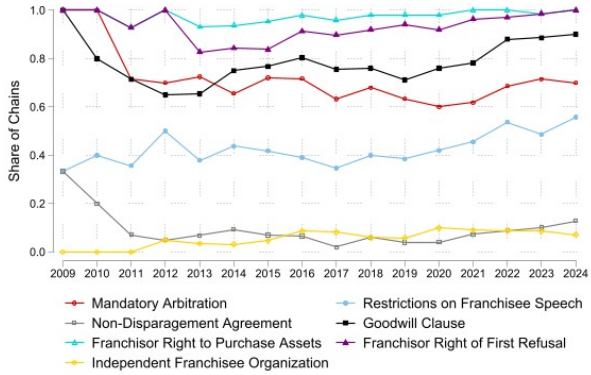
(D) Services to Buildings and Dwellings



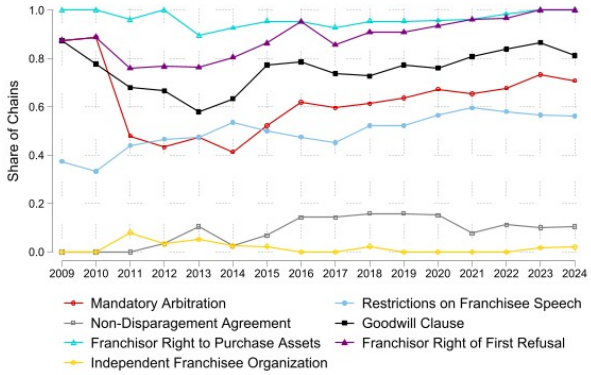
(E) Other Schools and Instruction



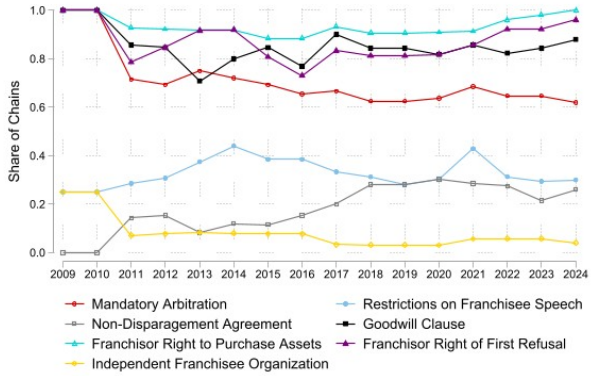
(F) Traveler Accommodation



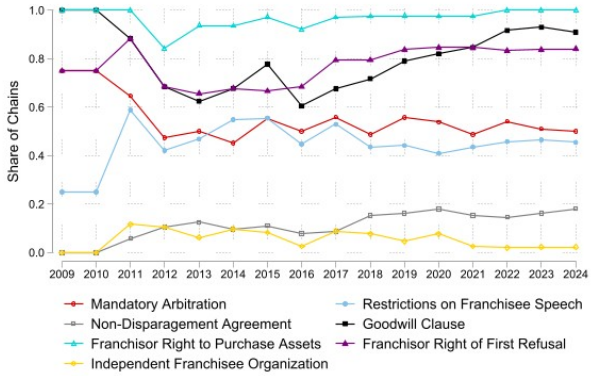
(G) Residential Building Construction



(H) Automotive Repair and Maintenance

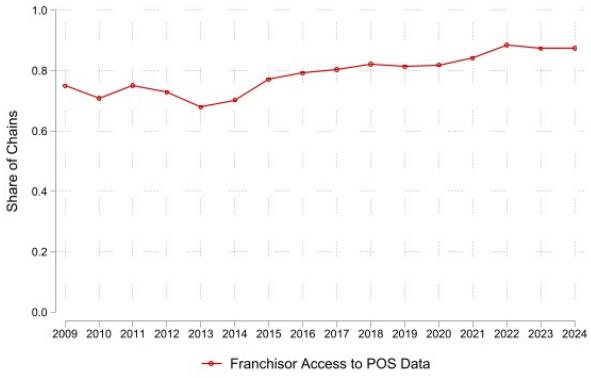


(I) Other Personal Services

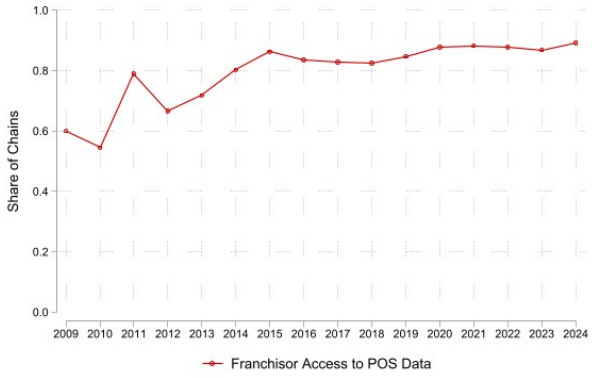


(J) Offices of Real Estate Agents and Brokers

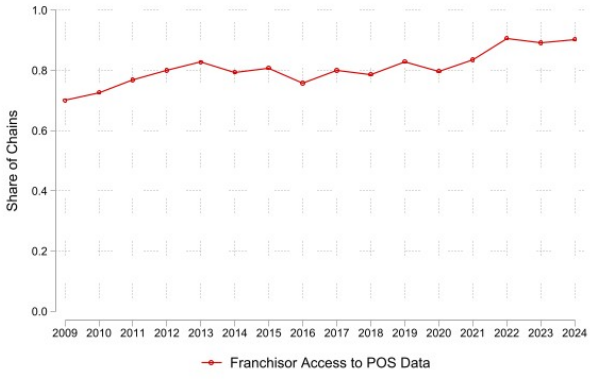
Figure E.6. Information and Monitoring Provision Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.



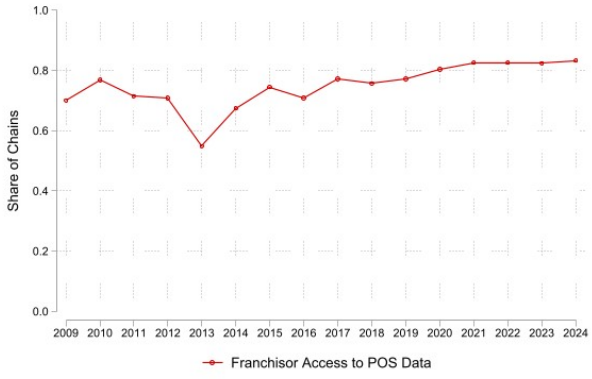
(A) Restaurants & Other Eating Places



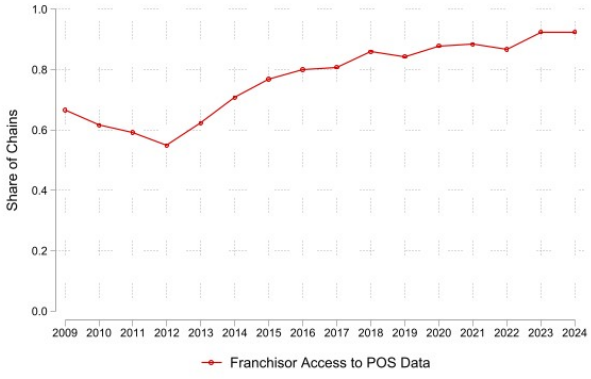
(B) Other Amusement & Recreation Industries



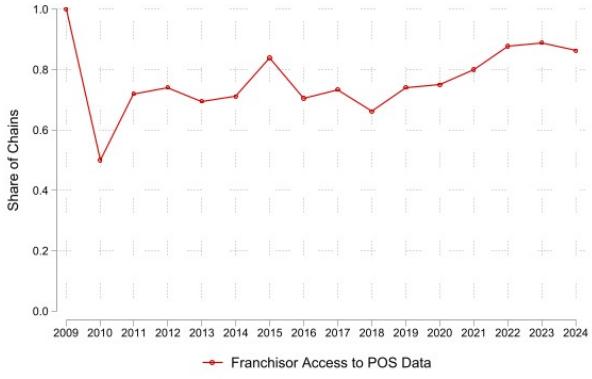
(C) Personal Care Services



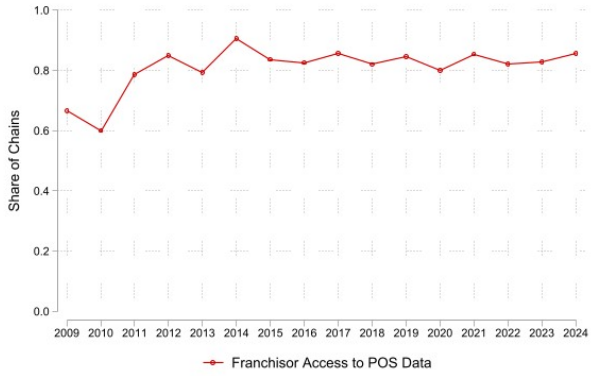
(D) Services to Buildings and Dwellings



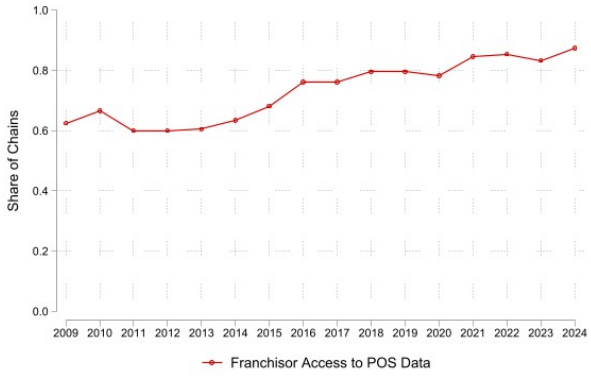
(E) Other Schools and Instruction



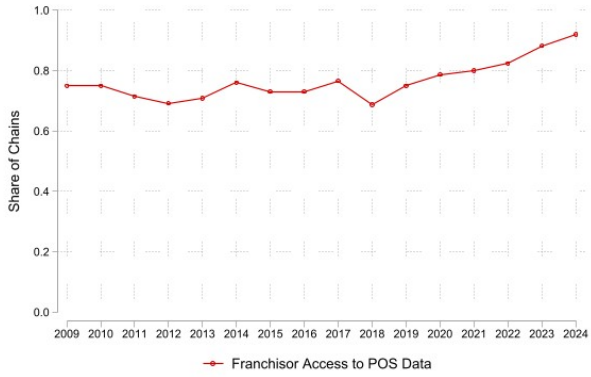
(F) Traveler Accommodation



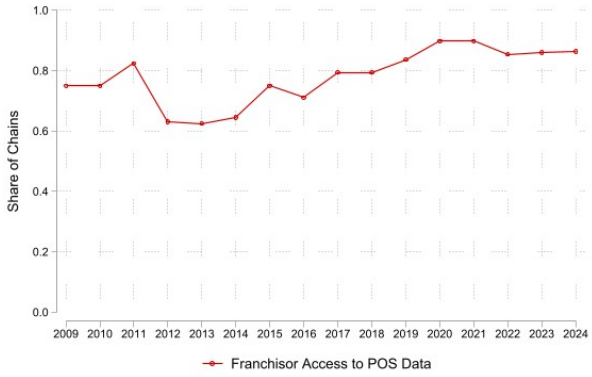
(G) Residential Building Construction



(H) Automotive Repair and Maintenance

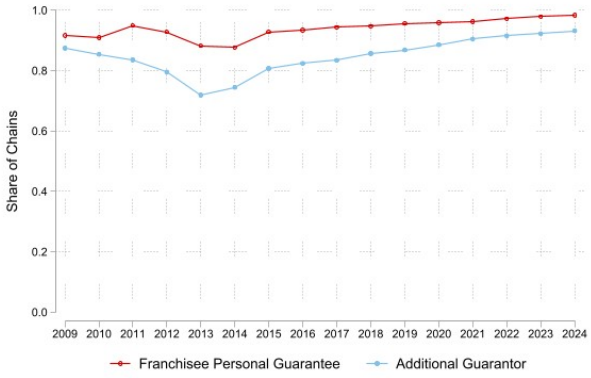


(I) Other Personal Services

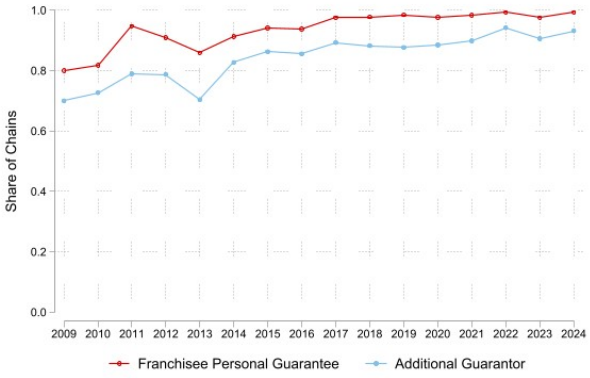


(J) Offices of Real Estate Agents and Brokers

Figure E.7. Legal and Financial Obligation Provisions Prevalence in Each of the Top 10 Industries in the Franchise Chain Panel Dataset, 2009-2024.

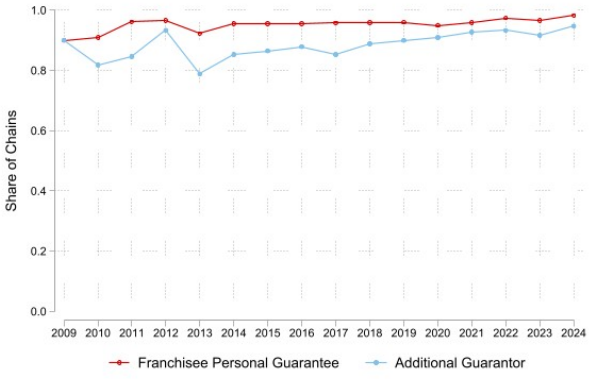


(A) Restaurants & Other Eating Places

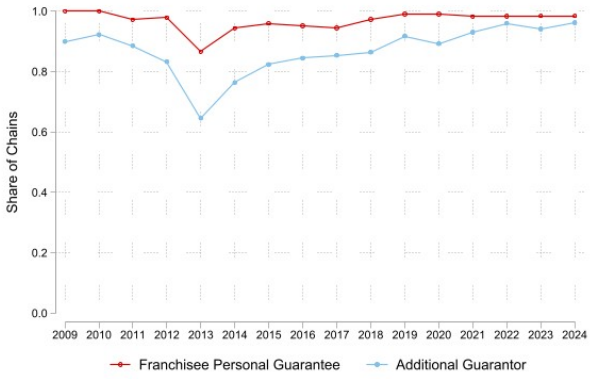


(B) Other Amusement & Recreation Industries

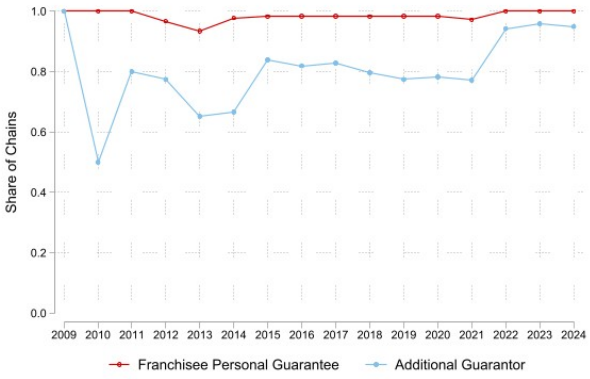
(C) Personal Care Services



(D) Services to Buildings and Dwellings

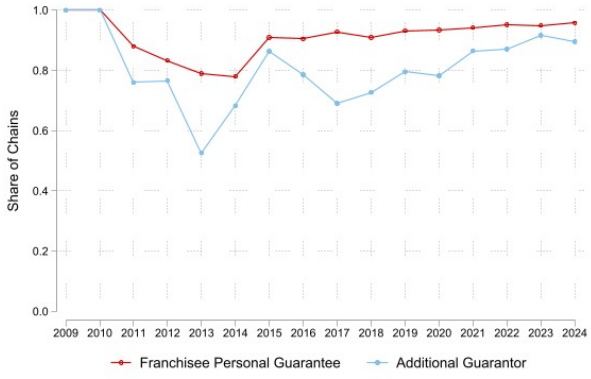


(E) Other Schools and Instruction

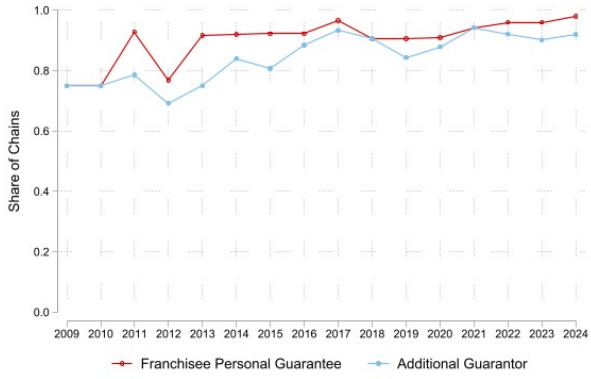


(F) Traveler Accommodation

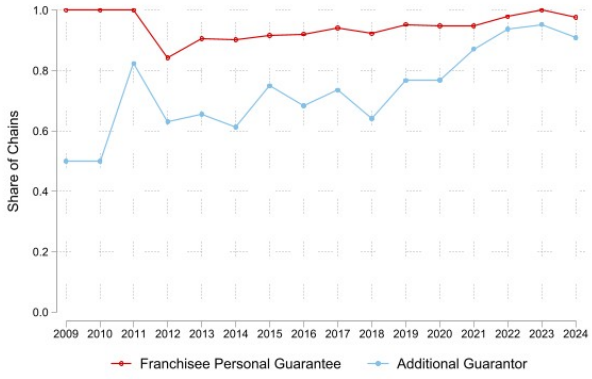
(G) Residential Building Construction



(H) Automotive Repair and Maintenance



(I) Other Personal Services



(J) Offices of Real Estate Agents and Brokers

F Item Response Model for Franchisor Control

We compute an overall measure of franchisor control from the restraint indicators observed at the chain-year level using a two-parameter logistic item-response model in Section 5.1. The method assumes a latent, common trait θ to which individual items are responsive. In our application, θ is interpreted as a continuous measure of franchisor control, and each of the restraints is an item whose probability varies as a function of the underlying franchisor control parameter as well as a restraint-specific difficulty parameter β_k and discrimination parameter α_k. The difficulty parameter can be interpreted as a shifter of the likelihood that a given restraint is present: high values of β_k indicate that restraint k is relatively uncommon in the population. The discrimination parameter represents the responsiveness of the likelihood of observing a restraint to the underlying control parameter: a low absolute value of α_k indicates that a low-θ and high-θ franchisor are nearly equally likely to use restraint k.

The probability that a given restraint k is present for franchise chain j in year t is given by

$$P(y_{jtk} = 1 \mid \theta_{jt}, \alpha_k, \beta_k) = \frac{1}{1 + \exp[-\alpha_k(\theta_{jt} - \beta_k)]} \tag{F.1}$$

where: θ_{jt} = latent trait score for franchise chain j in year t.

β_k = 'difficulty' of restraint k: location of the logistic function in θ-space.

α_k = 'discrimination' of restraint k: slope of the logistic function in θ-space.

We estimate this model via Maximum Likelihood on the set of restraints that reduce franchisee autonomy, plus the inverse of Exclusive Territory Granted (so that all items are coded in the direction of greater franchisor control) and the presence of an Independent Franchisee Association.[14] The estimation produces $\{\hat{\theta}_{jt}\}$, which we use in subsequent

[14] We exclude from this analysis a handful of the restraints described in Section 2 that are the converse of restraints we do include, such as "No Exclusive Territory" and "No Independent Franchisee Association," to avoid redundancy in the item set.

analyses.

Figure 5 reports the results. Figure 5(A) shows item characteristic curves: the predicted probability function, $\hat{y}_{jtk}(\theta)$, for each restraint k as a function of $\hat{\theta}$. Consistent with the results in Section 4, the logistic curves are increasing for all restraints except Exclusive Territory Granted, confirming that higher values of θ correspond to increased probability of all autonomy-reducing provisions and decreased probability of exclusive territories. Figure 5(B) is a histogram of the estimated $\hat{\theta}_{jt}$ for the panel as a whole, and Figure 5(C) shows how that distribution evolves over time. The rightward shift in the distribution of $\hat{\theta}$ over the panel illustrates increased franchisor control and establishes that the pattern is reducible to a single estimable latent trait.

G Methodology and Robustness for FTC Complaints Analysis

This appendix contains a detailed methodology for the FTC complaints analysis presented in Section 5.2, as well as additional results related to idiosyncrasies in the complaints data.

Since complaint coding is input by users, miscoding occurs. We take several steps to clean the data. First, we standardized business names by removing leading, trailing, and internal duplicated blanks; converting to lower-case; converting Unicode character codes; keeping only Name 1 in the case of names input as "Name 1 fka/aka/dba Name 2;" and removing common endings not present in the matching data (e.g., "llc," "inc," "of California," "franchise systems").

Next, we removed complaints unlikely to be about the franchising relationship. We kept only complaints with a violation code contained in the following list: Deficient Franchise Disclosure, Breach of Contract, Fail to Provide Franchise Disclosure, Deception/Misrepresentation, Unsubstantiated Earnings Claim, and Other (Note the Violation in the Comment Field). This list was generated by identifying violation codes associated with at least one complaint with the product code "Franchises & Distributorships"[15] and then manually curating the list to retain codes highly likely to pertain to the franchising relationship.[16]

We matched the names of complained-against parties to an extensive list of known franchisors, first by exact match against a manually generated list of known misspellings and alternate spellings, then by fuzzy match using a Jaro-Winkler similarity threshold of

[15]This product code is used synonymously with "Franchises\Distributorships," which is reported in some years of the data.

[16]Examples of removed violation codes include: Company does not have adequate security; Company fails to honor request to opt-out/opt-out mechanism does not work; I was told it was a free trial; Uses obscene, profane or otherwise abusive language; and several violation codes related to spam and the Telemarketing Sales Rule.

0.95. We manually removed common false matches (e.g., complainers who indicated the complaint was about “me,” which erroneously matched to a sandwich franchise called “Melty”).

The primary sample (the “full matched complaint set”) consists of observations with violation codes likely to pertain to the franchising relationship and with names that exact- or fuzzy-match known franchises. In additional analyses, we separately require that the complaint be tagged “Franchises & Distributorships” (1,327 complaints) or that the complaint text contain the words “franchisee” or “franchisor” (461 complaints, available only from January 2019). Both restrictions likely result in false negatives but serve as analysis samples with few false positives.

G.1 Lower Bounds and Effects of Website Redesigns & FTC Outreach

The full matched complaint sample utilized for the results in Section 5.2 may include complaints which are not, in fact, about the franchising relationship. In this section, we discuss more restrictive assumptions which likely generate lower bounds on the count of complaints that are truly about the franchising relationship. In doing so, we highlight and discuss two FTC actions which starkly affect complaint categorization.

The first additional restriction we implement is to require that complaints are tagged as “Franchises & Distributorships" (hereafter, FD). The second additional restriction is that the text of complaints contain either of the words “franchisee" or “franchisor." The first restriction identifies complaints that are more likely to be about the franchising relationship, since the complainer must select “Franchise" as the topic of their complaint. The second restriction similarly identifies complaints about the franchising relationship, since complaining franchisees are likely the only ones who would use the terms “franchisee" or “franchisor."

The time series of complaints (including the full matched complaint set, as well as the tagged set—those tagged FD—and the Franchisee/Franchisor Text set) are depicted in

Figure G.1. Time Series of Complaints Filed with FTC: Full Matched Complaint Set vs. Additionally Restricted Sets The figure contains time series of franchising complaints. In addition to the full matched complaint set, the figure depicts series that are additionally restricted to be tagged with the "Franchises & Distributorships" tag or contain either of the words "franchisee" or "franchisor". The two dashed vertical lines indicate the two actions taken by the FTC: first, a 2020 website redesign, and second, a 2021 button addition and outreach to franchisee groups.

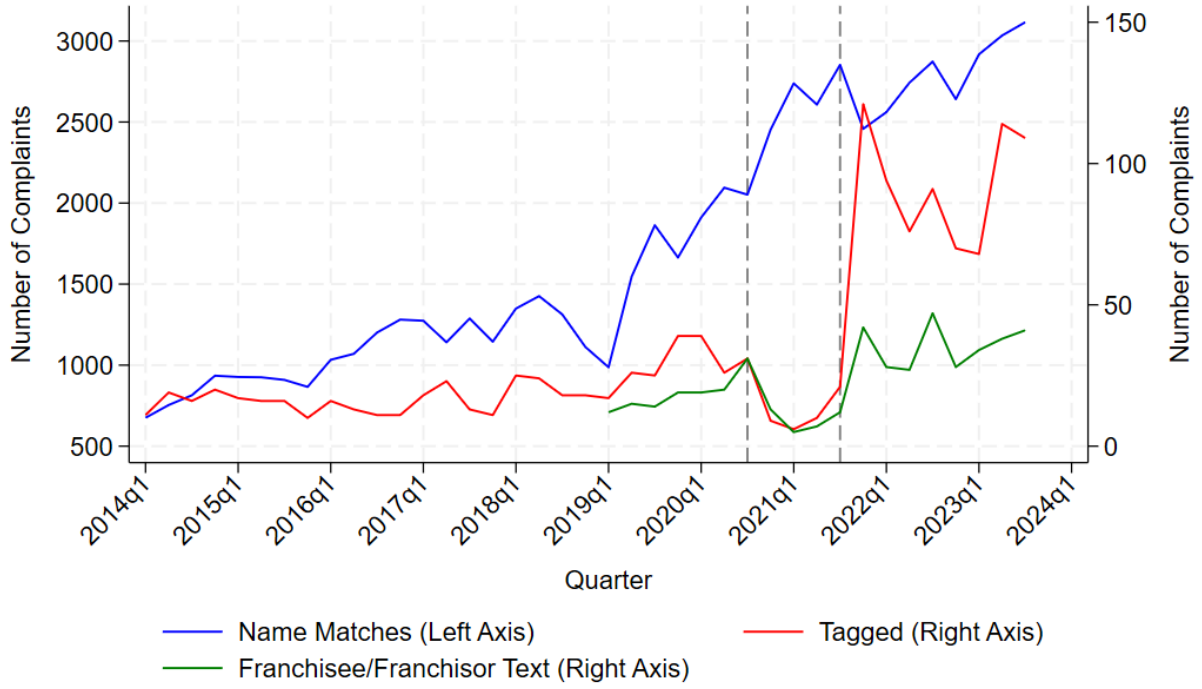


Figure G.1.

There are multiple notable features of Figure G.1. First, the number of complaints that are tagged FD or have franchisee/franchisor text (as well as satisfying the other sample inclusion restrictions) is one to two orders of magnitude less than those that satisfy our baseline restrictions. Therefore, the true number of complaints about the franchising relationship is bounded, but not tightly so. However, the trends in each series are similar: broadly increasing over time.

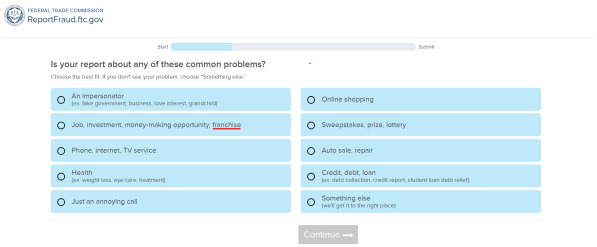
Other notable features of Figure G.1 are the drop in complaints in Fall 2020, and the rise in complaints in Summer 2021, for the two additionally restricted sets. In Fall 2020, the FTC redesigned the complaint reporting website in order to make it easier for consumers to file complaints. The timing of this redesign is indicated by the leftmost dashed

line. Its effects were analyzed in Grosz and Raval (2025), who found that the redesign substantially increased the quantity and readability of complaints. It is surprising, therefore, that complaints tagged FD appear to have dropped following the redesign. However, this may be due to specific components of the redesign. As shown in Figure G.2(A), the old website clearly indicated the ability to select a subcategory (which included FD). On the other hand, the redesigned website (shown in Figure G.2(B)) asked complainers to select "Something else" in case they did not find a suitable category, without inviting complainers to look through subcategories. Therefore, while the redesign broadly increased complaint rates, it may have decreased those specifically categorized as FD.

Figure G.2. Screenshots of FTC Complaint Website entry page over time

(A) FTC Complaint Website, Pre-Redesign (before Fall 2020)

(B) FTC Complaint Website, Post-Redesign (after Fall 2020, before Summer 2021)



(C) FTC Complaint Website, Post-Button Addition (after Summer 2021)

In late summer 2021, the FTC undertook two additional actions that had the potential to affect the count of complaints tagged as FD. First, the FTC added a specific "franchise" button to the online portal (see Figure G.2(C)). Second, the FTC engaged in outreach to franchisee groups to encourage franchisees to report illegal behavior by franchisors, including referencing the complaint website in legal filings and on its website.[17] The timing

[17]For more details on the redesign and outreach, see the Government Accountability Office's report en-

of these two actions is indicated by the rightmost dashed line in Figure G.1.

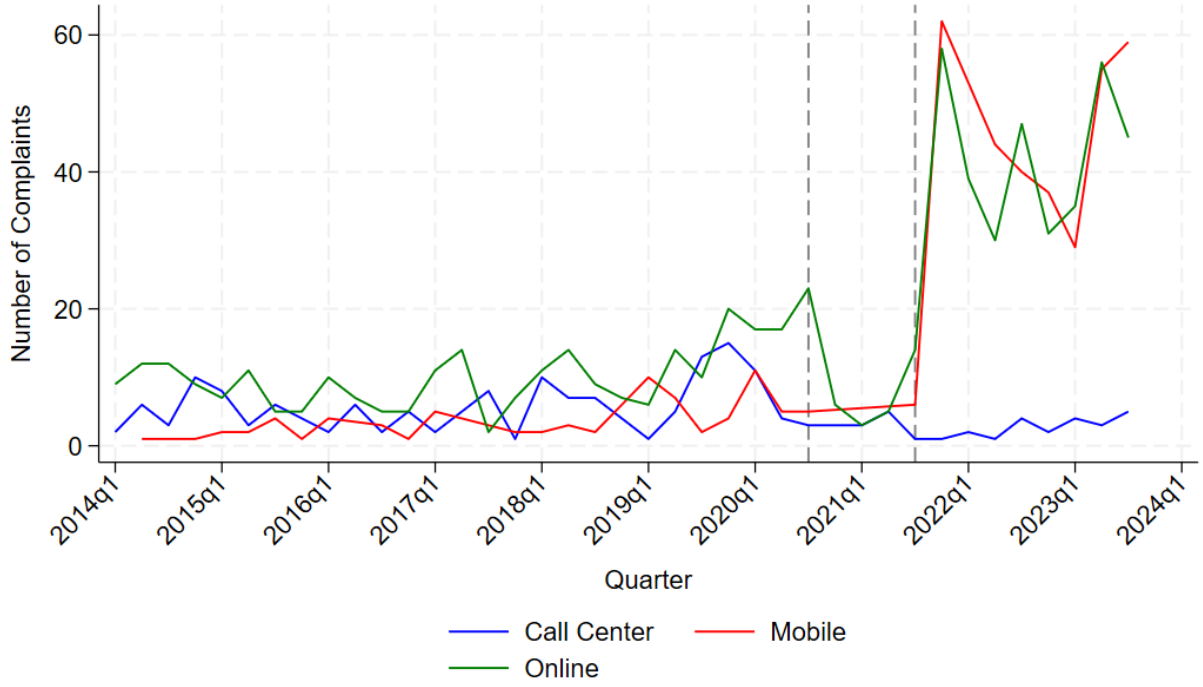
Notably, there is a clear increase in complaints satisfying each of the two additional restrictions following the Summer 2021 button addition and outreach. However, there does not appear to be an increase in franchise complaints in the full matched complaints set. This difference raises the question of whether the full matched complaints set is accurately capturing complaints about the franchising relationship: on the one hand, the button addition should *not* affect the full matched complaint set (since that set is not restricted only to include those complaints tagged FD). However, if the outreach was effective, it should have had a positive effect on the full matched complaint set. Lack of an effect could indicate that that set is overly inclusive, and any positive effect is swamped by noise.

One piece of evidence suggests that the positive effect for the tagged and franchisee/franchisor text match groups was due to the button addition. In Figure G.3, we show (for the set restricted to complaints tagged FD) the breakdown of the full matched complaint set into the mode of complaint: online, mobile, or via the call center. This breakdown shows that the sharp rise in complaints occurred for the online and mobile channels (where the button addition mattered), but not for the call center channel. Indeed, there appears to be no spike for the call center channel at all. Treating the call center data as a mode affected by the outreach but not the button addition, this Figure appears to demonstrate that the outreach was not effective at increasing the rate of complaints, relative to the button addition. However, if outreach encouraged online (rather than call center) reporting specifically, then this comparison may not be valid. In that case, it may simply be that the effect of outreach was not enough to make a huge difference in the full matched complaint set, though the divergence of that series versus all complaints (depicted in Figure 8) may be at least partially reflective of outreach.

Taken together, this evidence suggests that, while the full matched complaint set may

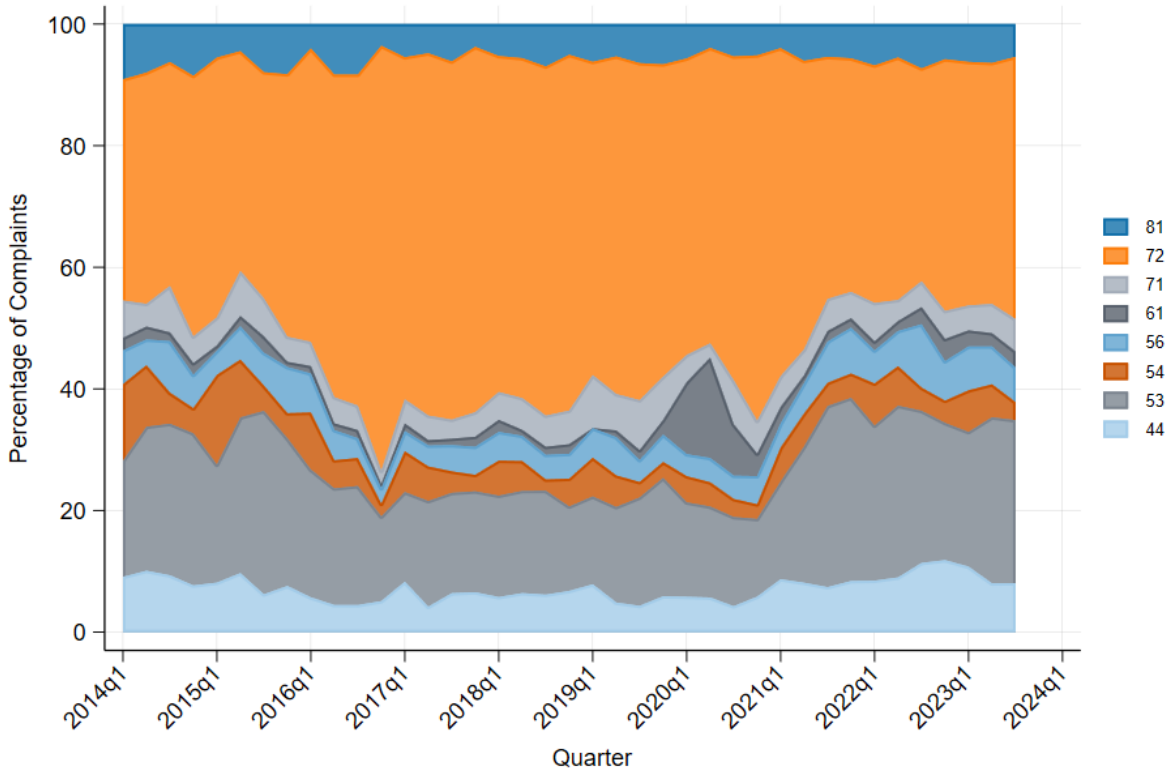
titled "Actions Needed to Improve Education Efforts and Awareness of Complaint Process for Franchise Owners," available at https://www.gao.gov/assets/d23105338.pdf.

Figure G.3. Time Series of Complaints Filed with FTC (by Mode of Complaint) The figure contains time series of franchising complaints, by mode of complaint (online, mobile, or via the call center). The sample is restricted to complaints tagged with the "Franchises & Distributorships" tag. The two dashed vertical lines indicate the two actions taken by the FTC: first, a 2020 website redesign, and second, a 2021 button addition and outreach to franchisee groups.



overestimate the total number of complaints, it is likely unimportant to take into account the effect of either the Fall 2020 or Summer 2021 events in assessing the time series of that set. This is because the events appeared to simply change the composition of complaints (tagged FD or with franchisee/franchisor text, versus not) as opposed to changing the overall number.

Figure G.4. Time Series of Complaints Filed with FTC (by Industrial Sector). The figure contains time series of franchising complaints (the full matched complaint set), broken down by industry (denoted by 2-digit NAICS codes), on a relative basis. For disclosure avoidance, only sectors with 1000 or more total complaints over the sample period are included in the figure. The included NAICS codes correspond to: 44: Retail Trade; 53: Real Estate Rental and Leasing; 54: Professional, Scientific, and Technical Services; 56: Administrative and Support and Waste Management and Remediation Services; 61: Educational Services; 71: Arts, Entertainment, and Recreation; 72: Accommodation and Food Services; and 81: Other Services (except Public Administration).

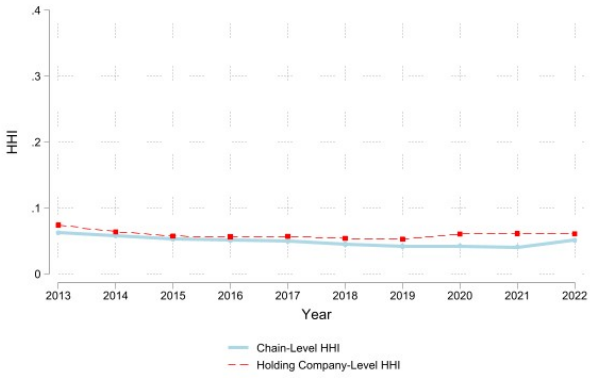


H Supplemental Figures for Franchisor Ownership Concentration and Private Equity

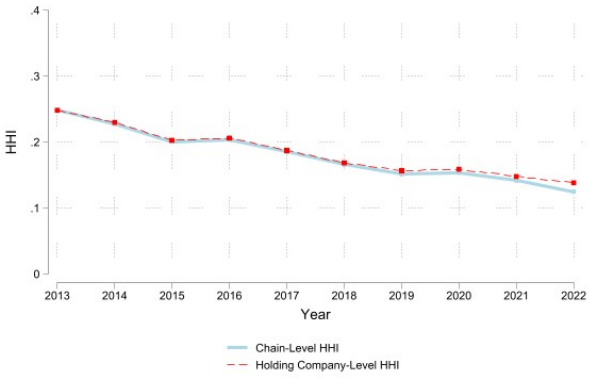
In Section 6 we address the ownership of franchise chains by what we call holding companies, which are corporate entities that control multiple franchise chains. If the market is defined by 4-digit NAICS industry and the entire country, and market shares are computed from outlets as reported in Item 20 of the FDDs, holding-company-level ownership concentration has not meaningfully increased (and in some cases, slightly decreased) over our sample period. That is shown below in figure H.1 for the top 10 most-frequently-appearing 4-digit NAICS industries in our panel dataset. We interpret this finding as reflecting the offsetting effects of increased chain ownership by holding companies and new chain entry.

In Section 6 we also discuss the association between adopting vertical restraints and private equity investment in franchise chains. This appendix reports the levels analysis of restraint prevalence among chains that do and do not have private equity ownership (figure H.2) as well as the binned scatterplot of the relationship between $\hat{\theta}_{jt}$ and whether chain j is owned by a private equity firm in year t (figure H.3). We document a positive association in both cases: private-equity-owned chains are more likely to use a given autonomy-reducing restraint, and the overall index of franchisor correlates positively with private equity ownership.

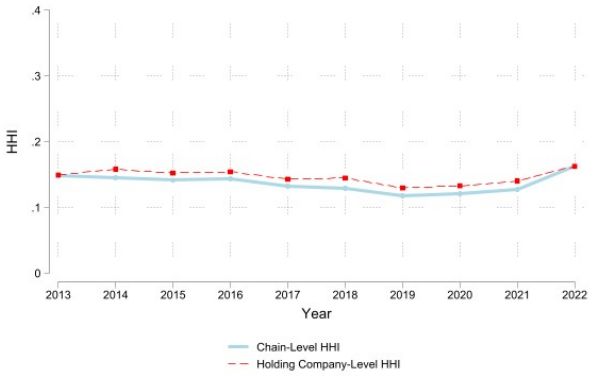
Figure H.1. Industry-level Concentration for the top 10 NAICS 4-digit industries in the panel dataset. We compute the Herfindahl-Hirschman Index at the industry-by-year level for each of the top 10 most frequently-appearing industries in the franchise chain panel dataset. We compute HHI separately at the individual chain level and at the holding company level, i.e. attributing all the chains owned by a given holding company to that locus of control (and treating the non-holding-company-owned chains as independent). Market shares are computed from chain-level outlet counts, reported in Item 20, Table 1 of the FDD.



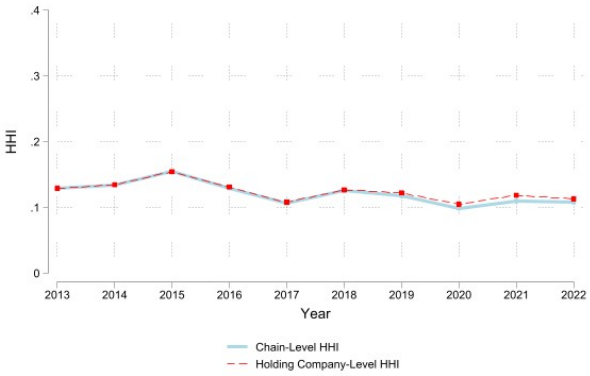
(A) Restaurants & Other Eating Places



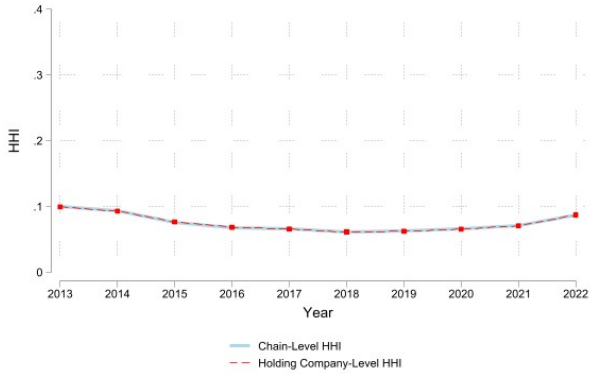
(B) Other Amusement & Recreation



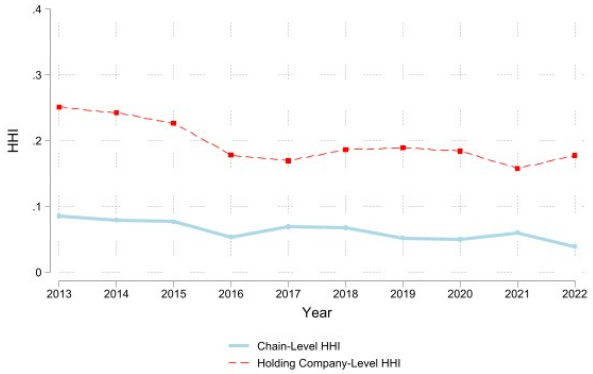
(C) Personal Care Services



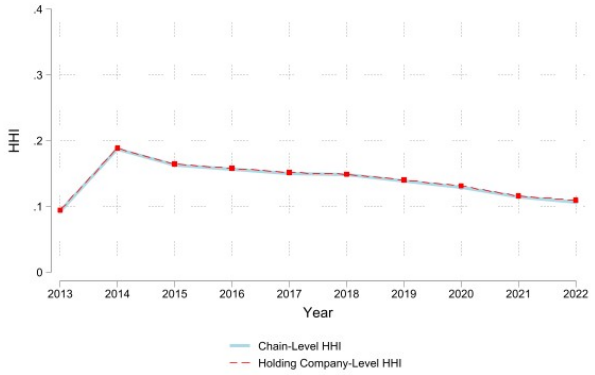
(D) Services to Buildings & Dwellings



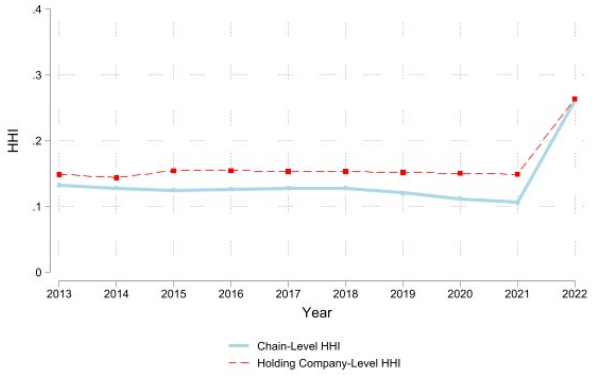
(E) Other Schools & Instruction



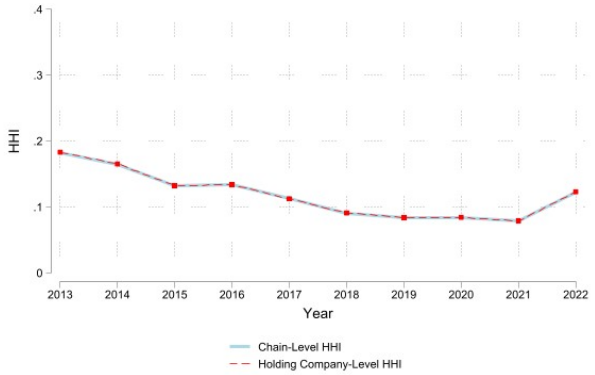
(F) Traveler Accommodation



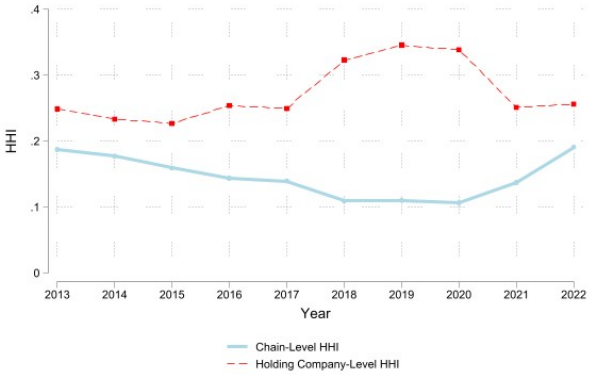
(G) Residential Building Construction



(H) Automotive Repair & Maintenance

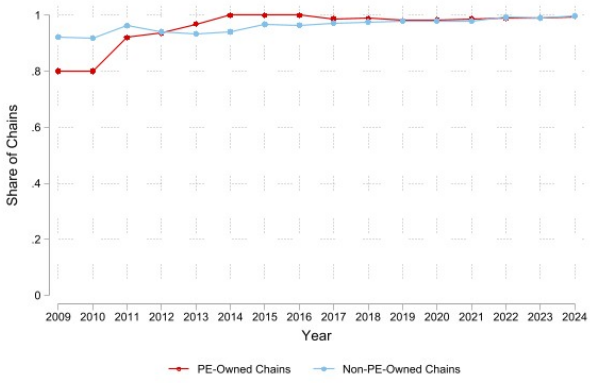


(I) Other Personal Services

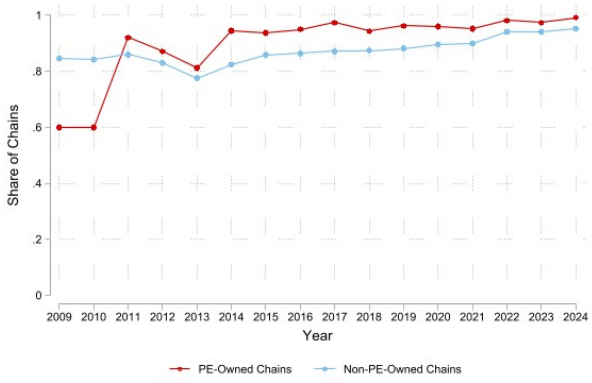


(J) Real Estate Agents

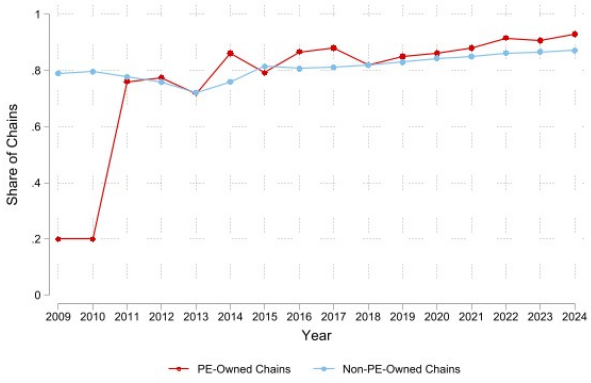
Figure H.2. Vertical Restraints in Private-Equity-Owned and non-Private-Equity-Owned Chains. These figures display the differing frequencies of which private-equity-owned chains utilize a given vertical restraint compared to non-private-equity-owned chains.



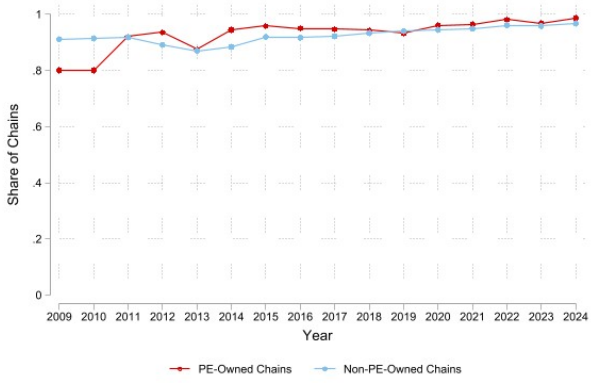
(A) Right to Purchase Assets



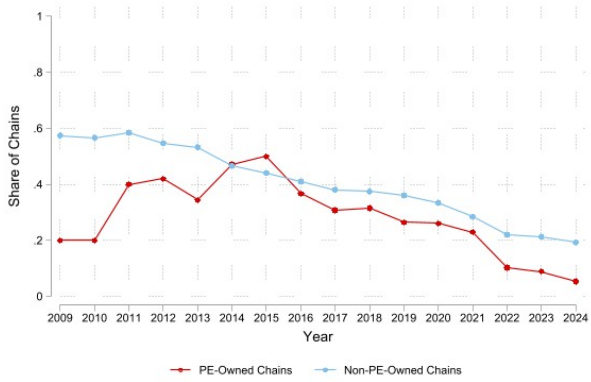
(B) Right of First Refusal



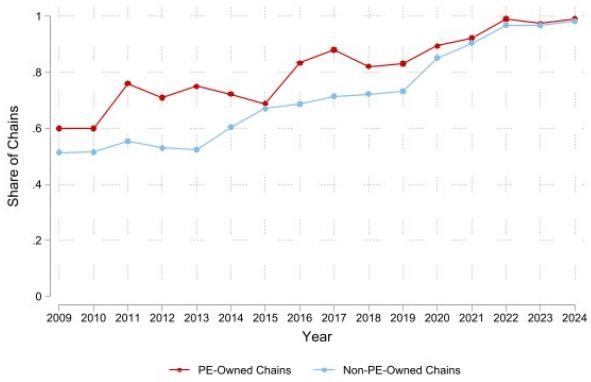
(C) Franchisee Noncompete



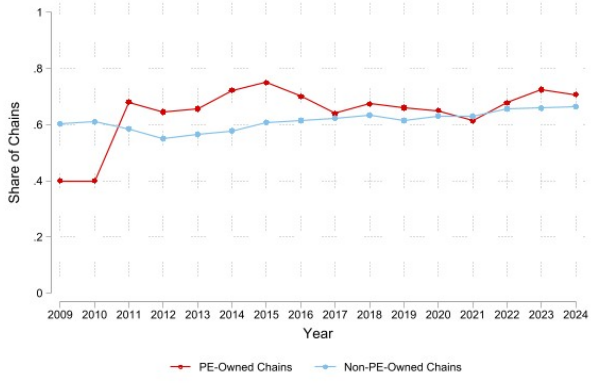
(D) Exclusive Dealing



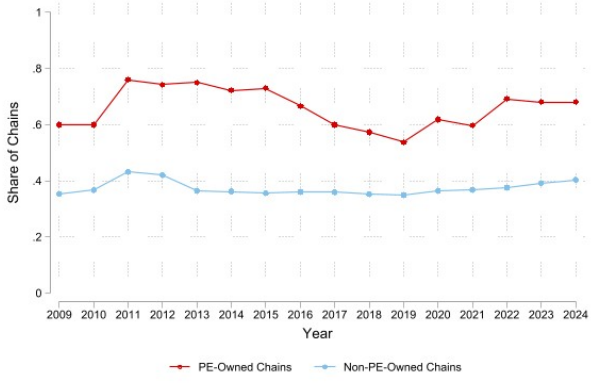
(E) Exclusive Territory Granted



(F) Franchisor Reserves Right to Compete



(G) Mandatory Arbitration



(H) Speech Restrictions

Figure H.3. Probability of Private Equity Ownership as a Function of $\hat{\theta}$