

ACQUISITIONS TO OVERCOME ENTITLEMENT CONSTRAINTS: EVIDENCE FROM FRANCHISE SYSTEMS

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JANUARY 2023

Abstract

The strategy and finance literatures have extensively studied behavioral and social attributes of acquirers that drive acquisition behavior. Less studied are the behavioral and social attributes of targets that invite their acquisition. We maintain that an important such attribute in franchising systems are prior commitments and psychological contracts between franchisors and franchisees that limit franchisors' ability to capture additional value from the system by changing written contract terms. The reason is that such terms act as reference points by which franchisees determine whether franchisors have undermined what they see as their "entitlements". If franchisees perceive that their entitlements are being undermined, they may retaliate by underperforming, reducing franchisor profits. New owners, however, are less subject to such retaliation, because they did not make such prior commitments. We provide empirical evidence consistent with the importance of entitlement constraints from a matched sample of acquired and non-acquired systems. The evidence is that in the few years following acquisition, acquirers increase franchise, royalty, and marketing fees. Moreover, royalty fees, the largest of these, are increased more in franchise systems in which entitlement constraints bind more tightly; namely, those that emphasize multi-unit franchising.

We thank Paul Nary, Jeff Reuer and seminar audiences at Purdue University and Washington University in St. Louis for many helpful comments.

The last 25 years have seen a significant increase in strategy and finance research on the behavioral and social drivers of acquisitions (Devers, Wuroinen, McNamara, Haleblan, Gee & Kim 2020). Scholars have examined a wide variety of acquirer characteristics that drive acquirer behavior, especially CEO attributes and acquisition experience (e.g., Chatterjee & Hambrick 2007; Malmendier & Tate 2008; Gamache, McNamara, Mannor & Johnson 2015; Iyer & Miller 2008; Kim, Haleblan & Finkelstein 2011; Kim, Finkelstein & Haleblan 2015). Research has also studied the influence of outside firms on acquirers' acquisition behavior (Stuart & Yim 2010; Rogan & Sorenson 2014; Ozmel, Reuer & Wu 2017; McCann, Reuer & Lahiri 2016).

There has been much less study, however, of how behavioral and social characteristics of *target firms* influence acquisition behavior. Clearly, understanding the factors that make firms attractive acquisition targets is important for strategic management. The small literature on target characteristics that encourage their acquisition has focused on social factors such as a target's market popularity (Massa & Zhang 2009), and the target's ties to prominent investors or investment banks (Reuer & Ragozzino 2012; Vasudeva, Nachum & Say 2018).¹ In this paper, we explore an understudied behavioral characteristic of some target firms that may lead to their acquisition, and determine important post-acquisition choices by acquirers; namely what we term "entitlement constraints".

A widely-cited notion is that hostile takeovers of publicly owned firms sometimes occur when a target's leaders are unwilling to take actions that violate prior commitments made to employees, even if these actions are efficiency enhancing, because employees see these commitments as entitlements (Shleifer & Summers 1988). Acquirers are better placed to take such actions post-acquisition because they have not made such commitments to a target's

¹ A paper that examined target owners' personal motivations to sell their firms (among other factors) is Graebner and Eisenhardt (2004).

employees. When this difference exists, an acquirer's willingness to pay for a target will exceed the target owner's reservation price. Consistent with the idea that target firms often face entitlement constraints, a few studies have found that hostile takeovers make employees worse off, suggesting that acquirers are better positioned to abrogate entitlements (Pontiff, Shleifer & Weisbach 1990; Bhagat, Shleifer & Vishny 1990).²

We extend this idea by examining whether entitlement constraint considerations are present when leaders' prior commitments are to franchisees rather than to employees, and in acquisition contexts other than hostile takeovers. Franchisors often make unwritten promises to franchisees not to undermine their financial interests (Chanut & Pache 2011; El-Sayed 2011). Over time, franchisees begin to see such commitments as entitlements, and are therefore liable to retaliate against franchisors who are seen as violating these unwritten promises. Franchising has a long history of contentious franchisor-franchisee relations (e.g., Argyres & Bercovitz 2015). New owners, who have not yet made specific promises to the franchisees, will be able to make changes to contractual agreements with franchisees at lower expected cost than can incumbent owners. Moreover, franchise systems are often privately owned, and when they are acquired it is typically by privately-owned acquirers. We therefore contend that entitlement constraints may not only stimulate hostile takeovers of publicly owned firms, but may also encourage friendly acquisitions of privately-owned firms.

We seek evidence bearing on these arguments in the post-acquisition behavior of acquiring franchisors. In a sample of 84 franchise system acquisitions matched with 99 non-acquired systems, we find that, on average, acquirers raise franchise, royalty and marketing fees that franchisees pay to franchisors soon after acquiring a franchise system. Because target

² Other studies find that hostile takeovers do not have large negative effects on target firm employment or wages (Brown & Medoff 1988; Kaplan 1989; Rosett 1990).

owners could previously have raised such fees with a stroke of the pen, the fact that they did not do so suggests that target owners were constrained. We argue that these constraints are created by franchisees' senses of entitlement to the fee levels that prevailed in the initial franchise contracts they signed; that is, initial contract terms serve as reference points by which franchisees judge whether or not to retaliate against franchisors for perceived violations of unwritten promises (Hart & Moore 2008).

We further find that post-acquisition increases in royalty fees are greater for those target franchise systems for which entitlement constraints are expected to bind more tightly; namely, systems that emphasize multi-unit franchising using area development agreements. The reason for this expectation is that, in systems offering area development agreements, existing franchisees are given priority to own additional franchised units over franchisees who are new to the system. To gain ownership of an additional unit, a franchisee signs a then current franchise agreement, which could feature different terms than earlier agreements the franchisee signed. Therefore, owners of target franchise systems that emphasize multi-unit franchising will be particularly reluctant to raise fees for fear of alienating highly productive existing franchisees interested in owning future units. Systems emphasizing multi-unit franchising thus benefit from leveraging franchisee skills and disincentivizing franchisee free-riding, but also introduce tighter entitlement constraints that can encourage their later acquisition. Thus, we provide evidence for the entitlement constraints mechanism as a driver of franchising acquisitions.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Acquisitions occur when a buyer's willingness-to-pay for a firm exceeds the firm's value to its current owner. The difference between these two values reflects differences in acquirer

versus seller expectations about the future value of the firm (Barney 1986). In some cases, these differences arise because the acquirer possesses superior business intelligence (Makadok & Barney 2001; Nary & Kaul 2021), while in other cases the acquirer sees opportunities to capture unique synergies involving its current businesses and the target -- opportunities that the target's owner lacks (Barney 1988; Mackey, Barney & Dotson 2017). In still other cases, however, the acquirer perceives that the target's owner is unable to generate as much value from the business as can the acquirer, even if such synergies are absent. The acquirer believes that it can create and extract greater value by imposing stricter financial controls over the acquired firm's operations, introducing stronger incentives into executive compensation plans, allocating capital to or from the acquired firm in a more efficient way, or increasing leverage to prevent target managers from wasting corporate resources (e.g., Williamson 1975; Dundas & Richardson 1982; Jensen 1989; Wruck 2008; Guo, Hotchkiss & Song 2011; Gompers, Kaplan & Mukharlyamov 2016; Nary & Kaul 2021).

Shleifer and Summers (1988) famously offered a different kind of argument, contending that hostile takeovers, in particular, often occur because a target's managers are reluctant to cut costs to improve short-run efficiency. This reluctance stems from a concern that doing so will undermine the interests of the target's employees or other stakeholders and thereby erode employees' trust in management. Target managers, they argued, typically make implicit (or explicit but unwritten) promises to employees to safeguard their interests in order to elicit employees' commitment to high levels of effort and/or relationship-specific investments that benefit the firm. Cutting costs through layoffs, for example, might improve efficiency in the short-term, but would be seen by employees as violating the implicit promises made to them, thereby undermining their motivation and performance over the longer term. Shleifer and

Summer (1988) argued that acquirers, never having made such commitments to the target's employees, are freer to take actions aimed at improving short-run efficiency.

The organizational behavior literature speaks of these unwritten -- indeed, perhaps even unspoken -- expectations and beliefs about employees' and employer's obligations in their relationship as "psychological contracts" (e.g., Argyris 1960; Rousseau 1995). When psychological contracts are perceived as having been violated, employees may engage in various kinds of undesirable behaviors, some of which include ceasing to engage in "organizational citizenship behaviors" -- i.e., contributions to the organization beyond those required by the employee's formal job description or expected responsibilities (Robinson & Morrison 1995; Turnley & Feldman 2000).³ Consistent with this, individuals who feel wronged in a relationship with another individual are more likely to behave selfishly in the relationship (Zitek, Jordan, Monin & Leach 2010).

We contend that these theories of unwritten commitments and expectations apply with particular force to acquisitions of business format franchise systems. Such franchising is based on long-term, highly detailed, government-regulated agreements that allow a franchisee to use the franchisor's brand name in exchange for royalties and other payments. The agreements formalize many additional obligations for the franchisee and franchisor, such as training to be provided by the franchisor, and various quality standards to be upheld by the franchisee. In addition to these written requirements, however, the parties also develop "tacit expectations of their partners that they actually consider as obligations" (Chanut & Pache 2011, p. 75). Such

³ Strategy scholars have argued that "governance inseparability" occurs when prior commitments by a firm to a stakeholder group make it difficult to alter governance arrangements with those stakeholders in order to accommodate changes in the firm's environment (Argyres & Liebeskind 1999). While the emphasis is on contractual rather than unwritten commitments, the basic mechanism is similar.

obligations on the part of franchisors include making efforts to protect franchisees' financial interests as partners in the larger franchise enterprise (El Sayed 2011). Expectations that, within the system, all franchisees will be treated in a consistent manner reinforce perceptions of obligations that further constrain the franchisor's ability to alter existing arrangements (Lafontaine & Shaw 1999).

When franchisees perceive that their franchisor has violated prior commitments or unwritten expectations, they may take a variety of retaliatory actions, similar to the ways in which employees have been found to retaliate against employers who they believe mistreated them (e.g., Lord & Hohenfeld 1979; Greenberg 1990; Restubog et al. 2015). Prominent among these retaliatory actions is what Hart and Moore (1990) term "shading": i.e., performing to the letter rather than the spirit of the franchise agreement. Williamson (1975) similarly distinguished between "perfunctory" and "consummate" performance. For example, aggrieved franchisees may reduce their efforts to produce quality service in ways that are difficult for the franchisor to observe and punish informally (e.g., by reverting to perfunctory performance themselves). Franchisees might shade by reducing the speed and/or friendliness of their customer service, skimping on cleanliness of their service locations, or underperforming their service in ways that customers cannot immediately detect. The focal franchisee bears only a portion of the costs of such chiseling because the effects of any consumer dissatisfaction are shared with the franchisor and other outlet managers in the system. Such actions hurt franchisors by reducing franchisees' sales, thereby reducing their royalty payments to the franchisor, and by damaging the value of the franchisor's brand (e.g., Klein 1980; Brickley & Dark 1987). Franchisee retaliation may also reduce franchisee profits, but experimental studies have shown that people are often willing to

absorb financial losses in order to retaliate against those whom they believe have mistreated them (e.g., Guth, Schmittberger & Schwarze 1982).⁴

Franchisees might take other actions aimed at making trouble for a franchisor perceived to be defecting, such as withholding royalty payments, seeking opportunities to sue the franchisor for breach of the written contract, and the like. Making public complaints against a franchisor – complaints that can be publicized by the American Association of Franchisees and Dealers -- can negatively impact the franchisor's ability to recruit new franchises (e.g., Argyres & Bercovitz 2015).⁵ Because conflict between franchisees and franchisors occurs frequently, often resulting in litigation, franchisors will have every expectation that retaliation of some kind will likely follow any major perceived violation of franchisee entitlements.

What determines whether franchisees will feel that their unwritten expectations of franchisor behavior were violated? Hart and Moore (2008)'s theory of contracts as reference points suggests that formal written agreements are a major basis for such expectations. In their theory, written agreements set the terms of understanding between the parties, and over time each party begins to feel entitled to the treatment that is stipulated in the agreement. Therefore, if a franchisor makes changes to contract terms in its standard written agreement that franchisees believe will negatively affect their profits, franchisees will see this as an abrogation of their

⁴ Another possibility is that franchisees are less likely to retaliate against new owners because franchisees perceive that fee increases by new owners are fair given their recent investments in acquiring the franchise system in question. On the other hand, some franchisees may not perceive this justification as sufficient. While there is a literature on how explanations for adverse changes can cause them to be perceived as fair or just, we are not aware of a strong theory that would make clear predictions regarding franchisee responses to fee increases by new vs. current owners (Colquitt, Conlon, Wesson, Porter & Ng 2001).

⁵ As an example, over 100 Massage Envy franchisees recently publicized their complaints about fee increases by the franchisor, filed arbitration actions, and called for the franchisor's top managers to step down (Ewen 2021). In a similar example, fee increases by McDonald's caused an "open revolt" by its franchisees, who boycotted meetings with franchisor management (Zetlin 2000). In a third example, over 200 UPS Store franchisees sued their franchisor for requiring them to undertake low-margin services (accepting pre-paid packages and offering printing and document services: Post & Parcel 2007).

entitlements as agreed to in their original written contract, and are likely to retaliate. By law, franchisors have the opportunity to change the terms of their standard franchise agreements every year. Any such changes therefore affect franchisees who are renewing in that year, as well as those who wish to be granted additional units of the franchise in that year.

The key implication of Hart and Moore's (2008) theory is that rigid written agreements, by setting clear expectations, lead to less shading than flexible contracts, which have the benefit of better adaptation to new conditions. Experimental evidence for this implication was found by Fehr, Hart and Zehnder (2011). However, rigid contracts that, for example, specify numerical sales targets for franchisees, are difficult to implement in franchising contexts. The reason is that franchisee sales are affected by many factors over which franchisees have no control, and are difficult to predict. Local entry by competing brands, changes in customer tastes, changes in traffic patterns, etc. make it difficult to rely solely on rigid contracts to avoid shading. Ownership changes, we suggest, are an alternative mechanism by which inefficiencies caused by incumbent owners being bound to prior commitments and psychological contracts are eliminated.

Thus, we maintain that new owners, because they were not party to the original franchise agreements signed by franchisees, are less constrained by the same set of franchisee expectations -- "entitlement constraints" -- as compared to current owners. As a consequence, new owners have greater scope to change the terms of franchise agreements offered for new units in ways that are perceived as benefitting the franchisor at franchisees' expense. Franchisees are less likely to retaliate against such actions by new owners, or at least to retaliate less severely, because their psychological contract or prior commitment involved the current owner, not the new owner.

This logic was corroborated by an experienced executive who was on the founding team of a franchisee firm that went on to own and operate more than 50 units in the same franchise

system. When asked to explain the surprising stability of franchisee agreements over time, and typical franchisee reactions to changes in agreements, he responded as follows:

“The original (often inexperienced) franchisor has lots of loyalty to the franchisees. With the agreement, they set an expectation for their franchisees... [the franchisor doesn't] want to make changes and upset the apple cart and deal with backlash. [This is] never a good thing. . . [If you make changes,] you [can] piss the franchisees off enough so they don't perform. Franchisors use change of control in ownership to change terms. The reaction of the franchisees is different. It's less personal, the founders are gone, or less active. You are dealing with a more professional management team (interview, January 17, 2023).”

Following this logic, we postulate that when new owners acquire franchise systems, they will quickly take actions that many franchisees oppose. The reason is that an important motive for acquiring the system in the first place is to take advantage of the fact that new owners do not face the same set of entitlement constraints as do current owners. This difference in constraints also implies that current owners will value their systems less than do acquirers, leading to gains from trade. Indeed, if acquisition of a franchise system is quickly followed by actions that capture value for the franchisor, this begs the question as to why the current owner did not capture this value earlier. The reason, we submit, is entitlement constraints.

What kinds of actions would we expect new owners of franchise systems to take? We propose that acquiring franchisors will prioritize changes that involve low implementation costs, and provide immediate and certain financial returns that target owners were not able to make due to entitlement constraints; namely, they will raise franchise, royalty, and marketing fees charged to franchisees. Franchise fees are one-time, fixed fees charged upon signing a new franchise agreement. The royalty fee is usually the fraction of franchisee sales paid to the franchisor for the rights to the franchise. Marketing fees are charges to the franchisees for advertising and marketing of the franchise system, and are also calculated as a percentage of franchisee sales.

We contend that a current owner seeking to raise these fees beyond the levels specified in a franchisee's original agreement risks retaliation by franchisees, while for a new owner those risks are significantly lower.

Franchisees typically oppose fee increases for two reasons. First, most franchise systems feature multi-unit franchising, in which new franchises are disproportionately awarded to existing franchisees, rather than new ones (Kaufman & Dant 1996; Kalnins & Lafontaine 2004; Garg, Rasheed & Priem 2005). Many franchisees aspire to own additional units in the same system because there are economies of scale in managing multiple units. Increases in fees for new units reduce the attractiveness of those units. Second, franchise agreements are for a limited duration – usually 10-15 years. To renew for an additional term, franchisees must sign the then current franchise agreement. Franchisees make various kinds of investments in learning how to operate in a given franchise system. Those investments lose value when fees for renewal, or for new units, are increased, and are thus a mild form of “hold-up” (Williamson 1985; Klein, Crawford & Alchian 1978).⁶

Another possibility, however, is that raising fees creates value for the entire franchise system, benefitting franchisees as well as the franchisor. This would be the case, for example, if franchisors use increased franchisee payments to invest in advertising, new products and services, and the like, such that increased system sales compensates franchisees for the higher royalties and fees.⁷ However, even if some franchisees welcome an acquisition and the

⁶ New owners might consider taking other actions that capture value, such as shortening the duration of the franchise agreement (facilitating earlier termination of poorly performing franchisees), lengthening the period in which franchisees are prevented from opening competing outlets, or reducing the sizes of exclusive territories assigned to franchisees. However, these actions only improve franchisor profits in the longer term, and to an uncertain extent. Acquirers with shorter-term investment horizons, such as private equity firms (Gompers et al. 2016) will therefore emphasize immediate fee and input price increases. As noted above, in recent decades private equity owners have been active in acquiring franchise systems.

⁷ Of course, if this were the case, we would expect incumbent owners to make these changes themselves rather than sell the system to others, because franchisees would not be expected to retaliate against value-creating changes by

associated fee increases, many others will not. Loss aversion (Kahneman & Tversky 1979) implies that those who feel threatened will be more vociferous in their opposition than supporters will be in endorsing the acquisition.⁸

Therefore, even if some franchisees welcome an acquisition of the franchisor, and possibly even welcome fee increases, many others will be opposed, and will retaliate. To be clear, our theory of entitlement constraints carries no particular implication regarding whether franchisees will actually be better or worse off following an ownership change. It merely implies that new owners will quickly take virtually effortless value-capturing actions that, due to entitlement constraints, previous owners could not. Therefore, we hypothesize that:

H1: Acquirers raise franchise, royalty and marketing fees soon after acquiring franchise systems.

As we elaborate below, taking advantage of entitlement constraints may not be the only reason why acquirers of franchise system raise fees and increase terminations post-acquisition. For example, acquirers who rely heavily on debt to finance an acquisition often seek immediate revenue gains from the target in order to meet large debt obligations. This reason for raising fees post-acquisition may be complementary to our entitlement constraints explanation, or an alternative to it. Therefore, in order to more precisely test whether the entitlement constraint mechanism in particular is operating, we examine conditions under which the mechanism would

any owner. Still, some franchisees may not have confidence in the motives of the incumbent owner and/or they may be too short-sighted to see the value-creating potential of increases in fees, thus effectively tying the owner's hands.

⁸ Our interviewee agreed that franchisees can be divided in their views about an acquisition of their franchisor: [Franchisee] ...reaction [to an acquisition] is also linked to the maturing of the franchise system: Across the board as the new franchisor, they bring in best practices that cost the franchisee financially or costs the franchisee in their ability to make own their own decisions, but as the system gets bigger, the argument that more controls are necessary are more understood by the franchisees" (interview, January 17, 2023).

be expected to operate more strongly or weakly. In particular, we contend that entitlement constraints are more important when franchisors rely more heavily on current franchisees to fuel system growth by opening new units of the franchise. Current franchisees will feel a greater sense of entitlement than new franchisees who have not yet contributed to the franchise. Such franchisees will therefore feel especially aggrieved by fee increases, and therefore be less willing to sign new contracts with the franchisor for new units. On the other hand, franchisors who rely more on new franchisees for growth will be less constrained by franchisee entitlements. The tradeoff is that current franchisees may outperform new franchisees in terms of generating revenue from a given location because they have more experience with the franchise, and because they have less incentive to free-ride as negative reputation effects spillover to units they themselves own (Brickley 1999; Kalnins & Lafontaine 2004). On the downside, current franchisees may impose greater entitlement constraints.

While most franchise systems employ multiunit franchising, some rely on it more heavily than others. One measure of a franchise systems emphasis on multiunit franchising is whether it offers so-called “area development agreements” (Brickley 1999; Garg et al. 2005). Franchisees who sign these agreements commit to opening new units of the same franchise system in a given geographic region over time, signing the then current franchise agreement for each new unit in the year the new unit is established. When signing an area development agreement, franchisees typically pay a franchisee fee equal to the sum of the franchisee fees for the number of units they commit to open. However, royalty and marketing fees are not specified in area development agreements. Therefore, franchisors may choose to increase royalty and marketing fees for future units. This kind of action would likely be opposed not only by those franchisees that signed area development agreements, but also by any franchisee that was expecting to be a candidate to

own additional future units. Franchisors that rely less heavily on current franchisees for growth do not offer area development agreements. Therefore, we hypothesize that:

H2: Acquirers are more likely to raise franchise, royalty and marketing fees if the target offers area development agreements.

Of the three types of fees listed in our hypotheses, we expect the strongest effects of area development agreements to be on royalty fee increases. The reason is that franchise fees are one-time payments only, and are often discounted with a franchisee's purchase of additional units, whereas royalty fees continue to be paid throughout the 10-20-year contract term. Total royalty payments are therefore much larger than franchise fee payments for larger franchisees, making franchisees more likely to oppose increases in them.⁹ In addition, while marketing fees are also continuing fees and are similar in size to royalty fees, franchisors are contractually required to spend these fees on advertising, which benefits franchisees. Some franchisees might oppose increases in marketing fees if they feel that marketing spending is excessive or ineffective, or if they think that the franchisor is violating the contract by not spending all of the proceeds on advertising. Because these are likely to be atypical cases, however, we expect the strongest franchisee opposition to be against royalty fee increases.

The theories of psychological contracts and contracts as reference points might also imply that new owners will terminate existing franchisees at a higher rate than current owners. Franchise contracts typically include an extensive set of conditions, usually quite restrictive, under which a franchisor can legally terminate a franchisee during the course of the contract.

⁹ In the data we describe below, the average franchisee paid 17.2 times as much in royalty as in franchise fees per unit owned. Typical 1-2% increases in royalty fees cost a franchisee that was one standard deviation above the mean in terms of system size between \$36,000-\$73,000 over the life of a contract, whereas a typical franchisee fee increase would be \$7000, and often less for multiunit franchisees due to discounts offered by the franchisor.

Examples of such restrictions include terms that allow franchisees time to "cure" behavior that violates contract terms. We maintain that, because of these restrictions, franchisees develop unwritten expectations that they will not be terminated except under extreme circumstances; that is, the termination restrictions act as reference points. Therefore, if current owners begin terminating franchisees at a high rate, other franchisees may feel that the franchisor is interpreting contractual restrictions on termination in an opportunistic way in order to get rid of struggling franchisees and/or gain control of desirable locations -- and therefore abrogating its implied commitment not to terminate franchisees except in extreme circumstances. Once again, new owners would not be subject to these kinds of entitlement constraints -- at least not to the same degree -- as are current owners. They are freer to terminate poor performers with less concern about franchisee retaliation. Therefore, we hypothesize that:¹⁰

H3: Acquirers raise the franchisee termination rate soon after acquiring franchise systems.

A potential alternative explanation for Hypotheses 1 and 3 that does not involve entitlement constraints is based on agency theory. According to agency theory, managers of publicly-owned firms have weak incentives to maximize profits in the absence of stock option-based compensation. Publicly-owned franchisors may therefore fail to set fees at profit-maximizing levels, and may allow underperforming franchisees to continue operating. However, with the exception of a few very large firms such as McDonald's, business format franchise systems are overwhelmingly privately owned in the U.S. The reason is that franchising is itself a

¹⁰ Note that we do not hypothesize that acquirers are more likely to increase the termination rate if the target offers area development agreements. The reasons are twofold. First, multiunit owners in such systems are less likely to be concerned about termination, since only strong franchisees are selected for such ownership. Second, because such owners are more invested in the franchisor's brand, they are less likely to oppose increases in terminations because terminations increase brand value by eliminating weak performers.

financing mechanism; because franchisees provide capital, there is less need for franchisors to raise capital from the public. Consistent with this, 93% of the sellers of franchise systems in our data (described below) are privately owned. Incumbent private owners would therefore have every incentive to set fees at profit-maximizing levels, and to readily terminate underperforming franchisees. Thus, agency theory does not necessarily imply our hypotheses for our particular setting.

Another potential alternative explanation is that franchise systems are acquired not so much because of entitlement constraints, but simply because acquirer and incumbent owners have different beliefs about the future value of the business. This explanation is no doubt a necessary condition for an acquisition, but it does not explain why fees are systematically increased following an acquisitions. Different beliefs might just as well lead to decreases in fees to encourage system growth, or to no changes in them, post-acquisition.

Theories of relational contracting also do not necessarily imply any of our three hypotheses. Relational contracting is defined as a repeated exchange between the same two partners based on norms of reciprocity, trust, or implicit economic incentives (e.g., Macneil 1980; Zaheer & Harris 1995; Baker, Gibbons & Murphy 2002). Franchising relationships may well involve some relational contracting (in addition to written and psychological contracts) but this possibility does not speak to the effects of changes in system ownership. For example, if relational contracting is an efficient organizational form for franchising, then both current and new owners would foster it, with no necessary implication for changes in fees or termination following an ownership change. In fact, raising fees immediately post-acquisition would make it much more difficult for the new franchisor to establish the norms of reciprocity or trust that are

needed in relational contracting.¹¹ To generate the hypotheses, especially H2, we maintain that the concept of contracts as reference points is necessary, at a minimum, with the concept of psychological contracts adding insight. Below we discuss, and empirically rule out, an additional alternative explanation for H1 and H3 based on knowledge transfer.

METHODS

Sample and data

Our primary data comes from franchise disclosure documents (FDDs) – highly detailed reports designed in compliance with the United States Federal Trade Commission to inform aspiring franchisees regarding 20 different features of the franchise system, including its ownership structure and required fees, operating standards, historical performance indicators for both the franchisor and current franchisees, and the like. Four states not only require franchisors to register and file their FDDs, but also to make them publicly available on the websites of their respective Departments of Commerce: California, Indiana, Minnesota, and Wisconsin. We built our sample by selecting those franchise systems that were acquired in the period between 2012 and 2019, and which filed disclosure documents in at least one of the four states above. We used Item 1 -- The Franchisor and any Parents, Predecessors and Affiliates -- of the FDD to identify systems that had been acquired within the time window of interest. (When a franchise system is acquired, the existing franchisee agreements are assigned to the franchisor.) We also use Item 1 to identify whether the acquirer owned more than one system. We used the other items in the

¹¹ Relational contracting theories imply that if one partner defects, the relationship either ends entirely, or reverts to arm's length contracting. One could interpret violating entitlement constraints as a defection on a relational contract, and an acquisition as an instance of ending the relationship. However, we are not aware of any relational contracting theories that make predictions regarding the outcomes of a change in the ownership of one of the partners.

FDD to construct our variables of theoretical interest as well as control variables: Item 2 (Business Experience), Item 5 (Initial Fees), Item 6 (Other Fees), Item 11 (Franchisor's Advertising), and Item 20 (Outlets and Franchisee Information).

We chose to focus on those five industries in which the most franchise system acquisitions took place during our sample period. We wished to avoid discriminating based on industry while finding a sufficient number of matching non-acquired franchise systems for our analysis. Franchise system acquisitions were most prevalent in the food and restaurant industry, which accounts for roughly 35 percent of our sample. Additional industries in which franchise system acquisitions took place and that were included in our sample are Home Maintenance (27%), Healthcare (13%), Business Services (13%), and Fitness (12%).

For each acquired franchise system, we collected 5 years of data – from the two years prior to acquisition, the acquisition year, and the two post-acquisition years. Our final sample consists of 84 acquired systems, which we supplemented and matched with a group of 99 non-acquired systems with a similar industry representation. For each non-acquired system, we collected 12 years of data – from 2010 to 2021 – to facilitate our multivariate matching analyses described below. Additional information regarding the sample also appears below.

Measures and analysis

Dependent variables. Our first hypothesis concerns increases in three different dependent variables: franchise fees, royalty fees, and marketing fees. *Franchise Fee Increase* is a dummy variable that equals 1 if the initial franchise fee, or the franchise fee for any subsequent franchises in the case of multi-unit franchising, was higher than the franchise fees specified in the previous year's contract, and zero if it decreased or stayed the same. We specified a dummy

variable here because in some systems franchise fees are not absolute amounts, but instead depend on the population of the franchise territory. Moreover, in some cases franchisors keep base franchise fees unchanged while increasing fees for subsequent franchises (for multi-unit franchisees). *Royalty Fee Increase* is also a binary variable, coded as 1 if the annual royalty fee increased from one year to the next, and coded as zero if it decreased or remained unchanged. Again, specified a dummy variable to account for differences in royalty fee estimation methods across systems; in particular, they can be calculated as a percentage of net or gross sales, or as an absolute amount to be paid either weekly or monthly. The third dependent variable, *Marketing Fee Increase*, is another binary variable that is coded in the same manner as royalty fee increase. Our rationale for using a dummy variable here is the same as for the royalty fee.

Our third hypothesis concerns termination rates. Because the franchise systems in our sample differ in number of outlets, we examined termination rates relative to the total number of franchise outlets. *Termination Rate* is measured as the number of terminations each year divided by the total number of franchise outlets in the system at the start of that year – a value that ranges from zero to 1.

Independent variables. We are interested in possible increases in our dependent variables in the initial years after acquisition compared to the years before acquisition. Our main independent variable, *Post-Acquisition*, is a dummy variable that equals 1 in the first and second year after acquisition, and zero otherwise. Our second independent variable of interest is *Area Development*. This variable is also a dummy, taking the value of 1 if the system offers area development agreements in a given year, and zero if it does not.

Control variables. We incorporate a series of controls for franchise system characteristics that might be related to our dependent variables. *Size* measures the end-of-year number of

franchise outlets, which could matter for many reasons. For example, a given fee increase in a larger system is more lucrative to the franchisor. Conversely, smaller franchise systems could be in their growth stage, or be in a growing industry, providing an incentive to raise fees as well. Another factor that likely has an effect on post-acquisition fee and termination rate increases is the time since the franchise system last changed ownership. Franchise systems that were the subject of (a) prior acquisition(s) might be less likely to undergo fee and termination rate increases if these increases were already imposed after the prior acquisition(s), especially when the time between a prior acquisition and our focal acquisition is short. We therefore include a variable, *Time*, which measures the time in years since the most recent prior acquisition. For franchise systems that were never acquired before, we code *Time* as the number of years since the system first started offering franchises. To address the positive skewness that we observed for both *Size* and *Time*, we logarithmically transformed these variables.

We also control for the presence of the original founder on the executive team. In the first several years after founding, founders may be especially likely to make commitments to franchisees in order to attract them to what is an unknown brand. Commitments to early franchisees may deter founders from raising fees and termination rates in any particular year. This is consistent with the quote from our interviewee above. We therefore include the dummy *Original Founder*, which is coded as 1 if the original founder was part of the executive team during a given year, and zero otherwise. We also control for the presence of a Franchise Advisory Council. These councils consist of franchisees selected by the franchisor, other franchisees, or both, and have an advisory role regarding mostly marketing and advertising, but in some cases operations and management of the franchise system as well. *Council* equals 1 if a Franchise Advisory Council was present during a given year, and zero otherwise. The presence

of such a council may indicate stronger commitments to franchisees, and therefore a lower likelihood of fee and termination increases post-acquisition (Argyres & Bercovitz 2015). In addition, we include industry and time dummies in our regressions to control for industry differences in likelihood of fee increases, as well as for possible macroeconomic or other impacts associated with particular years in our data.¹² Table 1 displays the descriptive statistics and Pearson correlation coefficients for each variable in our study, for the pooled sample of both acquired franchise systems and non-acquired franchise systems.

An alternative explanation for the fee increases following acquisition is based on acquisitions enabling other kinds of efficiencies besides overcoming entitlement constraints. Some acquirers are “umbrella firms”: companies that own more than one franchise system. Umbrella firms are thought to capture economies of scale in procuring standardized inputs, and revenue gains from transferring knowledge about franchising best practices across systems by, for example, rotating managers across systems (Cohen & Kaufman 2021; Vinnedge 2022). Cross-selling services to customers, or units in different systems to franchisees, are additional rationales. In a subsample analysis of the acquired franchises systems only, we therefore added a control variable that takes the value of 1 if the acquirer was an umbrella firm, and zero if not. Table 2 displays descriptive statistics and Pearson correlation coefficients for each variable included in our study, for the subsample of acquired franchise systems only.

Because our analysis focuses on changes over time, we apply a panel data approach, with the franchise system as the unit of observation and grouping by target and acquirer. We include

¹² An alternative possibility is that fee increases are less likely if a target system’s fee levels pre-acquisition were below what franchisees considered to be “normal levels”, and more likely if they were above such levels. Franchisees might be expected to retaliate against the latter more than the former. It is difficult to define “normal levels” in our data, however, because there is significant heterogeneity in terms of systems’ brand name values, sizes, geographic profiles, competition levels, etc., even within an industry. It is therefore difficult to know how franchisees form their expectations about normal fee levels.

fixed effects to control for industry and year-specific effects. We use probit estimation methods for our binary dependent variables (franchise fee increase, royalty fee increase, and marketing fee increase). For our termination rate regressions, we use fractional probit estimation methods, given that termination rates take values between 0 and 1, and their denominator is unknown.

Entropy Balancing. Studying a sample of acquired systems only could bias findings if acquired franchise systems were systematically different from non-acquired systems, or if there was an upward trend in fees across all systems during the period of our study.¹³ Indeed, these kinds of problems may have been present in earlier tests of the Shleifer and Summers (1988) hypothesis. Biases could arise, for example, if there were stronger upward trends in fees in acquired systems relative to non-acquired systems. To control for these possibilities, we matched our 84 acquired franchise systems to 99 franchise systems that were not acquired during our sample period, while ensuring that the industry representation rates within the sample of non-acquired franchise systems were the same as those within the sample of acquired systems. Subsequently, we used entropy balancing to ensure that the acquired and the non-acquired franchise systems in our analyses were otherwise comparable on their observable characteristics.

Entropy balancing is a relatively novel multivariate matching approach that has recently been applied in the strategy literature (e.g., Distelhorst & McGahan 2021; Shi & DesJardine 2022) and argued to be more efficient and less biased than more traditional multivariate matching approaches such as propensity score matching and coarsened-exact matching (Hainmueller 2012; Hendricks, Howell & Bingham 2019). Entropy balancing reweights

¹³ Whether a franchise system is acquired or not is obviously not exogenous. Therefore, an alternative approach would be to specify a two stage model that includes an instrumental variable in the first stage that is correlated with the acquisition choice, but is not expected to affect fee increases or termination rates post-acquisition. This approach is difficult to implement in our case, however, because our theory claims that the same key variable – entitlement constraints – is driving both likelihood of acquisition and fee/termination rate changes post-acquisition.

observations in the control group in such a way that the means, variance, and skewness of the treatment and control sample become virtually equal. It directly reduces covariate imbalance between the treatment and control groups (here, the acquired and non-acquired franchise systems), which decreases model dependence, and, in turn, results in greater efficiency and less bias (e.g., Ho, Imai, King & Stuart 2007; Iacus, King & Porro 2012). While it is impossible to match observations on all observed and unobserved characteristics, entropy balancing achieves matching across numerous characteristics in order to create strong pseudo-control and pseudo-treatment groups. An important additional advantage of entropy balancing is that, unlike propensity score matching, no observations are lost in the matching process (Shi & DesJardine 2022). Finally, researcher discretion in choice of matching variables is minimized (Hendricks et al. 2019).

Table 3 displays descriptive statistics for the 1,129 system-year observations in our study, distinguishing between acquired and non-acquired franchise systems. We compared the two groups on all independent and control variables that we use in our pooled-sample analysis, except for *Post-Acquisition*, given that *Post-Acquisition* is always zero for non-acquired franchise systems (since no acquisition takes place). On average, acquired systems are larger (*Size*) than non-acquired systems. They are also more likely to offer area development agreements (*Area Development*) and to contain a franchise advisory council (*Council*). Finally, for acquired franchise systems, it is less likely that the original founder (*Original Founder*) is still part of the executive team. *t*-tests on these variables indicate that acquired franchise systems are systematically different from non-acquired franchise systems (i.e., *p*-values are all < 0.05 , except *Time*). The right hand side of Table 3 shows that after reweighting the observations within the group of non-acquired franchise systems (i.e., the control group), the group of non-acquired

franchise systems indeed becomes virtually equal to the group of acquired franchise systems in terms of the means, standard deviations, and skewness of the variables.

RESULTS

Table 1, 2, and 3 display correlations and descriptive statistics for the variables used in our study. Table 1 applies to our pooled sample of acquired and non-acquired franchise systems together, whereas Table 2 applies to a subsample of only acquired franchise systems. In Table 3, descriptive statistics on both acquired and non-acquired franchise systems (both pre- and post-entropy balancing) are provided. On average, the acquired franchise systems in our sample consist of approximately 445 franchise outlets, and have not changed ownership in about 12 years (untabulated – Table 3 provides the log-transformed values). In an average year, a franchise advisory council is present in 47% of the acquired systems, 43% offer area development agreements, and in 16% the original founder is still part of the executive team. Regarding the parties to the acquisition, 45% of acquirers are umbrella firms, and 7% of sellers are publicly owned companies.

With respect to our variables of theoretical importance, the correlation matrices reveal that *Franchise Fee Increase*, *Royalty Fee Increase*, and *Marketing Fee Increase* are all positively correlated with each other at the 95% significance level, indicating that if one of the fees is increased, the others are also likely to be increased. Moreover, we observe positive correlation coefficients between *Termination Rate* and *Franchise Fee Increase* ($p < .05$) in both Table 1 and 2, suggesting that when franchise fees are increased, the termination rate is likely to increase as well. We also observe positive correlation coefficients between *Post-Acquisition* and *Franchise Fee Increase* ($p < .05$ in both Tables 1 and 2) and between *Post-Acquisition* and *Marketing Fee*

Increase ($p < .05$ in both Tables 1 and 2), indicating that these fees are generally more likely to be increased after acquisition than before acquisition of the franchise system. Overall, correlations among the variables are small, with a maximum variance inflation factor of 1.42, suggesting that there are no multicollinearity concerns in our sample. On average, across our sample of acquired systems, franchisors increase franchise fees in 15%, royalty fees in 5%, and marketing fees in 6% of pre-acquisition system-year observations. Post-acquisition, these percentages are much higher: on average, franchise fees are increased by 27%, royalty fees by 10%, and marketing fees by 14% of system-year observations.

[Insert Tables 1-3 here]

Table 4 displays probit estimation results from the entropy balancing matched full sample for our payment-related dependent variables (franchise fee increase, royalty fee increase, and marketing fee increase). Table 4's coefficient estimates on *Post-Acquisition* are positive and significant at the $p = 0.01$ level for franchise fees, positive and significant at the $p = 0.05$ level for marketing fees, and positive and significant at the $p = 0.1$ level for royalty fees, consistent with H1. The average marginal effects of *Post-Acquisition* on the probability of franchise fee increase, royalty fee increase, and marketing fee increase are 0.15, 0.05, and 0.08, respectively. Thus, on average, the probability that the franchise fee will be increased post-acquisition is 15% higher than the probability that the franchise fee will be increased pre-acquisition. For royalty fee and marketing fee, the probabilities of an increase are respectively 5% and 8% higher post-acquisition vs. pre-acquisition.

[Insert Table 4 here]

Table 4 also shows a negative and non-significant coefficient estimate on *Post-Acquisition x Area Development* for franchise fees, a positive and significant coefficient estimate

for that interaction on royalty fees, and a positive and non-significant coefficient estimate for that interaction on marketing fees. These results provide partial support for H2, although recall that we expected the strongest effects of emphasis on multiunit franchising to be on royalty fees because these are the largest franchisee payments, and franchisors are not contractually obligated to spend them in ways that benefit franchisees. The positive effect of *Area Development* on the likelihood of an increase in royalty fees post-acquisition is also economically meaningful (Figure 1). In franchise systems that offer area development agreements, the likelihood of an increase in royalty fees is 13% greater post-acquisition than pre-acquisition (16% vs. 3%). In franchise systems that do not offer area development agreements, the likelihood of an increase in royalty fees is only 1% greater post-acquisition than pre-acquisition (7% vs. 6%). The other statistically significant coefficients in Table 4 suggest that original owners are more likely to raise fees during our time period, perhaps because they were less likely to do so in earlier time periods. In addition, franchise and marketing fees are more likely to be raised in systems in which a council is present, perhaps because franchisees are less likely to oppose such increases if they have a voice in setting them.

[Insert Figure 1 here]

Table 5 provides results from the entropy balancing matched full sample with respect to our dependent variable *Termination Rate*. Here, we used a fractional probit estimation method, given that termination rates take values between 0 and 1, and their denominator is unknown. The coefficient on *Post-Acquisition* is positive but non-significant, so does not support H3. We discuss this result below.

[Insert Table 5 here]

Table 6 shows regressions on the unmatched subsample consisting of acquired systems only. The purpose of these regressions is to introduce a control for umbrella acquirers: firms that owned one or more franchise systems prior to acquisition. Recall that these firms may have efficiency-related motives for raising fees post-acquisition other than avoiding entitlement constraints. The sample here is unmatched because umbrella status is undefined for non-acquired systems, making matching impossible. However, note that the concern about unobserved heterogeneity in these regressions is limited by the fact that the results in Table 6 are similar to the matched results in Table 4. The positive and significant coefficients on *Post-Acquisition* in the Table 6 regressions indicate that our main results continue to hold after controlling for the alternative explanation that post-acquisition fee increases are based on efficiencies other than overcoming entitlement constraints.

The positive significant coefficient estimates on the *Umbrella* variable in the Table 6's Models 1 and 2 indicate that umbrella firms were more likely to raise franchise fees in any year (regardless of acquisition). A reason may be because these firms were seeking to invest in capturing synergies between systems. On the other hand, the coefficient estimates on *Umbrella* in Models 5 and 6 are negative and (marginally) significant, perhaps because such firms are able to realize economies of scope in marketing by virtue of owning multiple franchise systems.

[Insert Table 6 here]

Robustness: Propensity Score Matching. To aid in the interpretation of the findings and confirm the robustness of our results, we repeated our full sample analyses using propensity score matching as an alternative multivariate matching approach. Although propensity score matching has its limitations compared to entropy balancing, such as the risk of increasing imbalance (instead of decreasing it) by approximating random matching, (e.g. King, Nielsen,

Coberley, Pope, & Wells 2011; King & Nielsen 2016) as well as dropping observations (Shi & DesJardine 2022), it is probably the most frequently used multivariate matching approach among management scholars. We therefore replicated our analyses using nearest-neighbor propensity score matching, matching acquired and non-acquired franchise systems based on their propensity scores. We calculated propensity scores using the same set of variables that we used in our entropy balancing procedure: all independent and control variables, except for *Post-Acquisition* (and *Umbrella*, given that this variable only applies to the subsample of acquired franchise systems). The results (untabulated) regarding the effects of acquisition on fees, and of multiunit franchising emphasis, are qualitatively consistent. Thus, H1 receives full support using propensity score matching, H2 continues to receive partial, but still substantial, support, and H3 is not supported.

Robustness: Multivariate Probit Analysis. Decisions to raise franchise fees, royalty fees, and marketing fees may be made in conjunction with one another, which would cause the error terms in our models to be correlated. To control for this, we conducted an additional robustness check: multivariate probit regression using simulated maximum likelihood (Capellari & Jenkins 2003). Multivariate probit regression can be used to estimate more than two binary dependent variables simultaneously (Ashford & Sowden 1970). Our multivariate probit model, in which we estimated the likelihood of franchise fee, royalty fee, and marketing fee increases simultaneously, provided qualitatively similar results (untabulated).

The fee increases following acquisition were quite large in our data, suggesting that raising them may have been an important motive for the acquisitions. On average following acquisition, franchise fees were raised from \$37,000 to \$44,500 (19%), royalty payments from .059 to .077 (30%), and marketing fees from .023 to .042 (87%).

DISCUSSION & CONCLUSION

Our analysis lends support to the idea that new owners have greater scope to change the terms of a franchise agreement than incumbent owners. The reason is that incumbent owners are constrained by their franchisees' expectations that such owners will not renege on implicit or explicit promises not to expropriate value from franchisees after franchisees have committed to a long-term written agreement. These promises are not necessarily written down, but are understood by franchisees to be bundled with the written agreement. Entitlement constraints of this kind are binding because franchisees can punish a franchisor in a variety of ways if franchisees believe that a violation has occurred: such as by withholding effort or otherwise shading performance, or hurting the franchisor reputation with potential future franchisees by publicizing complaints about the franchisor. As suggested by the psychology and economics literatures on retaliation, some franchisees may be willing to shade performance even if it also reduces their own short-term revenues. Changes in contract terms are particularly salient in our context because written franchise agreements are central to franchising relations, making terms in them important reference points for franchisees' judgements about franchisor opportunism.

Consistent with this theory, we find that franchise, royalty, and marketing fees are all significantly more likely to increase soon after an acquisition than in the pre-acquisition period, and that these increases are non-trivial. We find additional evidence for the operation of our entitlement constraint mechanism; namely, royalty fees – the fees that are of most concern to franchisees -- are more likely to be raised in systems in which multiunit franchising is a more important franchisor strategy. In such systems, entitlement constraints are likely to bind more tightly because of the sequential contracting that multiunit franchising involves.

Our matched sample analysis does not find evidence that termination rates increase following acquisition, although in unreported results on our unmatched sample, the coefficient on termination rate increase is positive and significant. The reason that this effect is weak may be that termination rates are quite low on average (only 3.7% per year on average), and affect only the lowest performing franchisees. Therefore, a system's franchisees more broadly may not be highly concerned with terminations, and are therefore less likely to retaliate against increases in them.

Future research should examine the implications of entitlement constraints in other contexts, such as those involving publicly-owned acquirers and/or targets. Another area for future research regards how the value created by acquisitions is split between franchisors and franchisees. Our finding that all major fees paid by franchisees increase following acquisition might suggest that value is simply redistributed from franchisees to acquirers. However, if franchisors invest some of the higher fees they receive back into the franchise system, franchisees could benefit too, either in the short or long term. Future research should investigate this value split.

Yet another area of future research suggested by this study involves acquirer heterogeneity. Different kinds of acquirers might have different approaches to splitting the value associated with overcoming entitlement constraints. Our setting is one in which all acquirers are privately owned, but some are private equity firms that raise funds from institutional investors. Other acquirers are smaller private investment groups, or umbrella firms, or are more focused, etc. While the larger private equity firms have been found to have investment time horizons of five years (Gompers et al. 2017), this information may be out of date, and little is known about the time horizons of smaller investment groups, larger umbrella firms, etc. Each might have a

different approach to creating and capturing value from acquisitions that would be important for strategy scholars to understand.

Our study contributes to the literatures on interorganizational relationships by highlighting entitlement constraints as a behavioral factor that motivates ownership changes in those relationships. This suggests a different logic than that offered by traditional theories of acquisitions based on relatedness/complementarity and agency costs. We believe it opens up new avenues for understanding why acquisitions occur, and when they're successful.

Table 1. Descriptive statistics and Pearson correlation coefficients – Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Post-Acquisition	1.000									
(2) Franchise Fee Increase	0.091	1.000								
(3) Royalty Fee Increase	0.019	0.152	1.000							
(4) Marketing Fee Increase	0.077	0.135	0.254	1.000						
(5) Termination Rate	0.051	0.093	0.044	-0.007	1.000					
(6) Area Development	0.036	-0.041	-0.104	-0.049	-0.149	1.000				
(7) Size	0.159	0.010	0.008	0.070	0.015	0.184	1.000			
(8) Time	0.075	-0.065	-0.070	-0.014	-0.041	-0.060	0.183	1.000		
(9) Original Founder	-0.336	0.084	0.088	-0.003	-0.064	-0.056	-0.163	-0.141	1.000	
(10) Council	0.119	0.062	-0.015	0.101	0.052	0.134	0.305	0.175	-0.240	1.000
Mean	0.130	0.175	0.081	0.081	0.025	0.351	4.656	2.408	0.516	0.350
SD	0.337	0.380	0.274	0.274	0.047	0.477	1.266	0.675	0.500	0.477
Min.	0	0	0	0	0	0	0.693	0.693	0	0
Max.	1	1	1	1	0.476	1	8.509	4.317	1	1

Note. $N = 1,129$. Table 1 displays descriptive statistics and Pearson correlation coefficients for each variable included in our study, for the pooled sample of both acquired and non-acquired franchise systems. Correlation coefficients with absolute values > 0.059 are significant at $p < 0.05$.

Table 2. Descriptive Statistics and Pearson Correlation Coefficients – Subsample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Post-Acquisition	1.000										
(2) Franchise Fee Increase	0.147	1.000									
(3) Royalty Fee Increase	0.078	0.176	1.000								
(4) Marketing Fee Increase	0.124	0.144	0.303	1.000							
(5) Termination Rate	0.054	0.203	0.062	-0.089	1.000						
(6) Umbrella	0.012	0.117	0.018	-0.103	-0.032	1.000					
(7) Area Development	-0.060	-0.080	-0.096	-0.021	-0.255	0.065	1.000				
(8) Size	0.015	0.052	0.108	0.085	-0.117	-0.003	0.149	1.000			
(9) Time	0.189	0.081	-0.016	-0.004	-0.016	0.147	-0.098	0.102	1.000		
(10) Original Founder	-0.173	0.141	0.126	0.056	0.022	-0.172	0.053	0.280	-0.039	1.000	
(11) Council	0.048	0.152	0.049	0.103	-0.058	-0.017	0.127	0.295	0.125	-0.033	1.000
Mean	0.381	0.192	0.070	0.091	0.027	0.448	0.433	5.150	2.388	0.163	0.466
SD	0.486	0.394	0.255	0.288	0.057	0.498	0.496	1.378	0.624	0.370	0.500
Min.	0	0	0	0	0	0	0	0.693	0.693	0	0
Max.	1	1	1	1	0.476	1	1	8.334	3.892	1	1

Note. $N = 386$. Table 2 displays descriptive statistics and Pearson correlation coefficients for each variable included in our study, for the subsample of acquired franchise systems. Correlation coefficients with absolute values > 0.101 are significant at $p < 0.05$.

Table 3. Descriptive statistics for acquired and non-acquired franchise systems, with and without entropy balanced matching

	Full Sample										Entropy Balanced Matched Sample					
	Acquired Systems				Non-acquired Systems				Diff in means		Acquired Systems			Non-acquired Systems		
	<i>n</i>	Mean	<i>SD</i>	Skew	<i>n</i>	Mean	<i>SD</i>	Skew	Value	<i>p</i> -value	Mean	<i>SD</i>	Skew	Mean	<i>SD</i>	Skew
Area Development	386	0.43	0.50	0.27	743	0.31	0.46	0.83	0.12	0.000	0.43	0.50	0.27	0.43	0.50	0.27
Size	386	5.15	1.38	-0.03	743	4.40	1.12	0.47	0.75	0.000	5.15	1.38	-0.03	5.15	1.38	-0.03
Time	386	2.39	0.62	-0.12	743	2.42	0.70	-0.02	-0.03	0.468	2.39	0.62	-0.12	2.39	0.62	-0.12
Original Founder	386	0.16	0.37	1.82	743	0.70	0.46	-0.87	-0.54	0.000	0.16	0.37	1.82	0.16	0.37	1.82
Council	386	0.47	0.50	0.14	743	0.29	0.45	0.93	0.18	0.000	0.47	0.50	0.14	0.47	0.50	0.13

Note. Table 3 displays descriptive statistics for each of the independent variables included in our study (except *Post-Acquisition*), for both the treatment group (acquired franchise systems) and the control group (non-acquired franchise systems). Descriptive statistics for each group, as well as the difference between the groups, are displayed for the full sample on the left-hand side of Table 3. *p*-values from two-tailed *t* tests are displayed. Descriptive statistics are also provided on the right-hand side of Table 3 for each group after reweighting the group of non-acquired franchise system observations in accordance with the entropy balancing approach. Differences and associated *t* tests are not displayed for the entropy balancing matched sample given that entropy balancing causes the mean differences between the groups to become insignificant.

Table 4. Probit Estimation Results – Entropy Balancing Matched Full Sample

	(1) Franchise Fee Increase	(2) Franchise Fee Increase	(3) Franchise Fee Increase	(4) Royalty Fee Increase	(5) Royalty Fee Increase	(6) Royalty Fee Increase	(7) Marketing Fee Increase	(8) Marketing Fee Increase	(9) Marketing Fee Increase
Post-Acquisition * Area Development			-0.049 (0.277)			0.824** (0.415)			0.330 (0.291)
Post-Acquisition		0.667*** (0.167)	0.685*** (0.200)		0.395* (0.219)	0.104 (0.241)		0.407** (0.176)	0.284 (0.218)
Area Development	0.265 (0.191)	0.324* (0.186)	0.335* (0.191)	-0.095 (0.217)	-0.079 (0.210)	-0.305 (0.239)	-0.263 (0.195)	-0.267 (0.196)	-0.359* (0.204)
Size	-0.050 (0.061)	-0.069 (0.058)	-0.069 (0.058)	0.041 (0.059)	0.030 (0.056)	0.021 (0.055)	0.045 (0.060)	0.034 (0.057)	0.031 (0.058)
Time	0.092 (0.103)	0.071 (0.103)	0.070 (0.104)	0.052 (0.127)	0.038 (0.125)	0.056 (0.123)	0.076 (0.118)	0.076 (0.122)	0.086 (0.122)
Original Founder	0.415** (0.166)	0.499*** (0.163)	0.498*** (0.164)	0.207 (0.232)	0.247 (0.227)	0.283 (0.234)	0.192 (0.220)	0.242 (0.218)	0.264 (0.217)
Council	0.292* (0.155)	0.296* (0.159)	0.298* (0.158)	0.050 (0.175)	0.042 (0.175)	0.025 (0.177)	0.636*** (0.182)	0.658*** (0.186)	0.647*** (0.187)
Constant	-1.723*** (0.603)	-1.559*** (0.588)	-1.563*** (0.591)	-2.705*** (0.545)	-2.608*** (0.536)	-2.488*** (0.540)	-2.825*** (0.634)	-2.757*** (0.622)	-2.704*** (0.606)
Industry Dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES
Log Pseudolikelihood	-276.23	-266.67	-266.66	-154.32	-152.22	-149.87	-195.39	-192.54	-192.04
Wald χ^2	75.91***	108.57***	110.70***	54.32***	68.00***	65.10***	88.91***	85.19***	90.55***

Note. $N = 1,129$. Standard errors in parentheses (clustered by target).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5. Fractional Probit Estimation Results – Entropy Balancing Matched Full Sample

	(1) Termination Rate	(2) Termination Rate
Post-Acquisition		0.015 (0.082)
Area Development	-0.442*** (0.000)	-0.442*** (0.104)
Size	0.001 (0.984)	0.001 (0.035)
Time	-0.105 (0.225)	-0.105 (0.086)
Original Founder	-0.017 (0.887)	-0.015 (0.120)
Council	0.058 (0.473)	0.058 (0.081)
Constant	-1.392*** (0.000)	-1.390*** (0.376)
Industry Dummies	YES	YES
Year Dummies	YES	YES
Log Pseudolikelihood	-100.05	-100.05
Wald χ^2	122.33***	123.16***

Note. $N = 1,129$. Standard errors in parentheses (clustered by target).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

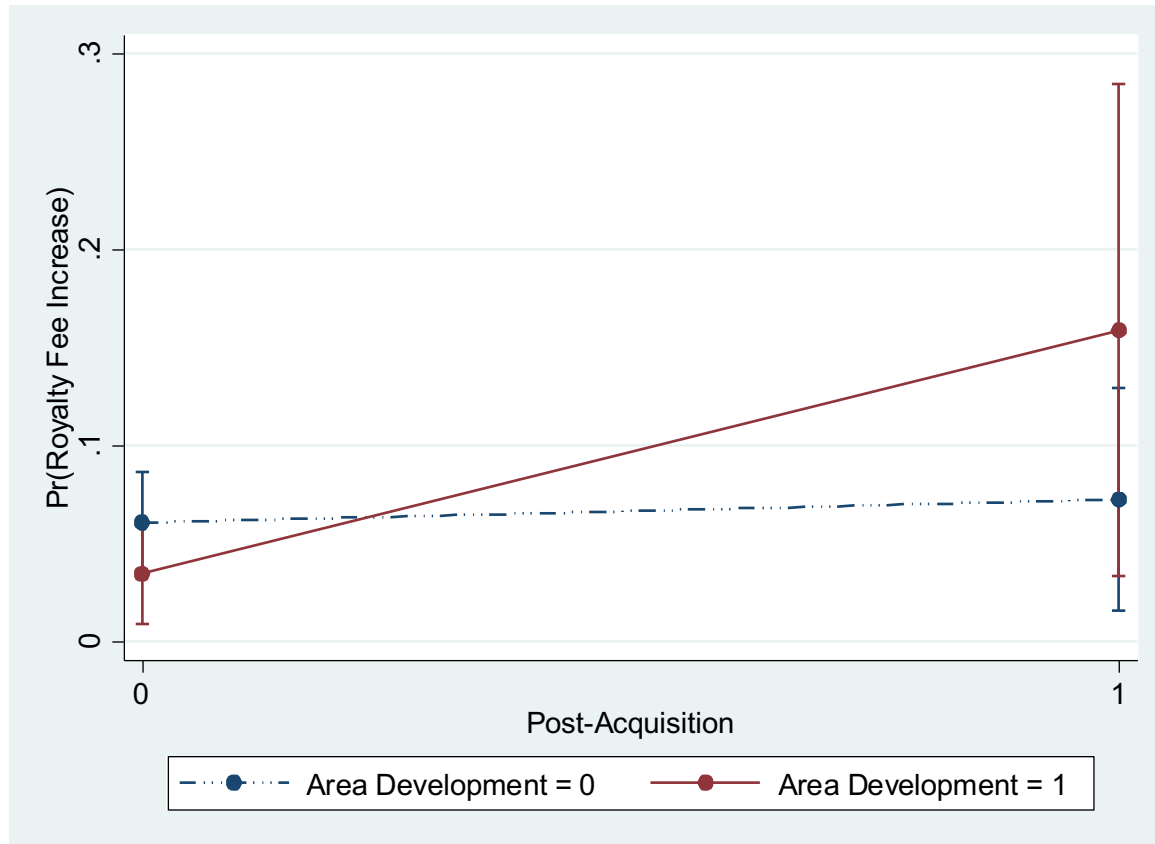
Table 6. Probit Estimation Results – Subsample

	(1) Franchise Fee Increase	(2) Franchise Fee Increase	(3) Royalty Fee Increase	(4) Royalty Fee Increase	(5) Marketing Fee Increase	(6) Marketing Fee Increase
Post-Acquisition		0.536** (0.240)		0.608** (0.269)		0.563** (0.270)
Umbrella	0.420** (0.186)	0.410** (0.182)	0.110 (0.212)	0.105 (0.218)	-0.482** (0.237)	-0.472* (0.245)
Area Development	0.047 (0.204)	0.168 (0.209)	-0.319 (0.278)	-0.249 (0.284)	0.137 (0.283)	0.223 (0.283)
Size	-0.099 (0.098)	-0.122 (0.099)	0.067 (0.078)	0.040 (0.078)	0.057 (0.080)	0.034 (0.081)
Time	0.192 (0.131)	0.129 (0.140)	-0.064 (0.173)	-0.132 (0.172)	0.052 (0.164)	-0.003 (0.173)
Original Founder	0.661*** (0.198)	0.726*** (0.197)	0.300 (0.336)	0.371 (0.328)	-0.134 (0.350)	-0.069 (0.359)
Council	0.555*** (0.202)	0.532*** (0.203)	0.169 (0.235)	0.128 (0.227)	0.371 (0.246)	0.345 (0.246)
Constant	-2.004*** (0.648)	-1.746** (0.684)	-1.729** (0.682)	-1.388** (0.667)	-2.756*** (0.806)	-2.472*** (0.835)
Industry Dummies	YES	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES	YES
Log Pseudolikelihood	-142.69	-139.25	-79.31	-76.78	-103.79	-100.71
Wald χ^2	72.77***	76.36***	34.28***	76.08***	33.63***	41.73***

Note. $N = 367$. Standard errors in parentheses (clustered by acquirer).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 1. Predictive margins of Post-Acquisition * Area Development with 95% CIs



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