



Contents lists available at ScienceDirect

Journal of Business Venturing

journal homepage: www.elsevier.com/locate/jbusvent

Franchise management capabilities and franchisor performance under alternative franchise ownership strategies[☆]



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ARTICLE INFO

Keywords:

Franchising

Venture performance

Alliance management capabilities

ABSTRACT

Franchising is a key entrepreneurial growth strategy, but a well-known downside is franchisee free-riding. Drawing upon alliance capabilities research, we describe *franchise management capabilities* and suggest that they are one way franchisors reduce free-riding and thus enhance performance. We also submit that these capabilities are especially helpful for “plural form” franchisors who own outlets in parallel with franchisees. Using a sample of 229 franchisors, we show that franchise management capabilities relate positively to franchisor performance among plural form franchisors. For “turnkey” franchisors who franchise all, or almost all, outlets these capabilities relate indirectly to performance through lower opportunism and improved brand reputation. Franchise management capability is therefore an important new theoretical construct linking franchising to franchisor performance.

Executive summary

Franchising is an important source of entrepreneurial growth involving two different types of entrepreneurs, the franchisor who identified an opportunity and manages its distribution and image across geographically dispersed locations, and franchisees who locally exploit the opportunity. Franchisees bring financial capital and highly motivated and competent managerial expertise that rapidly expands franchisors' entrepreneurial growth capacity (Norton, 1988), which lowers costs, attracts investment, and fosters rapid growth (e.g., Carney and Gedajlovic, 1991; Thompson, 1994; Madanoglu et al., 2011). These advantages, however, come at the price of franchisee-free riding incentives that make coordination difficult (Michael, 2002) and harms the franchisor's brand reputation (Lafontaine and Shaw, 2005; Michael, 2000).

One solution is plural form franchising wherein franchisors own a chain of company-owned outlets that sit alongside franchisees' outlets and can be symbiotically leveraged to discourage free-riding and foster system-wide standardization (Bradach, 1997; Bradach and Eccles, 1989; Perryman and Combs, 2012). This symbiosis perspective, however, implies that plural form franchisors develop capabilities for working with franchisees at the interface between its franchisee- and franchisor-owned outlets (e.g., Sorenson and Sorenson, 2001), but theory is yet to be developed describing the capabilities franchisors need to do so successfully. The symbiosis

[☆] We thank Brian Anderson and three anonymous reviewers for their considerable efforts to help us improve this paper. We also benefited from helpful comments from Larry Giunipero, Bruce Lamont, Dave Ketchen, John Martin, Annette Ranft, and Chris Shook on early versions of the paper.

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<https://doi.org/10.1016/j.jbusvent.2018.09.004>

Received 17 September 2017; Received in revised form 11 September 2018; Accepted 13 September 2018

Available online 02 October 2018

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perspective also fails to explain how those who lack franchise-owned outlets – i.e., turnkey franchisors – might limit opportunistic free-riding and thus support the brand.

In the first study to empirically exploit the theoretical distinction between plural form and turnkey franchise ownership strategies (Gillis and Combs, 2009), we draw parallels between research describing alliance management capabilities (e.g., Schilke and Goerzen, 2010; Schreiner et al., 2009) and what we call *franchise management capabilities* and submit that these capabilities help franchisors work with franchisees to enhance performance. Empirical results from survey and archival data on 229 franchisors support theoretical parallels between broader alliance management capability routines and context-specific franchise management capability routines involving knowledge sharing, standard operations, and trust – suggesting they are best viewed as a “package” (cf. Schilke and Goerzen, 2010). We further theorize that because franchisor-owned outlets provide strong incentives to enforce standardization and because franchise management capabilities can help leverage such outlets to do so, plural form franchisors' performance should benefit directly (and more than turnkeys) from franchise management capabilities. Results concur. Although we also theorized that franchise management capabilities would also directly improve performance among turnkeys, post hoc analyses show that the performance benefits of franchise management capabilities for turnkeys are achieved through (i.e., mediated by) lower franchisee opportunism and stronger brand reputations.

Overall, franchise management capability is a new construct that helps explain how franchisors' mix of franchisee- versus franchisor-ownership relates to franchisor performance. Results also demonstrate the importance of distinguishing between frequently-studied plural form franchisors and conceptually distinct turnkeys. Our hope is that knowing what capabilities are needed and how such capabilities operate under alternative franchise ownership strategies – i.e., turnkey or plural form – should help franchise entrepreneurs make better resource allocation choices, and help researchers better explain franchisor performance. For managers, our theory and results suggest that there is merit to investing in franchise management capabilities, but that properly deploying them appears dependent on the franchisor's ownership strategy.

1. Introduction

In many service and retail industries, franchising is an important entrepreneurial growth strategy that involves cooperation among two very different types of entrepreneurs (Barthélemy, 2011; Combs et al., 2011). One is the franchisor who identified a business opportunity and established a new venture to exploit it. The second entrepreneur is the franchisee who purchases from the franchisor the right to replicate the franchisor's business model and exploit the opportunity in a new geographic market. The franchisor typically provides a full range of services such as training, product supply, and marketing plans, and in return franchisees pay an up-front fee, on-going royalties, and agree to abide by the franchisor's guidelines. This strategy has permitted entrepreneurs such as Ray Kroc (McDonald's) and Dave Thomas (Wendy's) to transform small ventures into substantial public corporations while offering thousands of budding entrepreneurs the opportunity to build profitable local and regional enterprises.

The benefits of franchising are well known. Franchisees bring capital and managerial expertise that rapidly expands franchisors' entrepreneurial growth capacity (Norton, 1988). Because franchisees must invest heavily in their outlets, only competent prospective franchisees rationally self-select into franchising (Shane, 1996), and franchisees self-monitor their outlets to maximize outlet performance (Lafontaine, 1992). The result is that franchising fosters rapid growth (Thompson, 1994), lowers monitoring costs (Carney and Gedajlovic, 1991; Krueger, 1991), increases survival prospects (Shane, 1996), and finds favor with investors (Madanoglu et al., 2011). Given these advantages, it is not surprising that many entrepreneurs adopt a “turnkey” ownership strategy wherein they grow only through franchising, perhaps owning only one or a tiny number of outlets for training and/or testing purposes (Gillis and Combs, 2009).

Although franchising facilitates growth and survival, it also creates an incentive for franchisees to free ride on the franchisor's brand. Franchisees share the costs of brand advertising but keep all gains from servicing customers. Thus, franchisees gain by reaping all increased profits from delivering lower cost/quality while sharing the costs of having dissatisfied customers with other franchisees (Brickley and Dark, 1987). Free riding includes delaying or avoiding facility upgrades, offering minimal employee training, understaffing, withholding information, setting high prices, and failing to participate in new product introductions, promotions, or discounts (e.g., “participation may vary”) (Bradach, 1997; El Akremi et al., 2011; Kidwell et al., 2007; Michael, 2002).

In light of free-riding incentives, it is no surprise that the net effect of franchising on the franchisor's brand reputation is negative (Lafontaine and Shaw, 2005; Michael, 2000), which raises questions about what franchisors might do to limit free-riding. An emerging “symbiosis perspective” offers one answer (Perryman and Combs, 2012). Many franchise entrepreneurs adopt a “plural form” ownership strategy wherein they own outlets in parallel to franchisee-owned outlets (Bradach and Eccles, 1989). Franchisor-owned outlets reduce free-riding and promote a standardized brand image by providing franchisees with an organizational model to follow, helping to establish performance benchmarks, and providing trained managers to work with and for franchisees (Bradach, 1997). The symbiosis perspective, however, does not explain what actions turnkey franchisors (who lack such outlets) might take to limit opportunistic free-riding and thus support the brand. Further, the symbiosis perspective implies that plural form franchisors develop capabilities for working with franchisees at the interface between its franchisee- and franchisor-owned outlets (e.g., Sorenson and Sørensen, 2001), but theory is yet to be developed describing the capabilities franchisors need to do so successfully. Knowing what capabilities are needed and how such capabilities operate under alternative franchise ownership strategies – i.e., turnkey or plural form – should help franchise entrepreneurs make better resource allocation choices, and help researchers better explain franchisor performance.

We believe that research describing alliance management capabilities (e.g., Schilke and Goerzen, 2010; Schreiner et al., 2009) holds promise for identifying the performance-enhancing capabilities franchisors use to work effectively with franchisees. At its

heart, franchising involves a long-term contractual alliance between franchisees and a franchisor. Thus, we draw parallels between the concept of alliance management capabilities and what we call *franchise management capabilities*¹ and submit that these capabilities help franchisors work with franchisees to enhance performance. Accordingly, we contribute to franchising research first by revealing the parallels between three franchise-context-specific routines from extant franchising research – i.e., knowledge sharing routines, standard operating routines, and trust routines – and established dimensions of the broader alliance management capabilities construct – i.e., communication, coordination, and bonding (Schreiner et al., 2009).

We also contribute by explaining how franchise management capabilities encourage franchisees to support the brand and thereby enhance franchisor performance, especially among plural form franchisors whose owned outlets amplify the impact of such capabilities. In doing so, we demonstrate the importance of distinguishing between frequently-studied plural form franchisors and conceptually distinct turnkeys (Gillis and Combs, 2009). Empirical results from survey and archival data on 229 franchisors support theoretical parallels between broader alliance management capability dimensions and context-specific franchise management capability dimensions; knowledge sharing, standard operating, and trust routines appear best viewed as a “package” (cf. Schilke and Goerzen, 2010) that relates positively to performance among plural form franchisors. We were initially surprised that we did not also find a direct performance relationship among turnkey franchisors, but post hoc analyses show that franchise management capabilities among turnkeys relate to performance indirectly through (lower) opportunism and (stronger) brand reputation, further reinforcing the important distinction between these ownership strategies. Overall, franchise management capability is a new construct that helps explain how franchisors' mix of franchisee- versus franchisor-ownership relates to franchisor performance – a thorny challenge for franchising research (Combs et al., 2011) – and raises important new questions about the nature and evolution of these capabilities.

2. Prior theory about franchisee vs. franchisor ownership

A central question for franchising research has been: Why do entrepreneurs grow through franchising?² An early answer was that it allows entrepreneurs to attain the financial, human, and informational resources needed to grow rapidly and build economies of scale (Oxenfeldt and Kelly, 1969). The combination of capital, highly motivated managerial talent, and local market knowledge that franchisees bring (Norton, 1988) allows ventures to grow rapidly and attain much-needed economies of scale (Shane, 1996). Another explanation for franchising is agency theory. Rubin (1978) argued that because franchisees' ownership incentives induce self-motivated performance maximizing behavior, outlets are franchised when it would be costly for the entrepreneur to either monitor managers directly or build a hierarchy to monitor them. Consistent with the theory, franchisees are used in locations where monitoring employee managers is potentially costly, such as when outlets are small (Lafontaine, 1992),³ far from headquarters (Perryman and Combs, 2012), near highways (Brickley and Dark, 1987), and in rural (Norton, 1988) and foreign markets (Fladmoe-Lindquist and Jacque, 1995).

Despite these advantages, however, many entrepreneurs stay small and independent (Knott and McKelvey, 1999), grow only through company ownership (Combs and Ketchen, 1999), or adopt plural form franchising wherein franchisor-owned outlets operate in parallel with franchisee-owned outlets (Bradach and Eccles, 1989). Agency theory helps explain why. Although franchising reduces monitoring costs, a long-known downside is that franchisees' strong incentives exacerbate coordination problems (Michael, 2002) and encourage opportunistic free-riding that damages the brand (Brickley and Dark, 1987). Michael (2000), for example, found that the more restaurant and lodging franchisors rely on franchising, the lower customers rate the chain's reputation for quality. Kidwell et al. (2007) similarly found that free-riding among Norwegian gas stations reduced performance and sales. Accordingly, entrepreneurs use less franchising and instead own outlets when a standardized brand image is important (Lafontaine and Shaw, 2005) and when controlling operational detail is central to competitive advantage (Combs and Ketchen, 1999).

Moving beyond resource scarcity and agency theory – each of which describes advantages of franchisee- relative to franchisor-ownership – the symbiosis perspective suggests that there are symbiotic advantages to having both – i.e., plural form franchising (Perryman and Combs, 2012). By acknowledging advantages and disadvantages of each owner, the symbiosis perspective describes how having both helps balance competing pressures for standardization across outlets versus adaptation to local conditions (Kaufmann and Eroglu, 1999; Kidwell and Nygaard, 2011; Sorenson and Sørensen, 2001; Yin and Zajac, 2004). Bradach's (1997, 1998) study of five large plural form franchisors is particularly detailed. He described how franchisor-owned outlets (1) offer a best-practice model for franchisees to follow, (2) set performance standards that spur friendly competition with franchisees, (3) provide trained managers to work with franchisees as consultants, for franchisees to hire, or to become franchisees themselves, and (4) promote mutual learning in the development and evaluation of strategic initiatives.

These processes, and the symbiosis perspective more broadly, imply that plural form franchisors actively manage the interface between their franchisee- and franchisor-owned outlets (Perryman and Combs, 2012), but theory is yet to be developed to describe the capabilities franchisors must cultivate to do so successfully. Also, many entrepreneurs ignore the symbiotic advantages of plural

¹ Although franchise management capabilities largely pertain to franchisees, we use the term “franchise” rather than “franchisee” management capabilities to imply system-level capabilities that also impact company-owned outlets where they exist.

² Though the phenomenon involves the growth strategy of entrepreneurial firms, we acknowledge that the explanations emerged from outside the entrepreneurship literature, especially marketing (resource scarcity), managerial finance (agency theory) and organization theory and strategic management (symbiosis perspective).

³ Large outlets imply economies of scale in monitoring and greater profitability (Lafontaine, 1992), which is consistent with the idea that franchisors “cherry pick” the best outlets for themselves (Knott and McKelvey, 1999).

form franchising. About a third of the franchisors listed in Bond's Franchise Guide – a fairly comprehensive listing of active franchisors (Lafontaine, 1995) – adopt turnkey ownership wherein all, or almost all, outlets are franchisee owned (Gillis and Combs, 2009). The prominence of this growth strategy in the face of opportunistic free riding by franchisees – with no offsetting (symbiotic) influence from franchisor-owned outlets – raises questions about whether there are capabilities that some turnkey franchisors develop to better work with their franchisees and thereby limit franchisee opportunism and foster a standardized brand image.

To take a step toward describing such capabilities, we draw upon insights from alliance capabilities research that explains how some firms leverage alliances better than others (Anand and Khanna, 2000). Because franchising involves managing multiple long-term alliance partners, we describe important parallels between descriptions of alliance management capabilities (i.e., Schilke and Goerzen, 2010; Schreiner et al., 2009) and what we call *franchise management capabilities* that reflect routines franchisors use when working with franchisees. Not only might such capabilities improve turnkey franchisors' performance by reducing opportunistic free-riding, they might help plural form franchisors better leverage their franchisor-owned outlets.

We also hope to increase understanding about how the choice between franchisee- and franchisor-ownership affects performance – an on-going challenge in franchising research (Combs et al., 2011). We do so first by empirically distinguishing between previously-studied plural form and conceptually-distinct turnkey franchise ownership strategies (Gillis and Combs, 2009). Second, although franchising directly improves new ventures' survival and growth (Shane, 1996) and enhances investors' perceptions of future prospects (Madanoglu et al., 2011), its impact on financial performance seems contingent on other factors (Barthélemy, 2008). We believe that franchise management capabilities are likely such a contingency factor.

3. From alliance to franchise management capabilities

3.1. Alliance management capabilities

Alliance capability research broadly fits within the umbrella of resource-based theory, which describes the effect of firms' resources and capabilities on competitive advantage (Barney, 1991). Resources and capabilities that are valuable, relatively scarce, and difficult to imitate are strategic assets that deliver competitive advantage (Amit and Schoemaker, 1993). As alliances have increased in importance, researchers have sought to understand their role in competitive advantage (Dyer and Singh, 1998). One source of alliance-related competitive advantage appears to be that some firms develop “alliance capabilities” that allow them to better identify and manage alliance partners (Anand and Khanna, 2000).

Early research focused on experience as a source of alliance management capability (e.g., Simonin, 1997; Anand and Khanna, 2000; Zollo et al., 2002). Others identified processes, especially with respect to learning, that firms use to develop skills in managing alliances (Heimeriks and Duysters, 2007; Ireland et al., 2002; Kale and Singh, 2007). For example, one way firms retain what is learned is by developing a dedicated alliance function where learning is codified, shared, and applied (Dyer et al., 2001; Kale et al., 2002). Understanding that firms differ in their alliance management capabilities and that they are developed through experience and learning led researchers to explore the content of the capabilities successful firms develop.

In particular, both Schreiner et al. (2009) and Schilke and Goerzen (2010) described multidimensional alliance management capability constructs and showed how such capabilities relate positively to important alliance-related outcomes. However, while Schreiner et al. (2009) conceptualized alliance management capabilities as a three-dimensional construct (i.e., communication, coordination, and bonding), Schilke and Goerzen (2010) described five (inter-organizational coordination, alliance portfolio coordination, inter-organizational learning, alliance proactiveness, and alliance transformation). Three dimensions largely overlap. Schreiner et al.'s (2009) description of coordination largely involves coordination between the firm and its alliances, what Schilke and Goerzen (2010) call inter-organizational coordination. Schreiner et al.'s (2009) communication dimension is similar to Schilke and Goerzen's (2010) inter-organizational learning dimension; both involve information sharing and gaining knowledge about alliance partners. Schreiner et al.'s (2009) bonding dimension and Schilke and Goerzen's (2010) transformation dimension are similar in that both address the need for flexibility and adaptation, though Schreiner et al. (2009) emphasizes the role of interpersonal relationships while Schilke and Goerzen (2010) emphasize contractual flexibility.

Schilke and Goerzen (2010) describe two additional dimensions because of their focus on managing diverse alliance portfolios. First, they split coordination into two dimensions, one dealing with coordination between the firm and each of its alliance partners (i.e., inter-organizational coordination) and one dealing with coordinating (synergies) across diverse partners (i.e., alliance portfolio coordination). A second addition comes from including partner identification and selection skills (called “alliance proactiveness”), which Schreiner et al. (2009) see as a separate capability relative to managing on-going alliances.

Subsequent research supports the idea that alliance management capabilities create value (Kohtamaki et al., 2018; Niesten and Jolink, 2015; Schilke, 2014), though some partners capture more of the value than others (Wang and Rajagopalan, 2015). Small entrepreneurial firms also appear to avoid alliances with partners who have alliance management capabilities if those firms also have the power and incentive to appropriate and exploit the smaller firms' knowledge (Diestre and Rajagopalan, 2012). Other research examines boundary conditions. Schilke (2014), for example, found that alliance management capabilities are more strongly associated with competitive advantage in moderately dynamic than in stable or highly dynamic environments. Alliance management capabilities also appear more valuable when alliances are used for exploitation rather than for exploration (Kauppila, 2015).

Overall, alliance management capabilities emerge from firms' experience working with alliance partners and reflect communication, coordination, and trust routines (Schreiner et al., 2009), but can also include other routines when viewed from the perspective of diverse alliance portfolios (Schilke and Goerzen, 2010). Though not always captured by the firm (Wang and Rajagopalan, 2015), alliance management capabilities create value. We submit that, as a specific kind of alliance, alliance management capabilities

research can inform franchising research.

3.2. Franchise management capabilities

Schreiner et al. (2009: 1396) defined alliance management capabilities as “the main cognitive, behavioral, or organizational skills that enable a firm to effectively and efficiently manage any given alliance.” Schilke and Goerzen (2010: 1193) conceptualize alliance management capabilities “as reflected by a set of key alliance management routines.” A key challenge for franchisors is working with franchisees to achieve both standardization and local adaptation (Perryman and Combs, 2012). Combining these, we submit that *franchise management capabilities are the main cognitive, behavioral, and organizational routines that enable a franchisor to achieve both standardization and adaptation in working with franchisees.*⁴

In particular, we submit that there are three dimensions that reflect franchise management capabilities – i.e., knowledge-sharing routines, standard operating routines, and trust routines, and that these correspond respectively to the three alliance management capability dimensions – communication, coordination, and bonding – described by Schreiner et al. (2009). These franchise-context specific routines are a subset of the universe of constructs investigated by franchising researchers (e.g., autonomy, Cochet et al., 2008; gratitude, Weaven et al., 2017) selected because of their importance (e.g., Chiou et al., 2004; Chiou and Droge, 2015; Eser, 2012; Hendrikse et al., 2015; Kidwell et al., 2007; Lee, 2017; Wu, 2015) and their correspondence with Schreiner et al.'s (2009) theorizing. Although we also build upon Schilke and Goerzen's (2010) theorizing, Schreiner et al.'s (2009) focus on managing alliances rather than diverse portfolios appears more relevant in this context where the portfolio involves franchisee-partners independently performing almost identical tasks under similar long-term contracts.

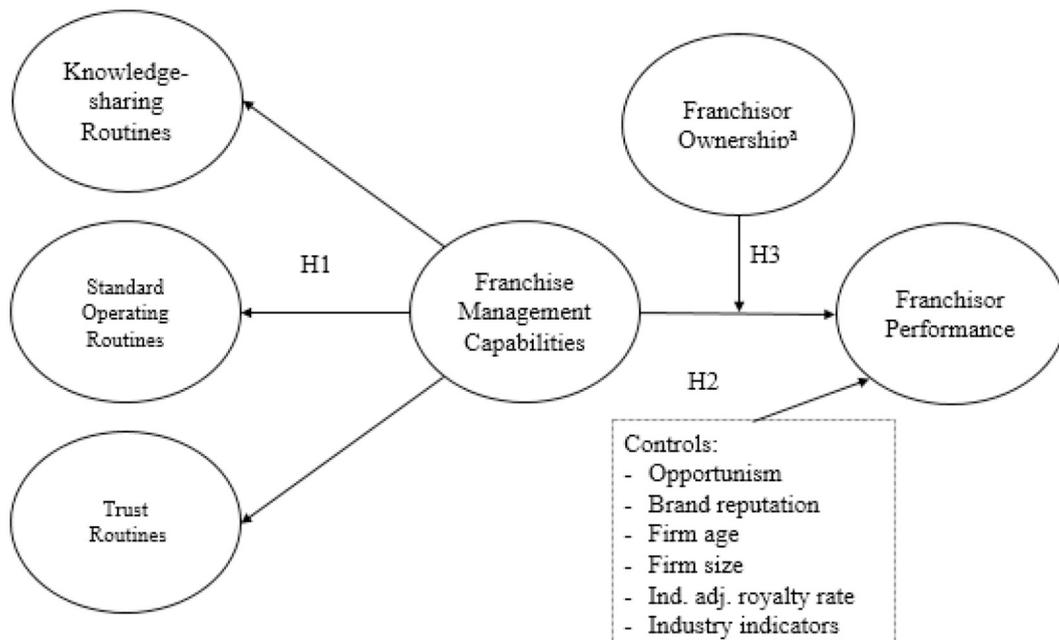
The first alliance management capability dimension is communication, which Schreiner et al. (2009:1401) call the “glue that holds an alliance together.” Communication is closest to Schilke and Goerzen's (2010: 1197) “inter-organizational learning” dimension where “knowledge transfer across organizational boundaries (Dyer and Nobeoka, 2000) is considered to be a key advantage of strategic alliances.” In franchising, standardization requires information about what constitutes the most effective routines to be communicated to franchisees (Bradach, 1997), and adaptation depends on franchisees having a forum for communicating information quickly about local adaptations and solutions to common problems (Darr et al., 1995; Gillis et al., 2014). Such communication can be accomplished through knowledge-sharing routines, which are regular patterns of interfirm communication that facilitate transfer, recombination, or creation of specialized knowledge (Dyer and Singh, 1998). Knowledge-sharing routines include franchisee consultants, newsletters, and national and regional meetings. Because learning through communication is a key element in alliance management capabilities, such knowledge-sharing routines should similarly be reflective of franchisors' franchise management capabilities.

The second alliance management capability dimension is coordination (Schilke and Goerzen, 2010; Schreiner et al., 2009). Information asymmetries from having a “divided authority structure and the physical, cognitive, and cultural distance between partners creates the need for formal and routine procedures, rules, and policies to guide cooperation between partners” (Schreiner et al., 2009: 1400). Such coordination facilitates standardization in franchising, and a central way that this is accomplished is by creating standard operating routines (or procedures) and training franchisees and their employees to follow them (Knott, 2003; Winter and Szulanski, 2001). Franchisors depend on having these routines followed closely to insure satisfactory quality (Winter et al., 2012), so they must credibly convey to franchisees that the routines are relevant and important to follow (Bradach, 1997). Thus, as a key source of coordination in franchising, the skill involved in developing, maintaining, and communicating operating routines should also reflect franchisors' overall franchise management capabilities.

Bonding is the third element of alliance management capabilities (Schreiner et al., 2009). It refers to the “close personal relationships and bonds” that “serve as a conduit for creating and maintaining expectations of mutual cooperation, developing trust and reciprocity between partners, as well as facilitating knowledge sharing between them; all of which possibly counter the effect of other internal or external hazards affecting the alliance” (Schreiner et al., 2009; 1400). The latter is important in the franchising context where limiting opportunism and free-riding is an ongoing challenge (e.g., Kidwell et al., 2007; Michael, 2002). Schreiner et al.'s (2009) bonding dimension is conceptually closest to Schilke and Goerzen's (2010) “alliance transformation” dimension which involves adapting to increase fit between partners. However, their focus is more on “contract amendments, fluctuations in alliance-related personnel, or changes in alliance-related governance mechanisms” (p. 1198) rather than interpersonal relationships. Although the ability to write and adapt complex contingent contracts can increase alliance effectiveness in some contexts (Ariño and Reuer, 2004), in franchising, contracts are largely standardized among outlets and chains share many of the same contract clauses (Lafontaine and Shaw, 1999). Thus, contractual bonding is not likely to be a source of competitive advantage in franchising.

Instead, bonding between franchisees and the franchisor is likely to take the form of interfirm trust (e.g., Meek et al., 2011). From the franchisor's perspective, trust exists when franchisors believe that franchisees' actions will result in positive outcomes for both parties, and that franchisees believe that the franchisor will do the same (Geyskens et al., 1998). Because trust is a self-enforcing governance mechanism (Dyer and Singh, 1998), we believe that it safeguards standardization while also fostering adaptation. Accordingly, routines that develop and support trust should increase franchisees' confidence that the franchisor's promotional and strategic initiatives will not harm them and increase the franchisor's confidence that franchisees' local adaptations will not damage

⁴ While franchise management capabilities are about working with franchisees, there are parallels in franchisor-owned outlets in that both use the same operating routines. Also, knowledge sharing and trust between local and regional managers is important, though they take place internally instead of across organizational boundaries.



² Our statistical test in Lisrel requires that franchisor ownership moderates the entire figure (i.e., all other relationships), but because our theoretical interest is in whether franchisor ownership moderates the franchise management capability-franchisor performance relationship, we drew Figure 1 to depict only that moderating relationship.

Fig. 1. A conceptual model of the relationships among franchise management capabilities, franchisor ownership, and franchisor performance.

the brand (e.g., [Baucus et al., 1996](#)). Thus, we submit that trust routines with respect to franchisees also reflect franchisors' franchise management capabilities.

Overall, franchise management capabilities reflect three franchise-context specific routines involving knowledge-sharing, operational procedures, and trust – that correspond respectively to the communication, coordination, and bonding skills described by [Schreiner et al. \(2009\)](#). While each dimension addresses different aspects of franchisors' ability to achieve standardization and adaptation, as is the case with alliance management capabilities, the dimensions of franchise management capabilities theoretically comprise a higher-order factor. Thus, we apply [Schreiner et al.'s \(2009\)](#) and [Schilke and Goerzen's \(2010\)](#) theorizing in the broader domain of alliance management capabilities to franchising by conceptualizing franchise management capabilities as a multi-dimensional construct comprised of conceptually parallel franchise context-specific routines. Accordingly:

Hypothesis 1. Knowledge-sharing routines, standard operating routines, and trust routines reflect higher-order franchise management capabilities.

This hypothesis is depicted on the left side of [Fig. 1](#), which guides our theorizing.

If our theorizing is correct that franchise management capabilities are important then franchisors who develop such capabilities should logically outperform. Although aspects of communication/knowledge sharing, coordination (via operational routines and other means), and trust permeate the franchising literature, almost all existing research is at the franchisee level. Consistent with our theorizing that these routines reflect a larger franchise management capability, several studies report relationships among dimensions. For example, knowledge sharing enhances franchisees' trust of ([Chiou et al., 2004](#)) and coordination with ([Rodríguez et al., 2005](#)) the franchisor. Trust, in turn, impacts both coordination ([Eser, 2012](#)) and knowledge sharing ([Hendrikse et al., 2015](#)). All three dimensions have also been linked to franchisee-level outcomes, such as satisfaction (e.g., [Chiou and Droge, 2015](#); [Eser, 2012](#)), commitment (e.g., [Wu, 2015](#)), conformity to standards (e.g., [El Akremi et al., 2011](#); [Kidwell et al., 2007](#)), survival (e.g., [Winter et al., 2012](#)), and performance (e.g., [Chiou and Droge, 2015](#); [Wu, 2015](#)).

Much less is known at the franchisor level. Both trust and knowledge sharing have been tied to the proportion of franchised outlets among plural form franchisors ([Gillis et al., 2014](#)) and knowledge sharing has been linked with multi-outlet franchising ([Gillis et al., 2011](#)). Trust and coordination (via specificity of routines) relates to “brand resonance” ([Badrinarayanan et al., 2016](#)), and standard operating routines (proxied by training days) foster centralized decision-making ([Mumdzhev and Windsperger, 2011](#)) while trust permits decentralized decision-making ([Herz et al., 2016](#)). However, virtually nothing is known about how these dimensions individually or collectively relate to franchisor performance.

While little is known about how the dimensions of franchise management capabilities relate to franchisor performance, much is known about the (broader) parallel dimensions of alliance management capabilities. Knowledge sharing facilitates understanding, aligns partners' interests, and helps achieve collective goals ([Argyres and Mayer, 2007](#); [Kale and Singh, 2009](#); [Spralls et al., 2011](#)).

Coordination builds consensus by defining roles and responsibilities, clarifying tasks, and facilitating cooperation (Luo, 2006; Mohr and Spekman, 1994; Park and Ungson, 2001), which enhances partner firms' competitive advantage (Walter et al., 2006). Trust between alliance partners protects resources (Das and Teng, 1998; Inkpen and Currall, 2004), resolves conflict, enhances learning (Kale et al., 2000), increases buyer's willingness to pay (in supplier alliances, Elfenbein and Zenger, 2014), and leads to superior firm performance (Barney and Hansen, 1994). Thus, it is perhaps not surprising that when viewed as a second-order capability, alliance management capabilities have been linked many important outcomes, such as joint action, customer knowledge, learning, innovation, abnormal stock returns, profitability, market share, sales growth, and alliance portfolio performance (e.g., Kazadi et al., 2016; Schilke and Goerzen, 2010; Schilke, 2014; Schreiner et al., 2009; Swaminathan and Moorman, 2009).

Resource-based theory provides the theoretical foundation explaining the relationship between alliance management capabilities and firm performance (e.g., Kraaijenbrink et al., 2010). Applied to the franchise context, if franchise management capabilities allow franchisors to maximize standardization while using franchisees' entrepreneurial spirit to adapt to local preferences, then such capabilities can be described as valuable (Barney, 1991; Kaufmann and Eroglu, 1999). Indeed, evidence at the franchisee-level suggest that these dimensions yield positive outcomes, such as franchisee commitment (e.g., Wu, 2015), that logically should benefit franchisors. Further, if these capabilities vary among the population of franchisors and are not easily copied by potential imitators, then the logic of resource-based theory suggests that they should lead to performance differences (Hoopes et al., 2003). Entrepreneurs who have built these capabilities should be able to create more value than those who have not. Thus, applying resource-based logic to franchise management capabilities, we expect that:

Hypothesis 2. Franchise management capabilities are positively related to franchisor performance.

Franchise management capabilities should help all franchisors learn from franchisees and increase standardization. We submit, however, that these effects are particularly strong among plural form franchisors because each of the three dimensions can be theoretically linked to the symbiotic advantages that come from owning some outlets while franchising others (e.g., Bradach, 1997; Perryman and Combs, 2012). Existing and proposed operating procedures can be tested in franchisor-owned outlets, as can new products and process innovations, and results from these tests can be communicated to franchisees through knowledge-sharing routines (Bradach, 1997; Gillis et al., 2014). Standardization is also enhanced when managers and employees of franchisor-owned outlets, who have deep knowledge regarding standard operating routines, are promoted into franchisee-consultant roles, hired by franchisees, or become franchisees (Bradach, 1997). Knowledge-sharing routines can help franchisors discover franchisee innovations that can then be tested in franchisor-owned outlets (Darr et al., 1995). Importantly, franchisees are also much more likely to trust franchisors' claims when the evidence comes from franchisor-owned outlets (Bradach, 1997). Franchisor ownership also increases franchisees' overall confidence and trust in the franchisor because it gives franchisors high-powered incentives to invest in new product development and brand advertising, and to control franchisee free-riding, which directly hurts the franchisor's owned outlets (Lafontaine and Shaw, 2005). Thus, franchisees can safely pursue franchisor initiatives and recommendations knowing that franchisor-franchisee incentives are aligned. Overall, franchisor-owned outlets help franchisors leverage investments in franchise management capabilities by increasing the volume and credibility of knowledge flow between franchisor and franchisees.

Turnkey franchisors should also gain from franchise management capabilities; standardization, knowledge sharing, and trust relate to each other (e.g., Chiou et al., 2004; Eser, 2012; Hendrikse et al., 2015; Rodriguez et al., 2005) and to important outcomes such as franchisee commitment (e.g., Meek et al., 2011), satisfaction (e.g., Chiou and Droge, 2015; Eser, 2012), adherence to routines (e.g., El Akremi et al., 2011) and performance (Chiou and Droge, 2015; Wu, 2015), all of which should benefit turnkeys. Without franchisor-owned outlets, however, turnkeys are unable to take advantage of the additional standardization that comes from leveraging franchisor ownership (e.g., Sorenson and Sørensen, 2001; Yin and Zajac, 2004). Moreover, because revenues are derived almost exclusively through franchisee royalties – which is fundamentally different for plural form franchisors who also sell products and services directly to final customers – turnkey franchisors are likely more concerned with selling additional business opportunities to prospective franchisees than expending resources to enforce standardization among existing franchisees (Gillis and Combs, 2009). This is consistent with evidence that turnkeys are less able (or willing) to standardize quality (Michael, 2000).

Accordingly, while all franchisors should benefit from franchise management capabilities, we submit that plural form franchisors gain more. Stated formally:

Hypothesis 3. The relationship between franchise management capabilities and franchisor performance is stronger among plural form franchisors than among turnkey franchisors.

4. Method

4.1. Sample and data collection

The level of analysis is the franchisor and their relationship with franchisees. Accordingly, we sought a representative sample of active franchisors. Our sample frame was the 2006 *Bond's Franchise Guide* (hereafter, BFG), an annual listing of approximately 1000 U.S. and Canadian franchisors in 45 industries. Potential franchisees use BFG to access information about franchisors and franchisors gain free advertising from BFG. Lafontaine (1995) shows that with respect to active franchisors BFG is reasonably complete.

We combine survey and BFG data to test our hypotheses. Survey design and scale development involved several procedures to increase validity (Podsakoff et al., 2003). First, we asked five active management researchers for feedback on prospective survey items. Another five researchers were then asked to perform a retranslation exercise wherein items are matched to construct

Table 1
Factor loadings, composite reliabilities, and average variance explained from confirmatory factor analysis.^a

		Loadings	CR/AVE ^b
	Opportunism		0.86/0.67
OP1	Our firm is perceived to be one of the best in the industry.	0.87	
OP2	Customers say that our company is the first to come to mind when considering the general product/service we provide.	0.88	
OP3	Comparing our company to our competitors, our company is well respected.	0.68	
	Brand reputation		0.88/0.71
BR1	Our firm is perceived to be one of the best in the industry.	0.82	
BR2	Customers say that our company is the first to come to mind when considering the general product/service we provide.	0.86	
BR3	Comparing our company to our competitors, our company is well respected.	0.85	
	Knowledge-sharing routines		0.76/0.54
KR1	There are established ways for franchisees' innovations to be transferred to all outlets.	0.59	
KR2	Our franchisees help us identify and develop good ideas.	0.86	
KR3	If a franchisee found a better way to do something, we would hear about it quickly.	0.70	
	Standard operating routines		0.75/0.52
SP1	We have a specified set of written procedures that is critical for all outlets to follow.	0.61	
SP2	Our employees ensure success by following standardized procedures.	0.90	
SP3	When employees follow daily procedures and checklists, success usually follows.	0.57	
	Trust routines		0.78/0.54
TR1	We and our franchisees are generally honest and truthful with each other.	0.81	
TR2	We and our franchisees treat each other fairly and justly.	0.69	
TR3	We have a fair process for resolving differences with franchisees.	0.69	
	Franchisor performance		0.85/0.65
FP1	Compare your firm's performance to your competitors over the last 3 years in terms of growth in sales.	0.87	
FP2	Compare your firm's performance to your competitors over the last 3 years in terms of profitability.	0.73	
FP3	Compare your firm's performance to your competitors over the last 3 years in terms of market share.	0.81	

^a N = 229.

^b CR = Composite Reliability; AVE = Average Variance Explained.

definitions (Smith and Kendall, 1963). After revisions, a second retranslation exercise was performed wherein all items were reclassified correctly. Finally, we asked three franchisors and two doctoral students to pre-test the survey using different delivery methods (verbally, paper, and online). We used this information to improve the final clarity of all survey items and to confirm that respondents could complete the survey within 10 min.

In early 2007, we called the contact person listed in BFG for each of the 905 unique franchise systems. The contact person listed in BFG is the point of contact for potential franchisees, so they are knowledgeable about the way the franchisor works with franchisees. The average respondent had 11 years tenure and 82% were members of the top management team. With few exceptions, respondents were CEO/Owners, Vice Presidents of Franchise Operations, or Directors of Franchise Development. We offered to administer the survey via fax, mail, email attachment, website link, or orally over the phone. An overwhelming majority chose the website link. No differences were found on average responses across delivery systems. A follow-up phone call and email was sent to those who did not respond within two weeks. We received 263 responses for a 29.1% initial response rate. After listwise deletion for missing survey data, there were 229 usable responses for the confirmatory factor analysis (CFA) and SEM used to test [Hypotheses 1 and 2](#), respectively, an effective response rate of 25.3%. Sample size requirements for two-groups analysis in Lisrel required that we use scales rather than items as input for testing [Hypothesis 3](#), and averaging items to generate scales made it possible to include respondents who had missed an item, which yielded 243 respondents.

Sample firms were overwhelmingly small- and medium-sized enterprises, and over 90% were privately owned. The median franchisor had 129 outlets and had grown by an average of one outlet per year over the previous two years. Participating firms were not significantly different from non-participating firms on franchisor ownership or total number of outlets, and early responders were not significantly different from late responders on any of the survey scales. Thus, we did not find evidence of non-response bias.

[Table 1](#) lists the retained items, their factor loadings in a CFA (explained below), the scales' composite reliabilities (CR), and the scales' average variance explained (AVE). To minimize common method variance (CMV), we used several techniques from [Podsakoff et al. \(2003\)](#). We used different anchors and scales for the dependent and independent survey items. All independent survey items used seven-point Likert anchors from 1 = strongly disagree to 7 = strongly agree; the dependent performance items used five-point Likert scales with anchors from 1 = much worse to 5 = much better. We also included a two-item social desirability measure to test for respondents' proclivity to give biased answers. Finally, we used both survey and archival data. Obviously, CMV does not occur between archival and survey variables.

4.2. Dependent variable

Performance was captured by modifying a scale developed by [Delaney and Huselid \(1996\)](#), which measures overall performance over the previous three years compared to similar organizations. *Franchisor performance* includes three items that ask about growth in sales, profitability, and market share relative to competitors (CR = 0.85). Most franchisors are small, private businesses where archival performance data are unavailable. We could have asked respondents for objective performance indicators but doing so has

been shown to yield lower response rates (Runyan et al., 2008). Given that subjective comparisons to competitors correlate strongly with objective performance data (Ling and Kellermanns, 2010), we were less concerned about the construct validity of our subjective performance measure than we were about increased sampling error due to a lower response rate.

4.3. Independent and moderator variables

We either created or adapted the three scales used to measure the three dimensions of franchise management capabilities. We developed a three-item scale to measure *knowledge-sharing routines* (CR = 0.76). Items ask about the existence and use of methods of learning and transferring ideas (cf. Dyer and Singh, 1998). Also developed for this survey, *standard operating routines* contains three items depicting the degree to which success depends on following written procedures and checklists (CR = 0.75) (Knott, 2003). Finally, *trust routines* was measured by adapting a three-item scale from Dyer and Chu (2003)⁵ that asks about the process and extent of honest and fair treatment in the relationship (CR = 0.78). Each first-order dimension represents a type of routine – knowledge, operating, or trust – indicating that they share a common theme as is the norm for reflective constructs (both first and second order) (MacKenzie et al., 2005).

We anticipate in *Hypothesis 3* that *Franchisor ownership* influences the relationship between franchise management capabilities and franchisor performance. We categorized ownership as plural form (coded = 1) or turnkey (coded = 0), where plural form is defined by >5% franchisor-owned outlets or at least some growth through company ownership in the previous two years. Turnkey franchisors, in contrast, were either 100% franchised or at least 95% franchised with growth only from franchising during the previous two years. We selected the 5% cut-off in recognition that turnkeys often own one or a small subset of outlets that are retained for training purposes. The robustness of this choice is tested below. Data were taken from the BFG 2006 and confirmed, when possible, through other sources (UFOC, Entrepreneurship.com).

4.4. Control variables

WE controlled for *brand reputation* using a three-item scale developed for this survey (CR = 0.81). Following prior efforts wherein managers assess their firm's brand reputation vis-à-vis competitors (e.g., Combs and Ketchen, 1999), items ask how well known and respected the company is among customers relative to competitors (Knight and Cavusgil, 2004). To control for the influence of resource scarcity among new/small firms (Castrogiovanni et al., 2006), we controlled for *firm age* in years since founding and *firm size* using the log of the total number of outlets. Because firms with more successful and well-known brands might charge a higher royalty (Lafontaine, 1992), we controlled for the franchisor's royalty rate, *industry adjusted royalty rate*, by subtracting the firm's royalty rate from the industry average royalty rate. To control for the effect of possible opportunistic behavior by franchisees on performance, we used a three-item measure, *opportunism* (CR = 0.86) (Gillis et al., 2014). To account for the value of franchise management capabilities varying among industries (Barthélemy, 2011), we included indicator variables for each of eight industry segments: (1) automotive products/services, (2) business services, (3) food/restaurants, (4) hair/health/beauty, (5) cleaning/educational services, (6) lodging/recreation, (7) packaging/printing/mailing, and (8) retail. Finally, in our test of *Hypothesis 2*, franchisor ownership is included as a control.

4.5. Data analysis

We used structural equation modeling (SEM) (Lisrel 8.80) with maximum likelihood to test all hypotheses. Specifically, we combined Anderson and Gerbing's (1988) two-step approach with that of Jöreskog et al. (2000) to produce first- and second-order confirmatory factor analysis (CFA) measurement models that we used to test *Hypothesis 2* as a full model. Due to sample size limitations, we were unable to test *Hypothesis 3* using Lisrel groups to run a single, two-groups, full measurement-to-path model with all control variables. Thus, we used factor scores created from the second-order CFA to depict franchise management capabilities, along with scales, means, standard deviations, and reliabilities for each of the other measures, in a two-groups SEM analysis (Joreskog, 2000). We chose SEM because of its powerful approach for testing both the second-order construct while simultaneously controlling for all items and measurement error in a group analysis (Bollen, 1989; MacKenzie et al., 2011; Petrescu, 2013).

Reliability, along with convergent and discriminant validity of multi-item scales were evaluated through a series of confirmatory factor analyses (CFA). Initially, we assessed scale reliability and validity by entering all survey items in a first-order solution (See [Table 1](#)). The items and scale reliability were further assessed by examining the standardized loadings of the manifest indicators/items on their corresponding underlying first-order factors. All factor loadings were well above the recommended minimum of 0.40 for the social sciences (all were at or above 0.50) (Ford et al., 1986). Final item coefficients all were greater than twice the standard error (Anderson and Gerbing, 1988) with one exception (SP3 in [Table 1](#)). Although this item had a standard error that exceeded the cutoff of half the value of the coefficient, we retained it for two reasons. First, keeping it meant that the scale retained three items, which is desirable in SEM (Bollen and Long, 1993). Second, removing this item would result in an unacceptable AVE (below 0.50). Thus, while this item added some error variance, it also improved consistency and variance explained. Because the chi square of the model was still significant ($\chi^2_{120} = 166.3, p = .003, RMSEA = 0.041$), we allowed the error variance of three pairs of items (OR1-

⁵ Specifically, we adapted the language to the franchising context and replaced an item about monitoring with an item about having a fair process for resolving differences. The latter keeps the scale focused on trust routines.

KSR2; KSR2-TR3; TR1-TR2) to correlate so that our final CFA's ($\chi^2_{117} = 139.1, p = .080, RMSEA = 0.029$) covariance structure more closely matches the underlying data structure.⁶

As shown in Table 1, each first-order factor's internal consistency is above the recommended 0.70 minimum and each AVE is at or above the 0.50 threshold (Fornell and Larcker, 1981). We established discriminant validity by comparing each first-order factor's shared variance among indicators with the shared variance between constructs and observing that the square root of each factor is greater than its correlations with other constructs (Fornell and Larcker, 1981). Overall, the measurement model fit the data acceptably well ($\chi^2_{117} = 139.1, p = .08, CFI = 0.99, PNFI = 0.73, PGFI = 0.64, \text{ and } RMSEA = 0.029$). Thus, an initial measurement model consisting of first-order factors was confirmed.

Next, we tested several other models representing alternative ways to conceptualize the constructs and to test for the effects of social desirability. The specific models that were run included: (a) a one factor solution where all items are loaded on a single method factor ($\chi^2_{132} = 1220.4, p < .001, CFI = 0.67, PNFI = 0.55, PGFI = 0.48 \text{ and } RMSEA = 0.19$), (b) a two factor solution where social desirability is included alongside a method factor ($\chi^2_{149} = 796.5, p < .001, CFI = 0.81, PNFI = 0.60, PGFI = 0.52 \text{ and } RMSEA = 0.14$), (c) a trait plus method solution where each variable (except social desirability) loads on both its trait and a common method factor ($\chi^2_{128} = 129.4, p = .49, CFI = 1.00, PNFI = 0.65, PGFI = 0.58 \text{ and } RMSEA = 0.01$), (d) a trait plus social desirability solution where each variable loads on its trait and social desirability is used as the common method factor ($\chi^2_{134} = 157.3, p = .08, CFI = 0.99, PNFI = 0.67, PGFI = 0.60 \text{ and } RMSEA = 0.03$), (e) a first-order solution where the variables of interest (i.e., knowledge-sharing routines, standard operating routines, and trust routines) are loaded onto a single factor ($\chi^2_{129} = 414.6, p = .08, CFI = 0.90, PNFI = 0.73, PGFI = 0.62 \text{ and } RMSEA = 0.10$), and (f) a first-order solution where correlations between knowledge-sharing routines, standard operating routines, and trust routines are constrained to zero ($\chi^2_{120} = 232.3, p < .001, CFI = 0.96, PNFI = 0.72, PGFI = 0.63 \text{ and } RMSEA = 0.07$).

The parsimony fit indices suggest that the hypothesized first-order model has the best overall fit, but the lowest RMSEA and highest CFI were in the trait plus method model (i.e., model "c" above), indicating a small amount of common method variance (CMV). Specifically, the trait plus method model attributed 9.8% of the variance to method. This is far less than the maximum allowed by the Harman one factor test and including a method factor did not affect the hypothesized coefficients or the average variance explained; each variable's AVE remained above 0.50 (Podsakoff et al., 2003). Still, it was important to make sure that this small amount of CMV did not inflate relationships. CMV was not evident in the way respondents answered the social desirability items compared to the way that they answered the performance and franchise management capability items. Thus, respondents do not appear to be attempting to make their firms "look good" for researchers (a key source of CMV). Finally, as described in the robustness test section below, we ran a robustness test on a subsample of the data using an archival dependent variable (not affected by CMV) and found similar results.

5. Results

Table 2 presents means, standard deviations, and correlations among variables. The highest bivariate correlation between independent variables was $r = 0.54$ (between trust routines and knowledge-sharing routines). In fact, the three components of franchise management capabilities were all correlated between $r = 0.39$ and $r = 0.54$, which is expected given these are hypothesized to be related but distinct first-order factors that reflect a second-order construct (MacKenzie et al., 2011). Thus, multicollinearity does not appear to be a significant factor (McColl-Kennedy and Fetter, 2001).

5.1. Hypothesis tests

Hypothesis 1 anticipates that franchise management capabilities are a multidimensional construct comprised of knowledge-sharing routines, standard operating routines, and trust routines. We used confirmatory factor analysis to estimate the overall fit of a second-order factor measurement model that best represents these relationships. The fit indices for this model show good fit ($\chi^2_{123} = 149.8, p = .05, CFI = 0.99, PNFI = 0.76, PGFI = 0.67 \text{ and } RMSEA = 0.03$). Fit indices for parsimony of model fit (PNFI and PGFI) were slightly better for the second-order factor model than the first-order factor model, indicating that the hypothesized second-order factor provides better fit. To compare these non-nested models, we calculated the Akaike Information Criterion (AIC), which takes model fit, parsimony, and complexity into consideration (Brown, 2015). As noted in Fig. 2, the AIC of 245.8 for the second-order model is lower than the AIC of 247.3 for the first-order model. Furthermore, in the second order CFA, correlations among latent first-order factors – i.e., knowledge-sharing routines, standard operating procedures, and trust routines – are high (i.e., 0.31, 0.51, 0.60, respectively, all $p < .01$). Loadings on the second-order factor (0.60 for knowledge-sharing routines, 0.51 for standard operating routines, and 0.83 for trust routines, $p < .01$) are also high. Thus, for the CFA, results are similar in loadings with the first-order factor model; however, the lower AIC, better parsimony fit indices, high correlations, and high loadings indicate that it is appropriate to view franchise management capabilities as a multidimensional second-order construct. Thus, Hypothesis 1 is supported.

⁶ We freed the error covariance for three pairs of indicators, two of which reflect different first-order constructs. While this would not be appropriate for first order constructs, these indicators are all reflective of the second order construct, franchise management capabilities. Because these indicators are all content valid measures of this higher order construct, freeing the error terms appears appropriate in this instance (Brown, 2015).

Table 2
Means, standard deviations, and correlations.

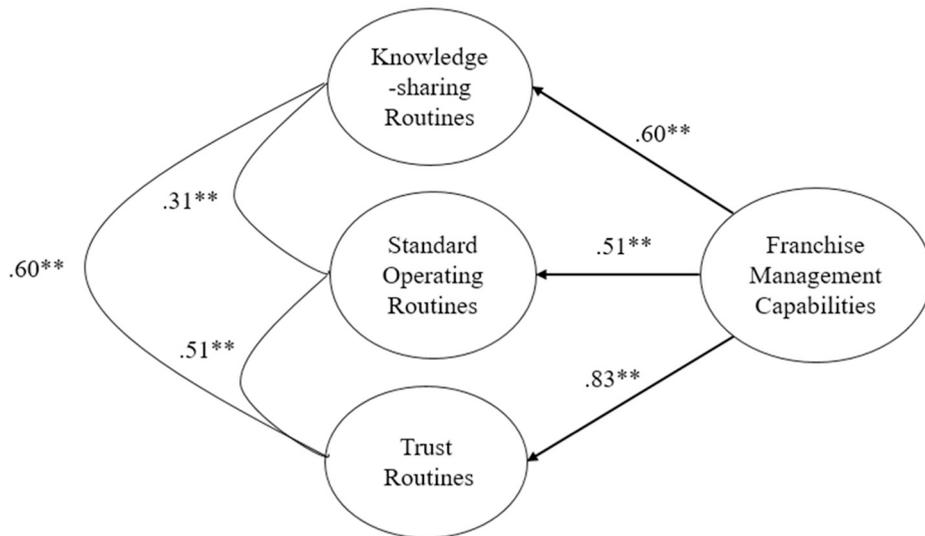
Variable	Mean	Std dev	1	2	3	4	5	6	7	8	9
1. Brand reputation	5.95	1.02									
2. Firm age	27.93	16.67	0.04								
3. Industry adj. royalty rate	-0.01	0.05	-0.01	0.06							
4. Firm size (log outlets)	2.10	0.60	0.06	0.28***	-0.07						
5. Opportunism	4.58	1.24	-0.12	0.00	-0.08	0.06					
6. Knowledge-sharing routines	6.02	0.88	0.29***	0.03	-0.03	0.03	-0.12				
7. Operating routines	6.17	0.86	0.24***	0.05	0.08	-0.01	-0.25***	0.39***			
8. Trust routines	5.95	0.95	0.39***	0.10	0.01	0.07	-0.35***	0.52***	0.40***		
9. Franchisor ownership	0.41	0.49	0.04	0.26***	0.04	0.03	-0.11	-0.03	0.04	0.03	
10. Franchisor performance	3.82	0.79	0.41***	-0.12	0.10	0.09	-0.14*	0.18**	0.17**	0.27***	-0.05

N = 243.

* (p < .05).

** (p < .01).

*** (p < .001).



Model	df	χ^2	p-value	CFI	PNFI	PGFI	RMSEA	AIC
First-order (final)	117	139.1	.077	.99	.73	.64	.029	247.3
Second-order (Hypothesis 1)	123	149.8	.050	.99	.76	.67	.031	245.8

*(p<.05); **(p<.01)

df = degrees of freedom; CFI = Comparative Fit Index, PNFI = Parsimony Normative Fit Index, PGFI = Parsimony Goodness of Fit Index; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion.

Other first order latent variables (Opportunism, Brand Reputation, Franchisor Performance) not shown. Indicator paths for first order latent variables are not shown but do not vary from loadings in Table 1 by more than 0.01.

^a Models are non-nested so comparisons are made mainly through parsimony and AIC indices.

Fig. 2. Second-order model paths and comparison to first-order model fit statistics.^a

To test **Hypothesis 2**, we used the final second-order measurement model in a path model with franchisor performance as the dependent variable (Anderson and Gerbing, 1988). To avoid model misspecification, we allowed three industry indicator error covariances to correlate in all path models. We then added the control variables wherein franchise ownership is an indicator variable with an error variance of 0.1 *variance and $\lambda = 0.95$ (Petrescu, 2013). **Hypothesis 2** predicted that franchise management capabilities are positively related to franchisor ownership. In Model 1 (Table 3), the overall model fits the data well ($\chi^2_{279} = 313.2, p = .08$), but the FMC coefficient is not significant ($\gamma = 0.08, p > .10$) offering no support for **Hypothesis 2**.

Hypothesis 3 predicted that franchisor ownership moderates the relationship between franchise management capabilities and franchisor performance such that the benefits of franchise management capabilities are more positive among plural form franchisors. To test **Hypothesis 3**, we created scales from item-level means and used the groups analysis function in Lisrel (N = 143 for turnkey and N = 100 for plural form). As shown in Model 2 (Table 3), the overall model had good fit ($\chi^2_{84} = 91.5, p = .27$). There was no evidence of a relationship between franchise management capabilities and performance among turnkey franchisors ($\gamma = -0.02$,

Table 3
Hypothesized models, fit indices, paths, and coefficients.

Model		Std. coefficient	Coefficient	S.E.	p-Value
Model 1 –Hypothesis 2 (N = 229)					
df = 279; $\chi^2 = 313$; p-value = .078; SRMR = 0.047; RMSEA = 0.024; CFI = 0.98					
	FMC → franchisor performance	0.08	0.08	0.18	.660
	Brand reputation → franchisor performance	0.42**	0.42**	0.13	.002
	Opportunism → franchisor performance	−0.07	−0.07	0.13	.603
	Firm size → franchisor performance	0.10	0.18	0.20	.379
	Firm age → franchisor performance	−0.19	−0.01	0.01	.187
	Ind Adj. RR → franchisor performance	0.13	2.52	2.35	.284
	Franchisor own. → franchisor performance	0.17	0.36	0.31	.254
Model 2 – Hypothesis 3					
df = 84; $\chi^2 = 91.5$; p-value = .270; SRMR = 0.086; RMSEA = 0.027; CFI = 0.94					
Turnkey (N = 143)	FMC → franchisor performance	−0.02	−0.02	0.09	.421
	Brand reputation → franchisor performance	0.27**	0.22**	0.08	.002
	Opportunism → franchisor performance	−0.16†	−0.11†	0.06	.082
	Firm size → franchisor performance	0.16†	0.22†	0.12	.063
	Firm age → franchisor performance	0.25*	−0.01*	0.00	.029
	Ind adj. RR → franchisor performance	−0.06	−1.03	2.59	.689
Plural form (N = 100)	FMC → franchisor performance	0.25*	0.22*	0.09	.012
	Brand reputation → franchisor performance	0.81***	0.66***	0.08	<.001
	Opportunism → franchisor performance	0.08	0.05	0.06	.395
	Firm size → franchisor performance	0.00	0.00	0.12	.988
	Firm age → franchisor performance	−0.12†	−0.01†	0.00	.095
	Ind adj. RR → franchisor performance	0.26***	4.33***	1.05	<.001
Model 3 – post hoc					
df = 103; $\chi^2 = 118.8$; p-value = .136; SRMR = 0.092; RMSEA = 0.036; CFI = 0.90					
Turnkey (N = 143)	FMC → brand reputation	0.44***	0.47***	0.09	<.001
	Brand reputation → franchisor performance	0.28**	0.22**	0.08	.003
	FMC → opportunism	−0.25*	−0.32*	0.13	.010
	Opportunism → franchisor performance	−0.17†	−0.11†	0.06	.061
	FMC → franchisor performance	−0.03	−0.02	0.09	.802
Plural form (N = 100)	FMC → brand reputation	0.06	0.06	0.12	.610
	Brand reputation → franchisor performance	0.82***	0.65***	0.08	<.001
	FMC → opportunism	−0.29*	−0.37*	0.15	.013
	Opportunism → franchisor performance	0.06	0.04	0.06	.484
	FMC → franchisor performance	0.27**	0.23**	0.08	.005

All tests are two-tailed. Std. Coefficient = Standardized Coefficient; S.E. = Standard Error df = degrees of freedom; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; FMC = Franchise Management Capabilities; Ind Adj. RR = Industry Adjusted Royalty Rate. Not all paths shown: For Models 1 and 2, Industry Indicators not shown. For Model 3, only paths of interest are shown.

† ($p < .10$).

* ($p < .05$).

** ($p < .01$).

*** ($p < .001$).

$p > .10$), but the relationship is significant and positive among plural form franchisors ($\gamma = 0.25$, $p < .05$), supporting [Hypothesis 3](#).

5.2. Robustness tests

We ran several tests to investigate the robustness of the results. First, to investigate the possibility that respondents were unable to accurately assess their performance relative to competitors, we re-ran the model for [Hypothesis 3](#) using an archival performance measure, net income growth over the prior three years, on a sub-sample where data were available (N = 52 for turnkey and N = 63 for plural form) and found similar results – i.e., franchise management capabilities related to net income growth for plural form franchisors ($\gamma = 0.26$, $p < .05$) but not turnkey franchisors ($\gamma = -0.11$, $p > .10$). These results must be taken with caution given the small sample and retrospective income growth measure, but they are at least suggestive that our use of a subjective performance measure is not biasing results.

Second, to assess the possibility that the individual dimensions of franchise management capabilities might be more important than our hypothesized second-order construct, we ran Lisrel groups analysis with the three first-order scales pointing directly to franchisor performance. None of the first order dimensions were significantly related to performance for either turnkey or plural form groups. We also ran each dimension separately (in intentionally mis-specified models) and still found that no single dimension was related to performance.

A third robustness test involved splitting the sample (N = 132 for turnkey and N = 97 for plural form) and creating two separate

measurement models, each leading to its own path model for each franchisor ownership type.⁷ These results mirrored the results above wherein plural form franchisors' franchise management capabilities are significantly related to franchisor performance while turnkey franchisors had no such association.

Fourth, because alliance management capabilities can be conceptualized at the portfolio level, which in other industries includes proactively identifying potential partners with emerging technologies (Schilke and Goerzen, 2010), we tested whether franchisee selection should be part of the second-order franchise management capabilities construct. By adding a three-item scale for franchisee selection created for this survey (e.g., "Our firm selects franchisees based upon their knowledge about the local market."), we ran a four-factor, second-order model. While we could generate a solution with franchisee selection included as a second-order factor, we ultimately did not include it as part of franchise management capabilities due to (1) low correlations with the other dimensions (i.e., $r = 0.013, 0.11, \text{ and } 0.21$ with knowledge-sharing routines, standard operating routines, and trust routines, respectively), and (2) the standardized coefficient was less than half of the next lowest dimension. This indicates that it did not represent the same higher dimension. Thus, while we cannot rule out the possibility that franchisee selection routines also reflect franchise management capabilities, consistent with Schreiner et al.'s (2009) view that managing and selecting alliance partners are separate capabilities, we were unable to capture it.

Fifth, recognizing that franchisors have different policies with respect to encouraging franchisees to own multiple outlets (e.g., Jindal, 2011), we used a three-item measure of the franchisors' emphasis on multi-outlet franchising created for this survey (e.g., "Rewarding successful franchisees with more outlets is an important part of our growth strategy") to investigate (1) whether multi-outlet franchising might comprise a yet-untheorized franchise management capability dimension or (2) provide an alternative explanation that needs to be statistically controlled. Multi-outlet franchising was not associated with franchise management capabilities, nor did it impact performance directly or in conjunction with any other variable in our sample. Thus, we left it out of the model.

Sixth, because we split the sample into turnkey and plural forms using a subjective cutoff of 5% company ownership, we ran two additional Lisrel groups analyses using different criteria – i.e., ten and 1%. We found coefficients and model results in line with our reported results for Hypothesis 3. For both models, plural form but not turnkey franchisors showed a relationship between franchise management capabilities and franchisor performance. In addition, the AIC for the model with the 5% cutoff (AIC = 343.5) was lower than either the 10% (394.9) or 1% model (345.9).

Seventh, we investigated the potential that franchise ownership is endogenous with respect to performance. This involved two steps. First, we used Heckman's (1979) selection methodology to check the possibility that selection effects could bias parameter estimates. The residuals of a first-stage equation predicting franchisor ownership was used to calculate the inverse-Mills ratio, which was subsequently included as a control variable in a second-stage model predicting performance. We used three survey items as exclusion restrictions – i.e., whether franchisees are selected based on industry experience, whether franchisee selection is based on a willingness to experiment in the local market, and whether the franchisor uses multi-outlet franchising as growth strategy. After inserting the inverse-Mills ratio, there were no changes in the significance or direction of the reported results. Second, as shown in Table I of the Appendix, we performed two-stage least square (2SLS) regressions to account for possible endogeneity in franchisor ownership due to omitted variables. We found two instruments for the franchisor ownership variable, industry-adjusted percentage of franchised outlets and the size of corporate staff per outlet, and performed three sets of tests to evaluate the validity of the instruments and potential endogeneity risks with respect to franchisor ownership. First, the suitability of the instruments was tested by reference to the F-statistics and the significance of the instruments in the first stage regressions predicting the endogenous variables (Bascle, 2008; Semadeni et al., 2014; Stock et al., 2002; Stock and Yogo, 2005). The coefficient for both instruments were significant and in the predicted direction. The F-statistics developed by Stock and colleagues (Staiger and Stock, 1997; Stock and Yogo, 2005) for franchisor ownership as a continuous and categorical variable are both above a threshold of 11.59 for two instruments (Stock et al., 2002). Thus, our instruments are "strong" (Bascle, 2008). Second, we used the Sargan test (Sargan, 1958) (i.e. of over-identifying restrictions) to examine whether the two instrumental variables are exogenous. The Sargan statistics are insignificant, and thus we fail to reject the null hypothesis that the two instruments are exogenous (Bascle, 2008; Titus and Anderson, 2016). Third, we used the Wu–Hausman F-tests and the Durbin–Wu–Hausman chi-square tests to evaluate the endogeneity of franchisor ownership. The tests compare the coefficients of the assumed endogenous regressors from a non-2SLS regression with the estimates obtained using 2SLS. The Wu–Hausman F-test and Durbin–Wu–Hausman chi square test are insignificant, meaning there is no evidence that 2SLS is required. Combined with the Heckman procedures, we found no evidence that our parameter estimates based on SEM are biased due to endogeneity with respect to franchisor ownership.

Finally, as shown in Table II of the Appendix, we performed 2SLS regression to investigate the possibility that franchise management capabilities are endogenous with respect to performance.⁸ We found three instruments for franchise management capability, (1) whether franchisee selection is based on industry experience, (2) whether the franchisor offers direct financial assistance, and (3) the level of conflict with franchisees, and performed three sets of tests to evaluate the validity of the instruments and the extent of the endogeneity threat. First, the suitability of the instruments was tested by reference to the F-statistics and the significance

⁷ Due to insufficient sample size, we were unable to use Lisrel groups to run a single, two-groups model that incorporated all control variables and followed Anderson and Gerbing's (1988) recommendation to create a measurement model that then is used in the path model. For this robustness analysis, we ran each full measurement and path model separately (i.e., not in Lisrel groups) for plural form and turnkey franchisors.

⁸ We did not perform Heckman's (1979) selection methodology with respect to franchise management capabilities because it is a continuous variable.

of the instrumental variables in the first-stage regressions predicting the endogenous variable (Bascle, 2008; Semadeni et al., 2014; Stock et al., 2002; Stock and Yogo, 2005). The coefficient for all three instruments were significant and in predicted directions. The F-statistics are above a threshold of 12.83 for three instruments (Stock et al., 2002). Thus, our instruments are “strong” (Bascle, 2008). Second, we used the Sargan test (Sargan, 1958) (i.e. of over-identifying restrictions) to examine whether the three instrumental variables are exogenous. The Sargan statistics are insignificant, so we fail to reject the null hypothesis that the three instruments are exogenous (Bascle, 2008; Titus and Anderson, 2016). Third, we formally tested for endogeneity using the Wu–Hausman F-tests and the Dubin–Wu–Hausman chi square tests, both of which were insignificant, indicating no advantage to using a 2SLS specification. Thus, we found no evidence that the parameter estimates in Lisrel model are overly biased due to endogeneity with respect to franchise management capabilities.

6. Discussion

Franchising fosters rapid growth and survival (Shane, 1996) but exposes franchisors to franchisee free-riding behavior that degrades the brand (Kidwell et al., 2007; Michael, 2000), raising questions about whether some franchisors are able to develop capabilities in working with franchisees that help limit free-riding, support a standardized brand, and thereby enhance franchisor performance. The symbiosis perspective describes how owning outlets in plural to franchisee-owned outlets is one way to reduce free-riding and increase standardization (Bradach and Eccles, 1989; Perryman and Combs, 2012), but it also implies that franchisors must possess certain capabilities for doing so, and the symbiosis perspective does not help explain what capabilities turnkey franchisors – who lack the symbiotic advantages of franchisor ownership – need to garner similar outcomes. The purpose of this research therefore is to take a step toward explaining how some franchise entrepreneurs develop what we call franchise management capabilities that allow them to work successfully with franchisees to enhance performance.

We drew upon alliance management capabilities research (e.g., Schilke and Goerzen, 2010; Schreiner et al., 2009) to describe the routines that franchisors develop to better work with franchisees to enhance performance. Specifically, we described franchise management capabilities as a new construct that is reflective of three franchise-context specific dimensions – i.e., knowledge-sharing routines, standard operating routines, and trust routines – that mirror dimensions of the broader alliance management capabilities construct – i.e., communication, coordination, and bonding (Schreiner et al., 2009). We also theorized that while all franchisors can gain from franchise management capabilities, plural form franchisors benefit more because these capabilities help leverage the symbiotic benefits of franchisor-owned outlets.

Consistent with our theoretical conception of franchise management capabilities, results suggest that routines involving knowledge-sharing, standard operational procedures, and trust reflect a second-order construct. While we were surprised that we did not find evidence of an overall direct relationship between franchise management capabilities and franchisor performance, we did find that these capabilities relate positively to performance among plural form franchisors. That is, as anticipated, franchise management capabilities appear important for helping plural form franchisors work with franchisees to leverage the symbiotic advantages available from having franchisor-owned outlets (e.g., Bradach, 1997; Perryman and Combs, 2012). The findings are important because they guide plural form franchisors toward the type of capability investments that best leverage their investments in outlet ownership.

While we expected plural form franchisors to benefit more from franchise management capabilities, we also expected turnkey franchisors to benefit. One reason we might not have seen a direct relationship between franchise management capabilities and franchisor performance among turnkey franchisors is that the link is less direct. Evidence at the franchisee-level suggests that elements of franchise management capabilities aid (brand) standardization (Chiou and Droge, 2015; Eser, 2012) and encourage less opportunistic free-riding (El Akremi et al., 2011; Kidwell et al., 2007). Although we did not have a measure of free-riding, per se, we did ask respondents about franchisee opportunism more generally and about the relative strength of the brand, which made it possible to run post hoc tests exploring whether the link between franchise management capabilities and franchisor performance might run indirectly through (i.e., be mediated by) these variables. As shown Table 3, Model 3, we found that the effect of franchise management capabilities on franchisor performance among turnkey franchisors is mediated by franchise management capabilities' (FMC's) negative relationship with opportunism (FMC → opportunism, $\gamma = -0.25$, $p < .05$) and positive relationship with brand reputation (FMC → brand reputation, $\gamma = 0.28$, $p < .05$), which in turn helps improve franchisor performance (opportunism → performance, $\beta = 0.17$, $p = .06$; brand reputation → performance, $\beta = 0.28$, $p < .05$). In contrast, plural form franchisors have only direct relationships (brand reputation → franchisor performance, $\beta = 0.82$, $p < .001$, and FMCs → franchisor performance, $\gamma = 0.27$, $p < .01$). Although post hoc analyses such as these should be interpreted with caution, they fit logically into and potentially advance franchising theory. That is, well-known downsides of leaning heavily on franchising (as turnkey franchisors do) are that it is difficult to control opportunistic free-riding (Kidwell et al., 2007) and there is more brand-harming variance (Michael, 2000). Franchise management capabilities appear to be an important tool for reducing these problems.

Overall, finding a direct relationship between franchise management capabilities and franchisor performance among plural form franchisors and indirect mediating relationships through opportunism and brand reputation among turnkey franchisors highlights the importance of distinguishing between these conceptually distinct ownership strategies. The results also support the idea that it is the “package nature” (Schilke and Goerzen, 2010: 1212) of franchise management capabilities that makes them relevant to performance and suggests that there are alternative strategic paths for growing new ventures that involve geographically dispersed outlets. The latter is important because prior research has struggled to describe the relationship between franchising and franchisor performance (Combs et al., 2011). The relationship appears contingent on other factors (Barthélemy, 2008), and franchise management capabilities is a new factor that helps explain how franchising can be implemented to enhance performance. Our theorizing and results have important implications for future franchising research.

6.1. Implications for future franchising research

Although franchisors with and without franchisor-ownership invest in franchise management capabilities, only plural form franchisors appear to benefit directly. Accordingly, future inquiry might benefit from investigating whether and under what conditions franchisor ownership and franchise management capabilities co-evolve. One possibility is that founders are more likely to make such investments. Lawrence and Kaufmann's (2011) exploration of franchisee associations showed that many emerge, or become cohesive, when professional managers succeed the founder(s) (often after an IPO or acquisition). Consistent with evidence that founders, in general, care about their firm and its people (Nelson, 2003), franchise founders personally know and care about their franchisees (Lawrence and Kaufmann, 2011). It might therefore be natural for them to invest in franchise management capabilities – i.e., knowledge sharing routines, standard operating routines, and trust routines – and also to invest in their own outlets. Professional managers, in contrast, are incentivized to seek growth and to minimize fixed investments (Balkin and Gomez-Mejia, 1987) such as franchisor-owned outlets (Madanoglu et al., 2011). They also might enforce standardization through threats and intimidation (Lawrence and Kaufmann, 2011). Thus, it might be fruitful to investigate whether the founder's active involvement influences investments in franchisor ownership and franchise management capabilities, and whether these are reduced after a change of control.

We identified three dimensions of franchise management capabilities based on franchise context-specific routines that are frequently seen in the franchising literature and observed how these routines parallel descriptions of alliance management capabilities found in the broader literature on alliances (i.e., Schilke and Goerzen, 2010; Schreiner et al., 2009), but these dimensions do not capture the universe of constructs that influence the franchisor-franchisee relationship (e.g., autonomy, Cochet et al., 2008; gratitude, Weaven et al., 2017). In particular, while the alliance management capabilities literature describes routines that improve the quality of partners' working relationships, the franchise literature emphasizes the role of monitoring (cf. Combs et al., 2011). Though monitoring and trust are interrelated concepts (cf. Dyer and Chu, 2003), it seems worth investigating whether some franchisors develop monitoring routines that reflect another franchise management capability dimension or, more broadly, whether there are other dimensions that are unique to the franchise context but were not considered here because they lack parallels in the broader alliance management capabilities literature.

The results also suggest two alternative strategic paths for entrepreneurs with business models that involve geographically dispersed outlets. In one path, plural form franchisors grow through a combination of franchised and owned outlets and use franchise management capabilities to leverage the interface between the two. In the other path, turnkey franchisors do not own outlets but enhance performance by using franchise management capabilities to reduce opportunistic free-riding and strengthen the brand, which then leads to better performance. Not only do the results point to the importance of distinguishing between these alternatives in future inquiry, they raise questions about when it is better for an entrepreneur to select one path over the other. For example, the symbiosis perspective suggests that one benefit of franchisor ownership is that it gives franchisors information and trained personnel that help franchisors increase standardization (Bradach, 1997), so perhaps the combination of franchise management capabilities and franchisor ownership is best when standardization is critical – e.g., when customers are mobile (Brickley and Dark, 1987) and depend on brand advertising (Lafontaine and Shaw, 2005) (e.g., fast food), but that the combination of franchise management capabilities and turnkey franchising is more appropriate when local adaptation is important (e.g., real estate).

Finally, our study suggests that franchise management capabilities help franchisor performance by improving franchisors' relationships with franchisees. One logical implication is that those franchisors with more franchisees will derive greater benefits from their investments in franchise management capabilities. On the other hand, developing and maintaining such capabilities might become more difficult as the number of franchisees grow. Thus, there appears to be merit in investigating how the franchisor's size, and perhaps other factors, might moderate the relationship between franchise management capabilities and franchisor performance.

6.2. Implications of limitations for future inquiry

As is the case with all research, our study has limitations that have implications for future research. First, our study is cross-sectional, which reinforces the need to develop and test theory about the co-evolution of franchisor ownership strategies and franchise management capabilities. Second, while our findings pertain generally to whether firms franchise or own outlets, they do not deal with different ways franchising is implemented, such as through multi-outlet or master franchising. Although we did not find any evidence that multi-outlet franchising impacts the relationship between franchise management capabilities and franchisor performance, future inquiry might find other differences in the way that franchise management capabilities influence the behavior of single- versus multi-outlet franchisees. Third, while two of our measures asked about the relationship between the franchisor and franchisees, one – i.e., standard operating routines – refers to the employees who actually do the work (i.e., the employees of either the franchisee or franchisor, depending on who owns the outlet), which might have created confusion among respondents. Our experience administering surveys over the phone and the scale's reliability (CR = 0.75) give us confidence that any such confusion had a minimal effect, but future research might benefit from adopting and comparing alternative measures of standard operating routines. Fourth, a challenge that plagues franchising research and makes it difficult to understand how franchising affects performance is that most franchise chains are privately held (Combs et al., 2011). Consequently, we used a subjective survey scale to measure performance, which relies on informed respondents' ability to properly assess their performance relative to competitors. Future research might find indirect ways to measure franchisor performance or investigate these relationships among the sub-set of public firms that do (or could) franchise (e.g., Madanoglu et al., 2011).

7. Conclusion

Given that franchising exposes the brand to franchisee free-riding, it seems likely that some franchisors develop capabilities that help them negate this downside. Investing in franchisor-owned outlets is one known way to reduce free-riding and increase standardization, but the anticipated symbiotic advantages of franchisor ownership presumes that franchisors have capabilities that help leverage such investments. Drawing on parallels in the alliance management capabilities literature, we described three franchise-context specific routines and provided evidence that they reflect a second-order franchise management capability construct that has important implications for franchisor performance. Further, the performance effects of these capabilities differ depending on the franchisor's ownership strategy, suggesting that the distinction between plural form and turnkey is an important consideration. Our hope is that this research offers a small step toward describing the capabilities that entrepreneurs who discover retail and service opportunities can develop in working with their local franchisee-entrepreneur partners.

Appendix A

Table I
Two stage (2SLS) analysis of franchisor performance^a.

	Model 1 franchisor ownership (continuous)	Model 2 franchisor ownership (0 = turnkey; 1 = plural)
First stage models and robustness checks		
Brand reputation	-0.007 (0.007)	0.023 (0.030)
Franchisee opportunism	-0.003 (0.006)	-0.039 (0.024)
Chain size	0.025 [†] (0.013)	0.133* (0.057)
Firm age	0.001* (4.36E-04)	0.005** (0.002)
Industry adjusted royalty rate	-0.115 (0.140)	0.449 (0.587)
Industry dummies	Included	Included
Franchise managerial capabilities (FMC)	0.005 (0.008)	-0.032 (0.035)
Instrumental variables ^b		
Industry adjusted % of franchised outlets	-0.633*** (0.036)	-0.831*** (0.152)
Corporate staff per outlet (log)	0.086*** (0.018)	0.232** (0.074)
Instrument relevance: F-statistics	215.036***	27.843***
Wu-Hausman endogeneity F-test (<i>p</i> = value)	0.031 (0.859)	0.535 (0.465)
Durbin-Wu-Hausman endogeneity χ^2 -test (<i>p</i> = value)	0.034 (0.854)	0.573 (0.449)
Sargan statistics	0.326 (0.568)	0.199 (0.656)
R-squared	0.729	0.341

^a N = 233. Standard errors are in parentheses (two-tailed tests).

^b For instruments, we used industry-adjusted percentage of franchised outlets over total outlets as the instrument because a firm's ownership strategy is likely to be related to exogenous trends of its focal industry. Specifically, we measured industry-adjusted percentage of franchised outlets by calculating the difference between a focal chain's percentage of franchised outlets and the average percentage of franchised outlets of its focal industry. We also used the size of corporate staff per outlet as an additional instrument because chains with larger corporate staffs logically support higher percentage of company owned outlets (cf. Bradach, 1997). We calculate the size of corporate staff per outlet by first dividing the size of a chain's corporate staff by its total number of outlets and taking the log transformation.

*** *p* < .001.

** *p* < .01.

* *p* < .05.

[†] *p* < .1.

Table II
Two stage (2SLS) analysis of franchisor performance^a.

	Model 1 franchise managerial capabilities (FMC)	Model 2 franchise managerial capabilities (FMC)
First stage models and robustness checks		
Brand reputation	0.164** (0.054)	0.164** (0.054)
Franchisee opportunism	-0.199*** (0.043)	-0.203*** (0.043)
Chain size	0.026 (0.085)	0.010 (0.084)
Firm age	0.006 [†] (0.003)	0.006 [†] (0.003)
Industry adjusted royalty rate	1.257 (1.556)	1.124 (1.559)
Industry dummies	Included	Included
Franchise ownership (continuous)	0.328 (0.294)	
Franchisor ownership (0 = turnkey; 1 = plural)		-1.4E-04 (0.107)
Instrumental variables ^b		
Franchisee selection based on industry experience	-0.091* (0.042)	-0.085* (0.042)
Direct financial assistance from franchisor	0.330** (0.102)	0.323** (0.102)
Minimal conflict with franchisees	0.234*** (0.038)	0.237*** (0.038)
Instrument relevance: F-statistics	19.366***	19.121***
Wu-Hausman endogeneity F-test (<i>p</i> = value)	0.063 (0.803)	0.107 (0.744)
Durbin-Wu-Hausman endogeneity χ^2 -test (<i>p</i> = value)	0.068 (0.795)	0.116 (0.734)
Sargan statistics	1.097 (0.578)	0.764 (0.682)
R-squared	0.484	0.480

^a N = 207. Standard errors are in parentheses (two-tailed tests).

^b We used franchisee selection based on industry experience as the instrument because firms that recruit more experienced franchisees logically need to rely less on FMCs to manage franchisees (Jambulingam and Nevin, 1999). Specifically, we measured franchisee selection based on industry experience with the survey item: "A potential franchisee's previous industry experience is an important selection criterion." We also used an indicator variable depicting whether the franchisor offers direct financial assistance as an instrument because firms that provide financial assistance for their franchised outlets likely have more resources to develop FMCs. We calculate direct financial assistance from the franchisor by using the Bond's (2006) questionnaire item number 32 (Yes; No and Direct/Indirect) – is Financial Assistance provided. Finally, we used a survey item about minimal conflicts with franchisees: "Our relationship with franchisees allows us to implement system-wide changes with minimal conflict", as the third instrument because a conflict-free relationship with franchisees should make it easier to develop and enhance FMCs (e.g., El Akremi et al., 2011).

*** *p* < .001.

** *p* < .01.

* *p* < .05.

[†] *p* < .1.

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