

DIFFERENTIAL EFFECTS OF PLURAL OWNERSHIP AND GOVERNANCE MECHANISMS IN LIMITING SHIRKERS AND FREE RIDERS

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Abstract

Using evidence from paired franchisor-franchisee dyads, this study identifies how plural formed ownership mechanisms curb the risk of shirking and free riding in franchise systems. These risks have damaging effects on the invested capital of franchisee entrepreneurs. Although shirking and free riding produce a major source of uncertainty for the franchisee entrepreneur it can be limited by plural formed governance dimensions. These mechanisms have different effects based on unit status, i.e., company owned-units versus franchisee-units. We tested our model using a paired-dyadic data approach to mitigate the problem of shared-method variance among the psychometric measures. Results support the contention that competition limits shirking and free riding across inter-firm relationships, but did not support the hypothesized role of relational mechanisms in lowering potential shirking and free riding. Also, endogeneity test uncovered that dealer's self-selected into either one of the plural form contracts. Drawing on the economics, marketing and management literatures, this study presents a basis for further investigation by placing international franchising entrepreneurship into a broader context of transactional and relational governance.

Keywords: Free Riding, Shirking, Transactional and Relational Governance Mechanisms, Franchising, Plural Form, Paired Dyadic Data, Endogeneity Test

1. INTRODUCTION

Franchising dominates the service industry. That is, the plural formed franchising systems apply both company owned units and franchisees to represent the exact same concept in the market. Although, franchise systems depend on entrepreneurial drive of the franchisees, these contracts has also been associated with incentives to free ride and the internal managers to shirk (Michael, 2002). Therefore the entrepreneur that invest in one particular franchise system is exposed to the potential risk of free riding and shirking behavior from the other units representing the same system. Franchisee entrepreneurs therefore depend on the power of the plural system to control these risks (Pfeffer and Salancik, 1978). Franchising as an organizational form is a relationship of mutual benefit as well as dependence, grounded in an ongoing series of transactions and relationships. Franchising can be seen as an entrepreneurial growth strategy (Ketchen, Short and Combs, 2011) where the franchisor rapidly can expand geographically by selling territorial rights to franchisees, who pay fees as well as royalties generally based on percentages of sales. In the presented context of investigation the multinational

oil company transformed the concept from a traditional gas station to a convenience store and fast food outlet. Both the corporate entrepreneurship and the entrepreneurial drive from each franchisee were needed to learn how to handle new products within in a new concept and business model. Franchisees can reap the benefits of a proven business model and partner with the franchisor in operations, marketing and brand development. However, the common benefits found in franchising are tempered by the fact that franchisor and franchisee interests may conflict (Michael and Combs, 2008), thus leading to potential negatives for both parties. Both franchisors and each single franchise entrepreneur run the risk of brand damage through the opportunistic actions of the other franchisees and managers in the company owned units.

Participants in franchise systems -- franchisors and franchisees -- derive value from their interactions with each other, using elements of contractual as well as relational exchange (Davies, et al., 2011). This study focuses on a key element of this symbiotic relationship: How franchisors use transactional and relational governance to maintain brand quality in plural arrangements among managers of both company-owned units and

franchisee entrepreneurs within a retail system. Governance structures such as incentives, monitoring devices, contracts, norms and interpersonal trust are among the safeguards set up between principals and agents to reduce opportunistic behavior as a relationship between two parties is established and progresses. Despite such mechanisms, opportunistic behavior persists (Jap, 2001; Jap and Anderson, 2003), and franchisors are often unable to anticipate and safeguard against such behavior on the part of franchisees (Cochet and Garg, 2008) and their own company managers.

The interdependence of franchisor and franchisee creates the need for an organizational arrangement, the plural-formed franchise system, which consists of both corporate-owned units and franchised units (Bradach, 1997; Michael, 2000; Kidwell and Nygaard, 2011; Cliquet and Penard, 2012; Perryman and Combs, 2012). The international expansion and success of such systems strongly depends on strategies that safeguard brand names against channel member shirking and free riding, forms of withholding effort that can be defined as an undersupply of quality in interfirm relationships (Wathne and Heide, 2000). Although researchers have made an intensive effort on how to build associations related to a brand (Zablah, Brown, and Donthu, 2010; Sriram and Kadiyali, 2009; Homburg, Klarmann, and Schmitt, 2010; Kapoor and Heslop, 2009; Geuens, Weijters, and Wulf, 2009), fewer studies focus on how to protect the brand against the behavioural risk of opportunism after it is launched.

This study makes the following contributions: 1) Using paired-dyadic survey data, it extends research in transaction cost theory and opportunistic behavior from buyer-seller relationships (e.g., Jap, 2001; Jap and Anderson, 2003) and alliances (e.g., Berkovitz, Jap and Nickerson, 2006) to brand protection in plural formed franchise systems thus contributing to the study of relationships at the organization level, 2) It examines use of transactional and relational mechanisms to curb potential shirking and free riding, thus expanding entrepreneurship research to brand-related issues, and 3) It identifies governance mechanisms that have differential effects on withholding effort in plural forms by examining both corporate units as well as franchised entrepreneurs, extending previous research that focused on franchisee responses to governance mechanisms (e.g., Kidwell, Nygaard and Silkoset, 2007). Also, it tests the endogeneity effect of governance dimension on dealer's self-selection of plural contractual choice.

2. CONCEPTUAL FRAMEWORK

Franchise systems generally own and centrally operate some units (*company owned units*), while others are franchised (*franchise units*) through independent entrepreneurs (franchisees) (Perryman and Combs, 2011). Generally, the company owned units report in a hierarchical structure to corporate managers whereas the franchise units are owned and operated by individual entrepreneurs but monitored to varying degrees by corporate area managers. An entrepreneur that invests in a franchisee contract also takes a behavioral risk of

opportunism. Thus, the study of such plural systems provides the ability to contrast the impact of corporate governance mechanisms to control opportunism on units that are "members" of the corporation with units that tend to be more entrepreneurial, as noted in a recent study of human resource practices in a plural franchise system (Brand and Croonen, 2010).

The plural system reflects both make and buy alternatives (Heide, 2003; Makadok and Coff, 2009), described by transaction cost theory as inter-organizational structures designed to safeguard transactions against opportunism, such as shirking and free riding (Williamson, 1985). Transaction cost theory states that markets always create the most efficient incentives. Only when the franchisor invests in i.e. brands, it has to safeguard its specific assets against opportunistic behavior (Williamson, 1985). The franchise entrepreneur invests in unique assets as well. The franchisee often has to undergo a course program to learn how to operate the concept and technology. Furthermore, the franchisee entrepreneur has to invest both in site specific assets, physical specific assets and human specific assets. This unique capital has little or no value outside the franchise system. Thus the single franchisee entrepreneur is exposed to "the horizon of opportunism" from the other units. Transaction cost associated with the asset specificity of the brand is created by incentive conflicts with the other company owned units and franchisees.

Although we point at franchisees investments in specific assets, that drive potential opportunism, we also apply agency theory to further understand the franchise system in an information asymmetry context. Like Anderson and Oliver (1987) we combine TCE and agency theory as complementary perspectives that add explanatory power into the investigation of franchise systems (Bergen et al., 1992). There is an agency relationship if a franchisor (principal) gives an agent (franchisee or company owned unit manager) the rights to represent the franchisor brand and concept in the market (Bergen et al., 1992). In other words, the franchisee and the manager of a company owned unit is agents representing the interests of the franchisor. Franchising as an agency problem has been seen as an information asymmetry problem in combination with opportunism (Eisenhardt, 1989). In a franchise system, the franchisor can choose between an outcome based franchisee contracts or a behavior based employee manager contract (company owned units). This investigation captures both alternatives proposed in agency theory (Bergen et al., 1992).

Following the logic of transaction cost theory and agency theory we examine the extent to which governance dimensions (centralized decision making, formalization) and relational governance mechanisms (communication) (Van de Ven, 1976) and the business environment (intra- and inter-brand competition) affect opportunism (Achrol et al., 1983), given the ownership structure, i.e., company owned (corporate) units or franchised units. Transaction cost theory and agency theory is viable theories to study franchisor-dealer interactions, brand representation and opportunistic behavior as (Hussain et al., 2012; Hennart, 2010).

Lowering quality standards is opportunistic behavior that jeopardizes brand strategy and

produces a risk to franchisee entrepreneurs. Because franchisors delegate the rights to represent a brand to either an internal employee manager or franchisee entrepreneur retail unit, the quality reputation of the brand is at stake. When one dealer cheats on quality, all dealers operating under the brand are affected. Examples of such shirking and free riding include stale hot dogs, dirty restrooms, inferior repair service and other shoddy offerings (Png and Reitman, 1995). Motivated by short-term interests, lowering standards in this manner hurts perceived brand quality across units and the “intangible, overall feeling about a brand” (Aaker, 1996, p.86). Thus, through these acts of shirking and free riding, brand value and the overall franchise organization are harmed. Consequently, these problems jeopardize entrepreneurial investments in franchisee units.

In placing its reputation in the hands of dealers, the franchisor faces an important strategic problem of collective behavior between a franchisor and its plural formed retail network. This raises the issue of safeguarding brand name capital from degradation by the individual dealers. Dealers operating under the brand may supply lower quality associated with their representation (Wathne and Heide, 2000), thus franchisors must build constructive inter-firm alliances and effective internal mechanisms to protect brand name value and reputation from degradation (Davidson, 1982). As detailed later, we predict that the effects of vertical governance designed to control shirking and free riding will in some cases vary depending on the ownership status of the individual unit.

Opportunistic behavior in interorganizational relationships and plural forms

This study extends previous theoretical and empirical work regarding opportunistic behavior in buyer-supplier relationships (Jap, 2001; Jap and Anderson, 2003; Jap and Anderson, 2007) and examines antecedents of opportunistic behavior in the context of a brand marketing channel in a plural formed system. Previous research on interorganizational relationships has found that specialized investments result in joint competitive advantages among buyers and sellers, but these advantages, which have positive economic outcomes, decay over time due to suspicions of opportunistic behavior in the relationship (Jap, 2001).

Michael (2000) applied the concept to franchising; arguing that running company owned units provides the franchisor with the ability to measure relative performance of franchisees and a wealth of operational knowledge, allowing for franchisor bargaining power with the franchisee in part to control free riding in the relationship. Using a transaction cost framework, Heide (2003) applied plural governance to examine why a firm would use both market contracting and vertical integration for basically the same transaction. He found that plural governance can be employed to deal with opportunistic behaviors that result from information asymmetry between buyers and suppliers. Such a plural form arrangement strikes a balance between a desire to control adjacent businesses and a need to be strategically flexible (Harrigan, 1984). Vertical integration, licensing, long-term contracts, joint

ventures, global coalitions, dynamic networks and other types of alliances can all be examples of plural forms (Bradach and Eccles, 1989). Furthermore Perryman and Combs (2012) support a symbiotic view of plural forms. Theory of plural forms proposes that it is efficient to use both company owned units and external units (Parmigiani, 2007). Here we develop an empirical model based on the costs of withholding efforts in plural formed systems (Kidwell and Nygaard, 2011).

Effects of withholding effort and damage to brand reputation

Opportunistic behavior among franchisees can include releasing proprietary information about the franchise, not making royalty payments, free riding on the brand and not complying with quality standards (Combs, Ketchen, Shook and Short, 2011; El Akremi, Mignonac, and Perrigot, 2011). The brand-owner franchisor often invests heavily in marketing, promotion and communication to build the reputation of quality associated with the brand. These unique investments have limited alternative value in the market (Williamson, 1999). Whereas the franchise unit may tend to undersupply quality profile efforts, the company owned unit manager has no economic incentive to avoid supplying quality. The company owned unit manager may instead reduce efforts in general.

Failure to supply quality and/or engage in brand-building efforts by franchisee- and/or company owned-unit managers are examples of withholding effort (shirking or free riding) on job-related tasks (Kidwell and Bennett, 1993). A company owned unit manager's failure to provide full effort is shirking, which occurs when employee agents who lack an ownership stake lower effort levels because their efforts are not linked to their incomes (Kidwell and Nygaard, 2011). A franchisee's lowering of service or product quality to cut costs and obtain the nondivisible benefits of brand identity without bearing a proportional share of the costs is free riding (Albanese and Van Fleet, 1985) on the efforts of other units as well as the franchisor. In theory, the costs of shirking or free riding do not necessarily reduce a single retail unit's short term cash flow. Instead, the unit may increase profits by reducing his/her share of the costs associated with brand representation. Caves and Murphy (1976, p.577) state that “A franchisee who reduces the quality of the good or service he offers for a given price might increase his own profits, yet by disappointing buyers' expectations he could reduce by a greater amount the net returns to the common intangible goodwill asset - maintained by the franchisor and used jointly by his other franchisees.”

Conflicts of interest between the owner of the brand name (franchisor) and each franchised unit produce the costs of opportunistic behavior (Rubin, 1978). Franchisees have an incentive to free ride on the brand by lowering quality thus depreciating brand reputation and the franchisor's future profits (Klein, 1980). This conflict of interest might vary with the ownership structure in the plural franchise system (Brickley, Dark and Weisbach, 1991). Thus, the way the company chooses to organize its corporate units and its franchised units might affect

these costs. For example, Bradach (1998) indicated eight out of 10 franchise systems in the restaurant industry combined company owned units and franchise units.

Accordingly, due to these connections, opportunistic behavior by single retail units can adversely influence the business of all units (i.e. corporate, franchisees, licensed companies, etc.) under the same brand name. Anomalies may include service equipment in poor condition, untrained or impolite staff, etc. Whereas the brand company invests in reputation, a retail unit has incentives to ride free on the brand reputation if the negative effects of inferior service and product quality are not borne directly by the dealer. Thus, all other dealers in the network must bear the negative consequences of withholding effort.

Also, dealers make choices which generate comparative advantages. These choices are not random, but are based on expectations of how the alternatives would affect the company's future performance (Hamilton and Nickerson, 2003 p. 51). By treating contractual choices as ex-ante decisions, we investigate whether dealers were self-selected into either one of the plural form contracts. To test this assumption, the study implements a two-step procedure by Maddala (1983). First, the retail units might have made an ex-ante choice of ownership based on how the franchisor manages the company owned and the franchise units (Bradach, 1997). This

means that ownership type might be endogenous with the dimensions centralization, formalization and communication in the model. Accordingly, it analyses whether the governance factors affects the retail unit's contractual choice. Second, the retail units might have made an ex-ante choice of ownership based on their potential to withhold efforts. This means that ownership type might be endogenous with withholding efforts. These two situations will be analyzed and discussed more in detail in the result section.

3. HYPOTHESIS DEVELOPMENT

Figure 1 provides an overview of the research model, illustrating the multi-informant research strategy and the variables/relationships of interest in the study. The make/buy (company owned/franchisee) element of the model locates it in a plural-form system. In summary, transactional governance mechanisms, i.e., centralization and formalization, and relational governance mechanisms, i.e., communication, are predicted to be antecedents of the potential for opportunistic behavior in the company owned and the franchised units. Intra and inter-brand competition reflect conditions in the channel environment proposed to affect withholding effort.

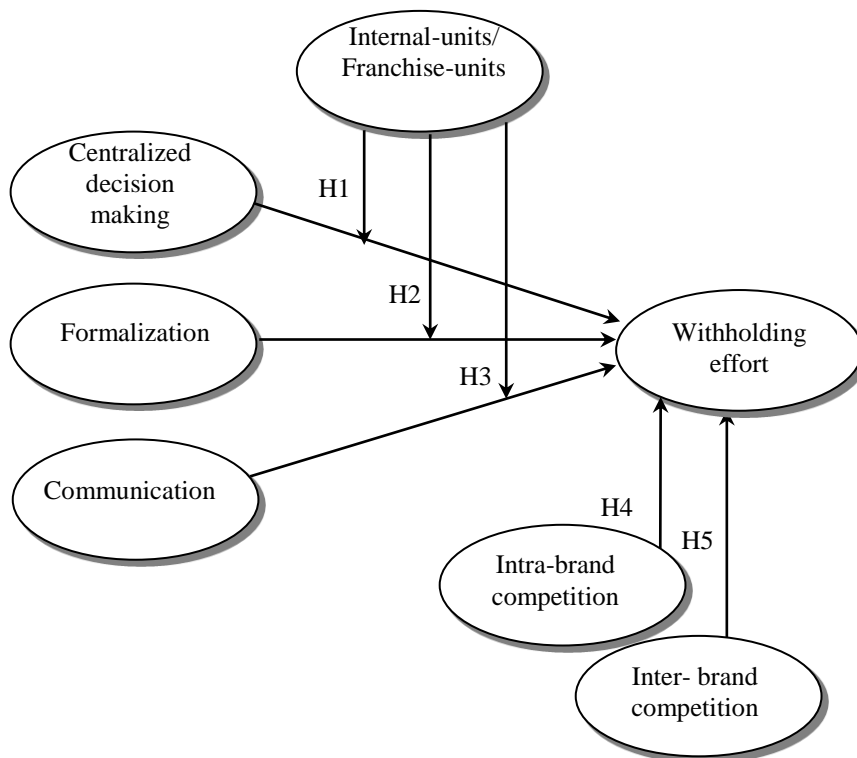


Figure 1. Antecedents of withholding effort in a plural-form franchise system

Transactional Mechanisms: Centralization and Formalization

The use of clear mechanisms to control opportunistic behavior on the part of organizational partners' is a general assumption when transaction

cost theory is applied to the study of relationships between firms (Stump and Heide, 1996). Therefore, vertical governance through centralization and formalization is seen as one way to address the problem of withholding effort. In the franchising context, this posture is indicated by the franchisor's

motivation to safeguard its brand capital by increased vertical control of transactions (Williamson, 1985); key means to achieve that end is central control of a firm's channel decisions and formal rules that guide behavior of the agents.

According to transaction cost theory, the implementation of more centralized control decreases the players' conflict of interests. Although it is possible that company owned units may have more knowledge about local markets and thus react negatively to centralized decisions, we argue that looser connections regarding decision making tend to increase the incentives for managerial shirking in company owned units. Centralized decision making leads to consistency between the strategic and operational decision levels and to convergent goals between the principal and agent (Arrow, 1974; Williamson, 1975), in this case, franchisor and manager/employee. The owner of the brand responds to potential costs of shirking, and centralized interfirm control leads to lower levels of shirking (Ruekert, Walker and Roering, 1985). Following the argument from transaction cost theory, centralization increases the ability to coordinate efficiently, and the potential for safeguarding long-term interests in the market. Centralized decisions reduce role ambiguity and conflicts for the company owned units (Nygaard and Dahlstrom, 2002). As a result, increased centralization is a response to anticipated costs of shirking in the employee manager/owner relationship (Alchian and Demsetz, 1972). Therefore, centralization negatively affects shirking under such circumstances.

Unlike company owned units, franchisee dealers are entrepreneurs that benefit from local market knowledge, managerial talent and entrepreneurial drive. Due to these factors, franchisees, unlike employee managers, may not favor centralized franchisor decisions. Rather, research findings indicate centralized interfirm decisions might constraint entrepreneurial spirit and managerial drive among franchisees (Kidwell et al., 2007). Consequently, although centralized decision making may hamper shirking among company owned units, it may encourage free riding among franchisee units.

H1: *The higher the level of centralization in channel decisions, a) the lower the potential for withholding effort among company owned units, and b) the higher the potential for withholding effort among franchisee units.*

Formal rules and regulations describe dyadic expectations for the purpose of restricting potential withholding of effort the franchisor can promulgate rules, restrictions, standards and operating procedures designed to protect the quality image reflected in the brand. Although formalization potentially creates stability and predictability and reduces uncertainty, it can also suppress self-regulation and autonomy among the company owned units, thus increasing the likelihood of shirking among employee managers in these units. Company owned units are not outcome dependent agents, so increased formalization does not decrease their risk (Bergen, Dutta and Walker, 1992). Formalization, through dysfunctional means-ends inversion and goal displacement often seen in

bureaucratic organizations (Merton, 1957), might instead hamper individual initiative and innovative behavior. The resulting reduced initiative can lead to greater frustration among the employee managers who then disregard company policies and procedures. Consequently, increased formalization may lead to an increase in shirking among company owned units (John, 1984).

In contrast to the company owned units, formalization has the potential to clarify the interaction between the franchisee unit and the franchisor company. Although formal arrangements are often incomplete and misaligned over time, they also create stability and predictability in the relationship. Aaker (2004) consistently suggests that standardization of a service operation is an effective approach to achieving reliable quality and brand equity. As a result, formalization may provide a stable framework, making it easier for the parties to make plans and reduce uncertainty (Kidwell et al., 2007). Those franchisees who are more risk averse appreciate increased formalization resulting in reduced uncertainty (Bergen et al., 1992), thus one might assume that they welcome formalization of the relationship because one beneficial consequence for the franchisee entrepreneur is lower uncertainty (Thompson, 1967). Formalization therefore reduces the potential for conflicts of interest and free riding among franchisees.

H2: *The higher the level of formalization, a) the higher the potential for withholding effort among company owned units, and, b) the lower the potential for withholding effort among franchisee units.*

Relational Mechanisms: Communication

Previous research indicates that relational mechanisms including goal congruence, interpersonal trust and bilateral investments, can lessen detrimental effects of cheating among buyers and suppliers (Jap, 2001); when withholding of effort reaches higher levels, interpersonal trust becomes less effective but goal congruence is then a more powerful safeguard (Jap and Anderson, 2003). Berkovitz, Jap and Nickerson (2006) found that cooperative exchange norms play a role in performance relationships in strategic research and development alliances in those deviations between actual and expected levels of normative development affect exchange performance in the relationship, potentially leading to increased levels of shirking and free riding. In a study of distribution channel resellers regarding cooperative interorganizational relationships with manufacturers, Jap and Anderson (2007) found that goal congruence and information exchange norms fade after the build-up stage of the relationship life cycle, yet relationship harmony and reseller trust in the manufacturer maintain into the mature stage of the life cycle. In a logistics context, Fugate, Stank and Mentzer (2009) found that a shared interpretation of knowledge among operational personnel and an enhanced knowledge management process were positively related to operational and firm performance. These studies indicate the potential impact of relational mechanisms on opportunistic behavior and performance outcomes in interorganizational relationships.

The level of communication between two parties is a dimension that can reflect a relational mechanism that has the potential to limit opportunistic behavior and enhance cooperation (cf., Axelrod, 1984; Dant and Nasr, 1998). A high degree of communication may include the dealer unit more closely in planning and coordinating processes of the franchisor company. We propose that this effect will occur for both employee managers of company owned units and franchisees in franchised units. Closer cooperation between parties means information is more accessible to both franchisor and dealer. The magnitude and scope of the communication will thus increase inter-firm adaptation. Moreover, communication should help align interests of all parties. Communication initiated by the franchisor redirects franchisee dealers' and employee managers' motivation toward best serving the interests of the owner of the brand name.

The marketing channel literature portrays interaction as autonomous and voluntary cooperation by both parties in the dyad (Dwyer and Welsh, 1985). Acceptance of the right to make decisions regarding the collaboration improves transaction climate and reduces the level of unit potential for withholding effort, that is, the two parties can interact to combine resources in a way that creates synergy and reduces the need for bargaining and control. Thus, we propose that communication increases the openness between the parties and at the same time it decreases withholding effort on the part of the dealer, both company owned and franchisee.

H3: *The higher the degree of communication, a) the lower the potential for withholding effort among company owned units, and b) the lower the potential for withholding effort among franchisee units.*

Competitive environment

The competitive environment is also expected to influence the potential for withholding effort (Nygaard and Myrtevit, 2000), thus its potential effects should be considered in the franchisor-franchisee relationship. When brand competition is weak, retail units reduce brand building efforts because of the lower degree of competitive pressure. Low pressure may also decrease motivation to attend to obligations and efforts aimed at maintaining quality. Furthermore, less market competition obstructs transparency of information because the franchisor cannot easily compare retail units. Less competition makes control costly and renders the franchisor more vulnerable to withholding effort. As a result, small number market situations encourage shirking and free riding (Williamson, 1985).

Bradach (1997) emphasized the importance of competition between franchise and company owned units in the plural franchise system. When intra-brand (among retail units operating under the same brand) or inter-brand (between units operating with different brands) competition increases, the unit -- faced with potential risk of the unit's financial failure -- will be forced to avoid withholding effort (Machlup, 1967). Thus, as competition within and between brands intensifies, retail units will increase

the quality efforts signaled by brand values, lessening the potential for withholding effort.

H4: *The higher the level of intra-brand competition, a) the lower the potential for withholding effort among company owned units, and b) the lower the potential for withholding effort among franchisee units.*

H5: *The higher the level of inter-brand competition, a) the lower the potential for withholding effort among company owned units, and b) the lower the potential for withholding effort among franchisee units.*

4. RESEARCH DESIGN

Sampling

The threat of random irrelevancies of causalities among constructs was managed by controlling extraneous sources of variation (Cook and Campbell (1979, p. 44). The theoretical relationships were therefore tested in a homogenous setting. We selected gasoline stations with convenience stores as the sampling frame in this study. These stations had the same business format, products and service offerings as well as a similar technical interrelationship with the franchisor (payment system, IT interface system, logistics/storage systems etc.). Consequently, we sought to keep third variables as constant as possible even though the set of company owned units reported through the corporate hierarchy of an oil company whereas the franchised units were outside the corporate system. Interorganizational research has previously used oil companies as an empirical research setting (John, 1984; Png and Reitman, 1995; Nygaard and Dahlström, 2002; Shepard, 1993).

The first step was to collect data from the dealers. The plural-formed oil company had 520 gasoline stations in the market. The survey included the 320 gas stations that included convenience stores with a standardized operation agreement with the company regulating bilateral exchange. After contacting all of these gas stations, we received data from 192 of the dealers, a 60 percent response rate. A priori, we postulated that the different ownership relationships between the company and the retail units affect governance within the firm. Based on this, the initial sample consisted of company owned units, i.e., company-owned units, and franchisee units, i.e., franchisee owned and operated units. The company owned units returned 128 responses whereas the franchisee unit sample consisted of 64 respondents.

Paired dyadic data approach

Theoretically, the interfirm transaction is the level of analysis (Williamson, 1985, p. 41). Thus, the theoretical model required dyadic data, and a multi-informant strategy was instrumental to address the theoretical concepts in the model. Therefore, we sent a second round of questionnaires to sales area managers in the company. Each of the sales area managers serves a group of convenience store/gas stations in the market. We randomly selected retail units from the two groups of dealers who had answered the questionnaires in the first round, i.e. the company-owned stations (company owned-units)

and the franchisee stations (franchisee-units). To ensure variation in the independent variables we chose a stratified random sampling design (Judd, Smith and Kidder, 1991). Consequently, we increased the proportion of company owned-unit (employee-managed) stations in the final dyadic sample. We asked sales area managers to sequentially fill out questionnaires referring *specifically* to retail units operating in their respective areas. We obtained 72 usable questionnaires from the sales area managers in the franchisor company. Consequently, we linked 144 respondents (72 sales area manager responses and 72 retail unit manager responses) into true-paired dyads; 58.3 percent of the respondents represent company owned units, and 41.6 percent represent franchisee units.

Our paired dyadic data approach represented a multi-informant strategy to the structural analyses. The sales area managers reported governance dimensions (centralization, formalization, and communication) while managers (franchisees or employees; both identified as dealers in the appendix of survey items) reported potential for withholding effort, business environment and ownership structure. Because of the novel nature of the study, previous research was unable to guide our attempt to build "unit potential for withholding effort" as a construct in this research setting; previous measures of withholding effort used in buyer-seller relationships (e.g., Jap and Anderson, 2003) were inappropriate. To investigate the issue, we organized an expert group consisting of one employee dealer (company owned unit), one franchisee dealer (franchisee unit), one sales area manager from the company, and one logistics director. Discussions with the expert group produced valuable insights for initial design and measurement models.

After designing the scales, we conducted a qualitative pilot survey using interviews with representative respondents. When a question did not generate variation or answers indicated the informant did not understand the question, we talked with the respondent and returned to the expert group with representatives from the company for suggestions on how to improve face validity of the measurement model.

We conducted a pilot test and went back to an expert group with the results in order to ensure face validity of all constructs. An independent-samples *t*-test analysis of early and late responses did not indicate any response bias. All of the items used in the final model are presented in the appendix.

Dependent variable: Unit potential for withholding effort

Unit potential for withholding effort was measured with a four-item scale that reflects the unit manager's opinion regarding the quality restrictions in the contract with the franchisor. This strategy was undertaken because we anticipated that the dealer would not directly admit or report that s/he broke the quality restrictions. Retail managers were asked to what extent the following sentences gave an erroneous or correct description: 1) It is totally unnecessary to control the way customer service is done at our station, 2) The company restriction to

wear uniforms is necessary, 3) The company restrictions to keep the station clean and tidy are necessary and relevant to us and our station, 4) It is no problem to keep the station perfectly clean even when there are a lot of customers. The latter three items were reverse scored providing a measure of unit potential for withholding effort to occur.

Possible behaviors linked to the withholding effort items entail costs due to degradation of the brand name caused by inferior products or service quality produced by single retail units in the market. The items measure how much the dealer is dedicated to the standard quality signaled by the brand name. For example, dealers who refuse to wear uniforms take opportunistic advantage of other dealers' efforts to build a brand profile in the market. Likewise, dealers who do not follow cleaning instructions or prefer to boost sales rather than maintain cleanliness in the station take advantage of the quality efforts of other dealers operating under the brand name. The dealer, company owned or franchise, must ensure quality in all station activities that normally signal quality to the customers. The question, therefore, is whether the dealer informs his/her employees about quality standards and the importance of such standards. We assumed that if an employee at a gas station were uninformed about quality standards established by the brand-owning company, s/he was unable to maintain brand standards and thus there was higher potential for withholding effort. Other parties in the distribution system must bear the losses caused by such withholding of effort because the focal dealer was not properly engaged in quality management. The Cronbach Alpha for unit potential for withholding effort in our sample was 0.7.

Independent Variables

Centralized decision making: The definition of centralization of interfirm decisions is the perceived level of asymmetrical company decisions and implementation associated with the relation between the brand owner company (franchisor) and the single franchise unit (Van de Ven and Ferry, 1979). Centralization is the hierarchical governance structure that manages the relationship. Several other studies have operationalized the concept (i.e. Dwyer, 1995). The operationalization of the theoretical concept benefits from these studies and the pretest interviews with dealers and company-managers. Because we had a setting where the power relationship was highly asymmetrical, the five items focus on how the franchisor influenced company owned and franchisee dealers. The construct of centralization reflected the need to receive permission from the franchisor company and the freedom of the dealer to make autonomous decisions regarding retail activities. The Cronbach Alpha for centralization was 0.7.

Formalization: This study defines the concept of formalization as the perceived degree to which fixed policies, rules, operating procedures and programmability influence the interorganizational exchange. The operationalization followed the guidelines provided by previous research (Dwyer, 1995) as well as pre-test interviews. The construct of formalization reflected the programmability and the level of standardized procedures of deliveries, the

formalized expected distribution of rules in the relationship as well as the level of formalization of interorganizational communication. The Cronbach Alpha for the four formalization items was 0.7.

Communication: The concept of communication can be defined as vertical flows of activities, resources and information from the franchisor company to the dealer (Van de Ven, 1976). Again, because we investigated a franchisor-dealer relationship, the operationalization indicates the magnitude and scope of assistance, service and programs offered by the brand name owner (franchisor). These activities contain both constructive contacts between the parties and communication between the parties so as to increase the competitiveness of the dealers. We have measured vertical communication through perceptions of joint activities and programs, and assistance systems developed to help realize the exchange between the parties in the distribution system. Previous research guided our operationalization of the concept (Dwyer, 1995). The Cronbach Alpha for the six communication items was 0.8.

Channel environment: Two dimensions measured the channel environment. Both intra-brand competition and inter-brand competition were ordinal scaled with a single-item approach and include measurement error in the final analysis.

Control variable: Firm size

We use sales revenue as a proxy for unit size to control whether unit size affects dealer's motivation for withholding effort by applying the sales revenue from the dealers' accounting data. Dess and Robinson (1984) strongly recommend using objectively defined data whenever they are available. Whereas both company owned and franchisee units were small in terms of sales and number of employees, an independent samples t-test indicated that company-owned units in the study were significantly larger than franchisee units in terms of sales volume and revenue. Thus, the company-owned units were not only directly tied to corporate control; they were larger in size than the franchisee units.

Measurement model / Convergent and discriminant validity

Our use of dyadic data enabled us to mitigate the problem of shared-method variance among the psychometric measures (Campbell and Fiske, 1959). Such common-method bias entails a major validity risk that may influence the test results (Podsakoff, Mackenzie, Lee, and Podsakoff, 2003; Viswanathan, 2005, p. 189). This use of paired-dyadic data made it impossible to bias the observed relationship

between the sales area manager's governance dimensions and the retail unit's potential for withholding effort, and is the preferred approach according to Podsakoff et al. (2003). In the analyses, we therefore used the sales area manager sample to account for the predictor governance dimensions and the retail unit sample to account for the unit withholding effort criterion variable and the other variables in a paired-dyadic structural equation model.

To increase the credibility of the structural modeling, we used a test-retest statistical method to examine the reliability of the analyses. Accordingly, the initial scale refinement was done on those 120 dealer respondents whose data were not used as part of the 72 dyads in the structural model. Our first step, in accordance with the Anderson and Gerbing (1988) two-step approach, identified the factorial validity of the scores. We did this by running a confirmatory factor analysis (CFA), using EQS 6.1 for windows (Bentler, 2006) and the 120 dealer respondent sample. The standardized factor loadings for all of the items were above the level of .3. The fit indices for the CFA reported a significant Chi-square at 314.567 based on 228 degrees of freedom (df) and a *p*-value at > .05. The Comparative Fit Index (CFI) reported to be .99. The Root Mean-square Error of Approximation (RMSEA) value were .07, with a 95 percent confidence interval between .05 and .08. The Standardized Root Mean-square Residual (Standardized RMR) reported to be .09.

To assess discriminant validity, Fornell and Larcker (1981, pp. 45-46) indicate that for any two constructs, A and B, the average variance extracted for both constructs need to be larger than the shared variance (i.e., square of the correlation) between A and B. These criteria were met in this study. The constructs' standardized factor loadings together with corresponding z-values can be found in Table 1, while Table 2 reports the correlation matrix and the descriptive statistics for the dealer sample. Table 2 also includes the descriptive statistics of the two sub-samples of company owned-units and franchise-units. Based on Levene's Test for Equality of Variances none of the variables reports to have significant, equal, variance. Two of the constructs reports to have significant mean difference among the company owned-units sample and the franchise-units sample. These are centralized decision making, where the company owned-units sample reported the highest mean value of 2.32, while franchise-units reported a mean value of 2.22. Also, for communication the company owned-units sample reported the highest mean values of 4.68 while the value for franchise-units were 4.13.

Table 1. Measurement model of the study items

<i>Items</i>	<i>Factor Loadings</i>	<i>z-scores</i>
Potential for withholding effort		
Item1	.33 ^a	-- ^b
Item2	.65	(3.11)
Item3	.91	(3.12)
Item4	.39	(2.29)
Centralized decision making		
Item1	.39	--
Item2	.66	(3.25)
Item3	.46	(2.85)
Item4	.52	(2.99)
Item5	.57	(3.11)
Formalization		
Item1	.79	--
Item2	.50	(4.75)
Item3	.79	(6.38)
Item4	.37	(3.46)
Communication		
Item1	.82	--
Item2	.80	(7.84)
Item3	.45	(4.19)
Item4	.53	(4.39)
Item5	.43	(4.30)
Item6	.59	(5.92)
Item7	.52	(5.17)
Intra-brand competition		
Item1	1.00	--
Inter-brand competition		
Item1	1.00	--
Firm size		
Item1	1.00	--
Fit indices		
Chi-square	314.57	
Df	228	
p-value	.05	
CFI	.99	
S-RMR	.09	
RMSEA	.07	

n = 144 (72 paired dyads)

a Standardized factor loadings

b z-score marked with -- are fixed to 1.00 for the purpose of scaling

Table 2. Correlation matrix for the measurement scales

	1	2	3	4	5	6	7
1 Potential for withholding effort							
2 Centralized decision making	.18 (.05) ^a						
3 Formalization	-.15 (.11)	.18 (.05)					
4 Communication	-.10 (.30)	.26 (.00)	.47 (.00)				
5 Intra-brand competition	-.10 (.26)	.14 (.13)	-.01 (.91)	-.04 (.71)			
6 Inter-brand competition	.03 (.71)	.08 (.39)	.083 (.36)	.06 (.53)	.28 (.00)		
7 Firm size	-.15 (.11)	.35 (.00)	.01 (.95)	.16 (.09)	.16 (.09)	.10 (.28)	-.02 (.86)
Descriptive statistics:							
Mean value	2.38	3.15	4.42	3.11	5.47	3.20	1.01
St. deviation	.83	1.21	1.16	1.17	1.29	1.81	.27
Skewness	.69	.61	.10	.39	-1.23	.38	-1.37
Kurtosis	.83	.61	-.48	-.55	2.03	-1.19	4.56
Descriptive statistics for the company owned-units sample:							
Mean value	2.31	4.34	5.26	4.68	2.98	5.57	1.07
St. deviation	.93	1.10	.87	.82	1.79	1.17	.27
Descriptive statistics for the franchise-units sample:							
Mean value	2.22	3.68	5.08	4.13	3.50	5.47	.98
St. deviation	.66	.96	.91	0.92	1.96	1.43	.24
Independent-samples t-test:							
Mean difference	.10	.65	.17	.56	.52	.10	.09
t-value	.53	2.69	.82	2.65	1.16	.33	1.47
Sig-level	(.60)	(.01)	(.42)	(.01)	(.25)	(.74)	(.15)

n = 144 (72 paired dyads)

a Two-tailed level of significance in parenthesis

5. RESULTS

Based on the tests just described, the convergent and divergent validity were within reasonable limits. Thus, we continued to the structural model with the remaining responses (72 paired dyads), where the 72 retail unit responses accounted for the dependent variable and the 72 sales area manager respondents accounted for the independent variables in the structural model. This accomplished the second step in the Anderson and Gerbing's two-step approach

(1988). We analyzed the structural relationships by EQS/Windows 6.1 (Bentler, 2006). Table 3 presents the correlation matrices for franchise-unit and company owned-unit samples, while Model 1 and Model 2 in Table 4 present the results from the hypothesis tests. The structural relationship was based on a two-group analysis for the structural model, distinguishing between company owned-units and franchise-units (see appendix for the associated respondents).

Table 3. Correlation matrix for the sample units

	1	2	3	4	5	6	7
1 Potential for withholding effort		-.05 (.80)	.07 (.71)	-.07 (.71)	-.08 (.67)	-.22 (.24)	-.16 (.41)
2 Centralized decision making	-.05 (.74) ^a		.65 (.00)	.77 (.00)	.14 (.46)	.04 (.83)	-.02 (.94)
3 Formalization	.06 (.73)	.41 (.01)		.3 (.04)	.02 (.93)	.01 (.97)	.03 (.88)
4 Communication	.07 (.68)	.59 (.00)	.25 (.11)		.12 (.55)	-.15 (.43)	.23 (.23)
5 Intra-brand competition	-.17 (.28)	.01 (.98)	.34 (.02)	-.10 (.54)		.37 (.05)	-.11 (.57)
6 Inter-brand competition	-.21 (.18)	.06 (.69)	.02 (.90)	.18 (.26)	.33 (.03)		.30 (.11)
7 Firm size	-.14 (.39)	.27 (.08)	.08 (.62)	.22 (.15)	-.05 (.77)	.11 (.49)	

Above diagonal Franchise-units. Below diagonal Company owned-units

n = 144 (72 paired dyads), a Two-tailed level of significance in parenthesis

Table 4. Estimates on Potential for withholding effort

	Structural Equation Modeling					Difference test	Endogeneity analysis										
	Model 1			Model 2			Model 3			Model 4		Model 5					
Independent variables:	Company units	owned-		Franchise-units		Model 1 and 2	Probit regression			Company units	owned-		Franchise-units				
Centralized decision making	-.75 ^a	(-1.75 ^b)	*	.74 ^a	(1.38 ^b)	†	4.55 ^c	*	-.54 ^d	(-3.98 ^b)	**	1.45 ^d	(3.10 ^e)	**	-.53 ^d	(-.90 ^e)	
Formalization	.54	(1.65)	*	-.47	(-2.69)	**	3.71		-.15	(-1.35)		.18	(1.15)		-.25	(-1.40)	
Communication	.36	(1.85)	*	-.18	(-.71)		.90		.26	(2.18)	*	-.66	(-2.81)	**	.19	(.63)	
Intra-brand competition	-.23	(-1.62)	†	-.03	(-.20)		.38		.14	(2.31)	**	-.29	(-2.50)	**	.12	(.41)	
Inter-brand competition	-.29	(-1.67)	*	-.33	(-2.02)	*	.20		-.16	(-1.84)	†	.21	(1.37)		-.21	(-1.35)	
Firm size	.02	(.17)		.09	(.62)		.11		-.00	(-.30)							
Constant									1.55	(2.57)	**	2.27	(3.43)	**	3.40	(6.61)	**
Mills-ratio company owned-units												-3.06	(-2.67)	**			
Mills-ratio franchise-units															-1.67	(.30)	
R-squared	.31			.37					.18			.12		.11			
Chi-square	317.22			379.33													
df	203			203													
p-value	.01			.01													
CFI	.99			.98													
SRMR	.12			.13													
RMSEA	.12			.17													

a Standardized regression coefficients
 b z-scores
 c Chi-square
 d Coefficients
 e t-scores
 † significant at the .10 level
 * significant at the .05 level
 ** significant at the .01 level

First, we investigated the correlation between manager's governance dimensions (centralization, formalization, and communication) and dealer's potential for withholding effort. First, for Hypothesis 1, we tested the effect of centralization on withholding effort. For H1a, we found that centralization for company owned-units had a markedly and significantly negative effect on unit withholding effort (H1a: -0.75 , p -value $< .05$). For H1b, the relationship for franchisee units reported a marked, although marginally significant, positive effect of centralization on unit withholding effort (H1b: $.74$, p -value $< .10$). This provides support for H1a and weak support for H1b. Hypothesis 2 concerned the effect of company formalization on dealer withholding effort. For H2a, we found that formalization increased potential withholding effort in the company owned units. The statistical test supported the hypothesis (H2a: $.54$, p -value $< .05$). H2b, a negative relationship between formalization and withholding effort for franchisee units, was statistically supported in our analysis (H2b: $-.47$, p -value $< .01$). For the final governance dimension, Hypothesis 3, we tested the effect of communication on withholding effort. First, in H3a we predicted that communication would reduce withholding effort for company owned units. The statistical test did not support this hypothesis (H3a: $.36$, p -value $< .05$). For H3b, we predicted that communication would decrease withholding effort for franchisee units. The statistical test supported the direction of the relationship, although it turned out to be insignificant (H3b: $-.18$, p -value NS). Therefore, both H3a and H3b were rejected.

The next set of hypotheses investigated the impact of the business environment. For Hypothesis 4, we predicted that competition between the dealers within the same brand affects withholding effort negatively for company owned-unit dealers (H4a) and for franchisee-unit dealers (H4b). Our statistical test supported this hypothesis for the company owned units (H4a: $-.23$, p -value $< .05$), but the franchisee unit results were not significant (H4b: $-.03$, p -value NS). Hypothesis 5 predicted that inter-brand competition negatively affects withholding effort. Our statistical test supported H5a, that inter-brand competition reduces withholding effort for the company owned-units (H5a: $-.29$, p -value $< .05$), as well as H5b, which predicted a negative relationship from inter-brand competition on withholding effort for the franchisee units (H5b: $-.33$, p -value $< .05$).

The sample size in the two company owned-unit and franchisor-unit samples were rather small, with 84 respondents for the company owned-units (yielding 42 paired dyads), and 60 respondents for the franchisee-units (yielding 30 paired dyads). Therefore, we ran a power-test to investigate the Type-II error rate in the study, given the observed alpha-level at $.05$; six predictors, the observed R-square, and the paired dyads sample sizes. The observed Beta-level for the company owned-units sample reports a Beta-level at 87 percent [$1 - .13$ (observed beta level) = $.87$], which is within the recommended 80 percent level. The Beta-level for the franchisee-units sample is 80 percent [$1 - .20$ (observed beta level) = $.80$], which is within the 80 percent level.

Results of this study supported seven out of 10 hypotheses, one of these at a marginal level of significance. The explained variance for free riding was 31 percent for the company owned units and 37 percent for the franchisee units. In our final test to validate the causality structures, we ran a Wald test to determine whether the model was overfitted. This test determined whether sets of parameters, specified as free in the model, could simultaneously be set to zero without substantial loss in the model fit (Bentler, 2006). The *Chi*-square test of each parameter, given a p -value $> .05$, suggests dropping the relationship between inter-brand competitions and free riding for the franchisee-units, with a *Chi*-square at $.02$.

5. ENDOGENEITY

When testing for endogeneity, the first step in Maddala's (1983) two step procedure tested whether governance factors of *centralization*, *formalization* and *communication* affected the retail unit's contractual choice. These analyses were based on the dealer sample. This test was based on result from a probit regression analysis (Ghosh and John, 2009, p. 605) of the two governance choice dimensions (see Model 3 in Table 4). The model reported a pseudo R-square of 0.18. The coefficient for centralization was significant ($p < .01$) and negative, indicating that the likelihood of choosing a franchise governance contract decreased with the level of centralization. Therefore, this analysis indicated that centralized decision making reduced the likelihood that actors would choose franchise. In other words, franchisees tend to avoid centralization though self-selection. This finding relates to the structural equation analysis (see Model 2 in Table 4) where the level of centralization increased franchisees potential to withhold effort. One can therefore speculate that franchisees strive to avoid centralization since it hampers their individual freedom. To put it differently, franchise entrepreneurs seem to avoid rules and regulations, and when exposed to such system restrictions they will break the rules to facilitate their new thinking and behavior. These findings capture the tensions among franchise entrepreneur's individual freedom on the one hand, and the standardization to secure the brand value within the franchise chain at the other. The coefficient for formalization was non-significant and negative ($p = \text{NS}$) (see Model 3 Table 4). This indicates that formalization had little influence on ownership type. Therefore, formalization did not seem to affect contractual choice ex-ante. Finally, the coefficient for communication were positive and significant ($p < .05$). It shows that the probability of choosing a franchise governance contract increased with the level of communication. In the structural equation modeling analysis (Model 2 in Table 4) there was a negative effect from communication on the potential to withholding efforts among franchisees. Therefore, franchisees facilitate communication as a governance factor, both when choosing franchisee as contractual affiliation, and as a factor reducing their opportunistic behavior.

The second step in Maddala's (1983) two step procedure tested whether the *potential to withholding effort* affected the retail unit's

contractual choice (Model 4 and 5 in Table 4). This answers the questions of what gain in withholding effort franchise firms would achieve by following their strategy rather than being internally organized. A switching regression model was used to identify potential sources that contributed to the difference in withholding efforts within the two contractual arrangements (Maddala, 1983). In these models the analysis regress withholding efforts against the same independent variable as the first-stage model, in addition to two inverse Mills-ratios computed from the same first-stage model (Maddala, 1983). The first inverse Mills-ratio coefficient measured actor's self-selection into company owned-unit contract, whereas the second inverse Mills-ratio coefficient measured actor's self-selection into franchise-unit contract. As such, this analysis of withholding efforts was based on the two contracting stages; (1) behavior arising from the company owned-units contractual arrangement, and (2) behavior arising from the franchise contractual arrangement. Both inverse Mills coefficients in these two equations reported negative signs (see Model 4 and 5 in Table 4). Since the inverse Mills ratio coefficient is always positive in the binary strategy choice case (see Hamilton and Nickerson, 2003, p. 64), one can expect that firms who choose franchise contract had above average level of withholding effort compared to the company owned units. Therefore, there is a selection bias into franchise contract with regards to withholding efforts (see Model 5 in Table 4). Further, the negative inverse Mills ratio coefficient for company owned units was non-significant (Model 4 in Table 4). This implies that the analysis did not identify any selection bias into these types of contracts.

When considering the two covariate terms together, both being negative, franchise firms would have above average level of withholding efforts regardless of whether they chooses a franchise or an

internal contract. Company owned units would encounter below average level of withholding efforts, regardless of whether they choose a franchise or an internal contract. This indicates that franchise firms have what would be called an "absolute advantage" (see Hamilton and Nickerson, 2003), meaning that their tendency to withhold effort exceed that of company owned units, regardless of what kind of contractual arrangement all of them make. Of course, the label absolute advantage is a bit misleading when using withholding effort as dependent variable, although the intention behind the label is illustrative.

To summarize, the analysis showed that centralization and communication affected retail-units self-selection within the plural form arrangement. The next question answers how much damage a wrong contractual form causes the franchisor. Because the contract form is endogenous, the impact of the two drivers (centralization and communication) cannot be ascertained simply by inspecting the regression coefficients in the endogeneity analysis (see Gosh and John, 2009, p. 607). In the following figures, we calculated and illustrated the governance costs of making the wrong plural form, given the governance dimensions of centralization and communication. These calculation followed the procedure of Mayer and Nickerson (2005, p. 237). When assessing the single independent variables, the other independent variables, as well as the control variables, are held at their observed sample averages. Because we were concerned about a randomly selected (hypothetical) project and not an observed project, we did not include the inverse Mills ratio term. We calculated expected outcomes under four combinations: the two governance choices under low versus high (two standard deviations below and above the observed means, respectively) levels of each of the focal independent variables of interest.

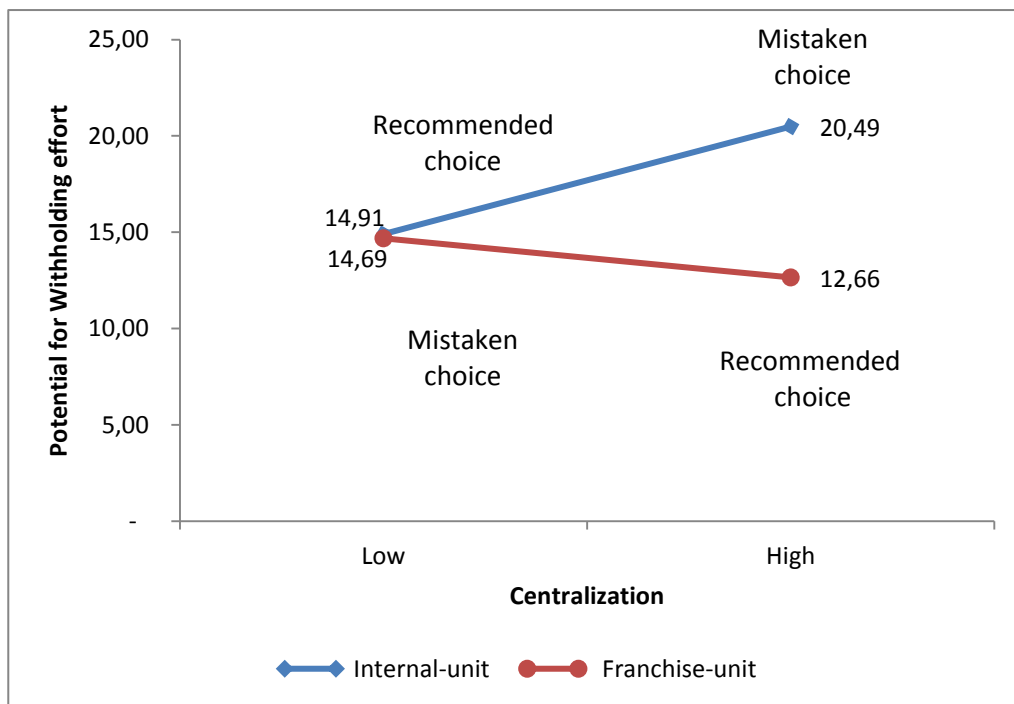


Figure 2. Governance costs of centralization under alternative contract forms

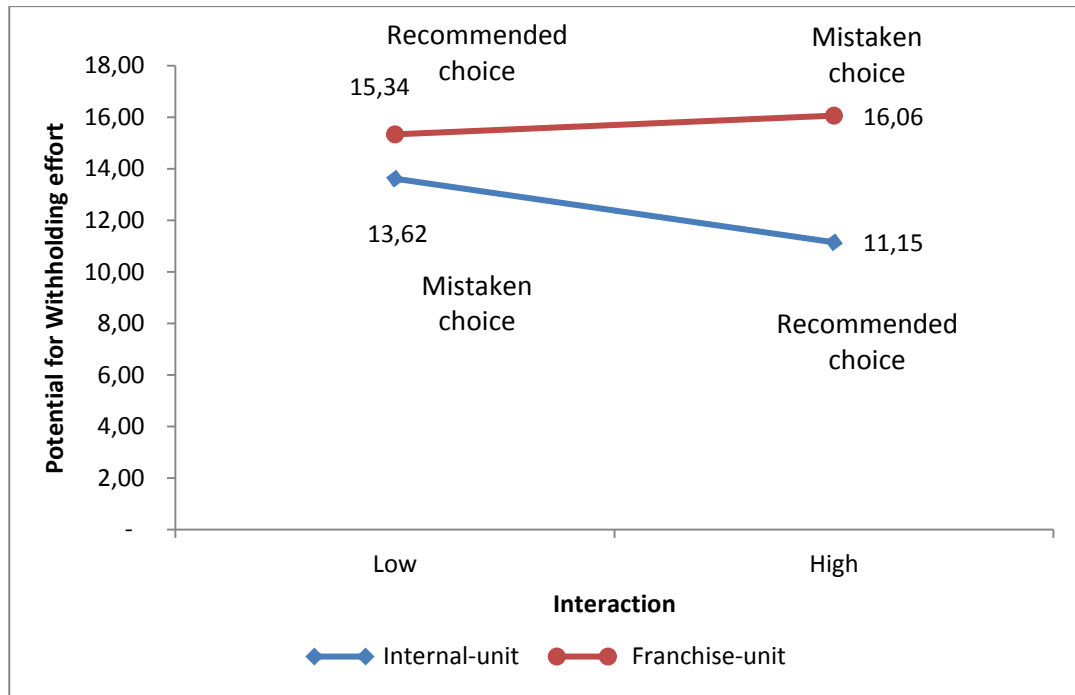


Figure 3. Governance costs of communication under alternative contract forms

Seen from the franchisors point of view, Figure 2 illustrates the costs of centralization when implementing the wrong plural form. For company owned-units the costs of implementing a low-instead of a high degree of centralization, withholding effort increases with 2.03 points. For franchise-units the costs of implementing a high-instead of a low degree of centralization, withholding effort increased with 5.58 points. Figure 3 illustrates the costs of communication when implementing the wrong plural form. For company owned-units the costs of implementing a high-instead of a low degree of communication, withholding effort increased with 0.72 points. For franchise-units the costs of implementing a low-instead of a high degree of communication, withholding effort increased with 2.47 points.

6. DISCUSSION

Management of the franchisor-franchisee relationship is a necessary element of any franchise system, yet it involves a struggle to avoid opportunistic behavior by both parties, which can threaten the survival of the system. This study focused on one element of that struggle: Withholding effort in franchise units and the impact of governance mechanisms in controlling such activities. This study extended transaction cost theory from dyadic buyer-seller relationships to brand protection in plural-formed franchise organizations. In addition, a key finding is that the effects of structural mechanisms on curbing the potential for opportunistic behavior vary between company owned units and franchised units, thus revealing insights into the complex nature of plural-formed governance and ownership.

The results indicate that the franchisor may be able to address shirking in company owned units through increased centralization of decisions. The

company owned units do not lose sales revenue as a result of following quality restrictions in brand representation, thus the employee manager has no economic incentive to avoid supplying quality. Centralized decisions might reduce role ambiguity and conflicts for company owned units (Nygaard and Dahlstrom, 2002). Thus, reduced role ambiguity in brand representation may lower the potential for shirking.

On the other hand, centralization of decision making may result in extra costs for the franchisee units by extending operating hours and varying products and services, for example. These decisions can raise the franchisee's costs but will not necessarily increase the benefits of operating the brand. Thus, the franchisee units that have to bear extra costs associated with brand operations may tend to lower quality efforts. The results support previous observations that centralization may raise the level of transaction costs (Eccles and White, 1988) and indicate that centralization may hinder franchisee motivation for productive efforts and undermine commitment to quality standards. The findings regarding the differential effects of centralization on company owned and franchisee units is consistent with Crosno and Dahlstroms' (2008) meta analysis, which indicated that centralization increased free riding more in interfirm relationships than in intrafirm relationships.

The study results suggest that formalization may increase the potential for shirking in company owned units. Company owned units are not outcome dependent agents, so more formalization does not decrease their risk (Bergen et al., 1992), but serves as a costly constraint imposed on their operations. Among franchisee units, higher levels of formalization lead to lower levels of opportunistic behavior. This finding is consistent with the theory that franchisee units are risk averse and appreciate

the predictable source of governance that formalization offers (Bergen et al., 1992). Formalization adds stability, predictability and less complexity to the interfirm business environment, thus it seems to create commitment to brand representation among the franchisee units.

Regarding communication, the opposite result of what was hypothesized occurred for the company owned units as increased communication related to a higher potential for withholding effort. Communication reflects cooperation offered by the franchisor to the retail units. Earlier studies have emphasized that high levels of interactive cooperation might foster a "groupthink" situation lacking critical views, room for disagreement and new ideas (Janis, 1972). Strong bonds between the franchisor's corporate representatives and the employee managers in the company owned units may reduce respect for quality restrictions. Often, the personal connections of sales area managers in the franchisor company are closer with company owned unit managers than with franchisees. In this situation, increased cohesiveness between sales area managers and unit managers may limit fruitful discussion between the parties about quality signals in the brand, possibly explaining why communication is positively linked to shirking in company owned units. Alternatively, the unit manager may perceive communications that we measured - assistance with budgets, marketing plans and accounting -- as unnecessary micro-management or unwarranted interference, thus raising potential for shirking by the unit.

Competition in the business environment, both intra-brand and inter-brand, served to constrain the potential for withholding effort in company owned units. These findings support theoretical perspectives that competition provides comparative information in the market, allowing retail units to control one another (Akerlof, 1970). Whenever the dealer observes and compares market performance, the market acts as an incentive mechanism (Lazear and Rosen, 1981). Our data also indicate that inter-brand competition reduces potential for withholding effort among franchisee units. Thus, competition might supplement hierarchical control structures. As noted, competition has a consistent effect on company owned units. Both intra-brand and inter-brand competition seem to control the dealer's representation in the market. Consistent with Parmigiani (2007), our findings support the notion that competition is an important managerial instrument in plural systems. Competition as added control is interesting because company owned units are less outcome dependent than franchisee units. Thus, company owned units have stronger incentives to shirk quality restrictions under weaker competitive circumstances.

Whereas research on franchise systems indicates brand name value affects the level of vertical control (Lafontaine and Shaw, 2005), earlier empirical studies relate brand name value to a low degree of vertical control (Hellenier and Lavergne, 1979; Lall, 1978). We speculate that reputation is associated with the service rather than product. Service quality is often easily observable in convenience store gas stations, whereas product quality such as differences between premium and regular gasoline are more difficult for consumers to

monitor. Therefore, there is potential for withholding effort in a franchisor-dealer relationship because an essential part of the service interaction between customer and retail unit is difficult and costly to control. The dealer's information superiority and lack of willingness to provide information (Dant and Nasr, 1998) increases the possibility of withholding effort.

The finding that centralized governance seems to increase withholding effort among franchisee units sheds light on empirical results indicating that a combination of decentralized management and outcome-based contracts results in free riding (Knez and Simester, 2001). As is the case in franchise systems, centralization is based on relationship information. However, agency theory emphasize that information asymmetry might reduce the quality of information and efficiency of centralized decisions (Bergen et al., 1992). Alternatively, withholding effort may lead to greater levels of centralized decision making, thus, future research should investigate causal direction and address one weakness of the current study by obtaining longitudinal data. Furthermore, longitudinal research might also control for life cycle theory of plural formed franchise systems (Oxenfeldt and Kelly, 1968; Manolis et al., 1995). In addition, measurement of actual opportunistic behavior rather than the potential for such behavior to occur would strengthen the conclusions. Future studies might also test for interaction effects between governance mechanisms, channel and business environment characteristics on withholding effort and examine the relative efficacy of transactional and relational mechanisms in cross-cultural franchise arrangements. Finally, research into franchisor withholding effort, e.g., unfair contract agreements and profit distributions (Lawrence and Kaufmann, 2010) and its connection to incidences of negative franchisee exits (Frazer and Winzer, 2005) would offer a more complete picture of the relationship. Franchisor withholding effort should also be studied in terms of franchisee perceptions that the contributions of the franchisor are diminishing and how such perceptions may lead to a shift in power toward franchisees, resulting in increasing compliance and commitment hazards (Davies et al., 2011), a cycle of withholding effort that damages the system.

This study raises practical implications for franchising system strategy in that the results support the application of centralization among company owned units and formalization among franchisee units. Thus, alternate effects of centralization and formalization should be given managerial focus as alternative governance dimensions. This is especially important for brand management based on less formalization, such as administrative systems and first generation franchise systems. The damaging effect of centralized decisions in franchisee units should be followed up with managerial analyses designed to determine how centralized decisions may be mitigated, redefined or even replaced by more formalized governance structures.

In terms of brand competition, managers of plural franchise systems may reduce the level of costly control mechanisms when such competition provides disciplinary incentives. Success of

international expansion of plural franchise systems strongly depends on strategies that safeguard brand names against such forms of withholding effort such as free riding and shirking.

CONCLUSIONS

In conclusion, shirking and free riding among dealers undermines brand reputation, jeopardizes long-term channel viability, and is a welfare loss to the economy (Aaker, 1996). Thus, relational systems such as franchise chains must employ a cornerstone strategy to guard against it. Rindfleisch and Heide (1997) emphasized the need to describe free riding more accurately. As withholding effort involves a shortage of quality relationships between firms, the phenomena of shirking and free riding can be identified as an undersupply of quality that affects brand perceptions in the market. This investigation attempts to refine how dimensions of interfirm governance and ownership relate to undersupply of quality. Transaction cost theory predicts that opportunistic behaviors are transaction costs related to interfirm relationships. A test of our model generally supports relationships among transactional governance dimensions, plural-formed ownership structures and the potential for withholding effort.

By applying a paired-dyadic data approach to structural equation modeling, this study presents a unique basis for the empirical investigation of governance mechanisms in franchise organizations. Because we obtain the predictor and the criterion variables from different sources (Viswanathan, 2005), our statistical test requires no additional remedies (Podsakoff et al., 2003). Therefore, the ability to link the different information sources together creates a unique dataset, which controls for confounding effects of shared method biases in the analysis. Thus, this study also contributes to methods for interorganizational research in corporate, small firm, franchising and plural-form contexts.

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Appendix. Items in final measurement model

Potential for withholding effort (dealer)	To what extent do the following sentences give an erroneous or correct description? ¹
Item1	It is totally unnecessary to control the way customer service is done at our station
Item2	The company restriction to wear uniforms is necessary (Reversed)
Item3	The company restrictions to keep the station clean and tidy are necessary and relevant to us and our station (Reversed)
Item4	It is no problem to keep the station perfectly clean even when there are a lot of customers (Reversed)
Company owned-units/ Franchisee-units (dealer)	Please mark the kind of contract you have with the Company-owned and dealer-operated units (employee managers) (company owned-units) Company-owned and operated units (employee managers) (company owned-units) Franchisee-owned and operated units (franchisee-units)
Centralization (manager)	Through your cooperation with the dealer, there are a number of matters where the company has more or less influence. Please indicate the extent to which you consider the company influences the dealer's decisions regarding his/her own business on the following matters? ²
Item1	Loan warrant
Item2	Opening hours at the station
Item3	Design at the station
Item4	Whether equipment other than cash register and fuel pumps shall be bought at the station
Item5	Determination of salaries to employees at the station
Formalization (manager)	In the relationship between the gasoline company and this dealer, there are established more or less defined routines, procedures, rules and plans about how various problems should be solved. To what extent do the following statements represent a correct or an erroneous of this aspect of the relationship? ¹
Item1	There are clear routines for how the dealer should run his or her sales work with customers
Item2	Clear routines are developed for handling customer complaints
Item3	There are clear routines for dealing with the customers and customer service
Item4	There are clear routines for the design of the station's shop
Communication (manager)	The company offers this dealer cooperation in a number of business activities. How often do you cooperate with the dealer in the following activities? ³
Item1	We cooperate with the dealer in order to develop budgets
Item2	We cooperate with the dealer in order to design marketing plans
Item3	We help the dealer to improve his/her competitive position
Item4	We have continuous interactive contact with the dealer
Item5	We help the dealer with economic analysis and accounting questions.
Item6	We help the dealer with questions regarding human resource management
Item7	We help the dealer to improve his/her purchasing routines and inventory control
Intra-brand competition (dealer)	Is this a good or a bad description of your situation? ⁴
Item1	The competition between "the company name" dealers in this market is very fierce
Inter-brand competition (dealer)	Is this a good or a bad description of your situation? ⁴
Item1	The competition between the dealers in this market is very fierce regardless of brand
Firm size (dealer)	
Item1	a) Net operating income/gross sales revenue in NOK millions

¹ = 1 erroneous description, to 7 completely correct descriptions² = 1 no influence, to 7 complete control³ = 1 never, to 7 always⁴ = 1 very strongly disagree, to 7 very strongly agree