Franchisee networking; a blessing or a curse?
A study on local knowledge acquisition and performance

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Abstract:
Several franchising studies have adopted a knowledge perspective to answer a variety of research questions. However, relatively little is known about how franchisees use their networks to acquire their local knowledge and with what effects. Franchisee local knowledge is often not codified and not possessed by the franchisor, and franchisees thus have to acquire such knowledge through other network partners. Our paper combines a knowledge perspective with a network perspective to develop hypotheses on how different characteristics of franchisee networks affect unit performance. We use OLS and quantile regression (QR) analyses to test our hypotheses with empirical data from a Dutch fast food franchise chain. Overall, the results show that franchisee network characteristics have different effects for franchisees at different ends of the performance distribution.

Keywords: franchising, local knowledge, networking, organizational learning, unit performance

1. Introduction

In business format franchising, a franchisor owns a ‘business format’ - including a uniform identity towards customers and extensive internal procedures - and replicates it by allowing other businesses (i.e. franchisees) to use it in return for fees (Kaufmann and Eroglu, 1998; Combs et al., 2011). The franchise relationship is embedded in a franchise chain consisting of the franchisor and its franchised and possible company-owned units that all operate under the same business format.

In many countries, franchising accounts for a major share of business; for example, it comprises about 40, 52 and 32% of retailing sales in respectively the USA, Australia and Germany (Dant et al., 2011). Recent estimates for the Netherlands show that Dutch franchise chains have a market share of 80% in food retailing and 71% in non-food retailing (Van Essen and Pleijster, 2009).

The increasing popularity of franchising has resulted in a growing number of franchising studies. In recent years, many researchers have used a knowledge or organizational learning perspective regarding business format franchising (e.g. Darr et al., 1995; Ingram and Baum, 1997; Darr and Kurtzberg, 2000; Sorensen and Sørensen, 2001; Szulanski and Jensen, 2008; Winter et al., 2012; Gorovaia and Windsperger, 2013). Such studies have focused on a variety of research questions, such as the question whether chains or units within chains benefit more from the standardized, chain-level knowledge of their franchisors or from the franchisees’ local knowledge (e.g. Kalnins and Mayer, 2004; Jensen and Szulanski, 2007). Another important
research question has been how specific types of units (e.g. franchised or company-owned) within chains influence organizational learning and hence chain performance (e.g. Darr et al. 1995, Sorenson and Sørensen, 2001).

The abovementioned studies typically assume that franchisees have some room to use their local knowledge in running their units due to the fact that they own the assets and are the residual claimants of their units, and their monitoring is less stringent and systematic than the monitoring of company managers (Makadok and Coff, 2009, Yin and Zajac, 2004). Moreover, due to their asset ownership and residual claimant status, franchisees are assumed to have a high inclination to use their local knowledge and to engage in demand-generating and/or cost-reducing activities (Makadok and Coff, 2009, Michael 2002, Yin and Zajac, 2004).

Franchisees thus have both the room and the inclination to use their local knowledge to adapt the business format to their own local market circumstances and hence to improve their unit performance (Ingram and Baum, 1997, Kaufmann and Eroglu, 1998; Sorenson and Sørensen, 2001). In order to attain such an optimal local fit, franchisees will try to increase the quantity and quality of their local knowledge. Since the franchisor has knowledge on the chain level, and, consequently, less knowledge on the franchisee’s local level, an important question is how franchisees acquire the local knowledge that is needed to run their units in their specific locations and how this affects their unit performance. To our knowledge, this question has not yet been addressed in the literature.

Franchisees form an important ingredient of their franchise chain’s success; the quality of the franchisee largely determines customer experience, and fee structures are usually designed in such a way that the chain’s financial returns are largely dependent on the unit’s financial performance (Michael and Combs, 2008). Therefore, the lack of literature on franchisee local knowledge acquisition and its impact on unit performance represents an important research gap. The main contribution of our study is to fill this gap. Since it is often argued that organizations can learn from the experience of others and that interactions between firms are required for transferring non-codified knowledge (e.g. Darr et al., 1995, Ingram and Baum, 1997), we combine a knowledge perspective with a network perspective to characterize franchisees’ personal contact networks for local knowledge acquisition and to develop and test hypotheses on how different franchisee network characteristics affect unit performance. Combs et al. (2004) have specifically pointed at the importance of studying the influence of a franchisee’s ability to network on this franchisee’s unit performance, and as far as we know, so far franchising researchers have not yet picked up on this research suggestion.

In this paper we will first propose hypotheses on the relationship between franchisee network characteristics and unit performance. In addition to some general positive or negative effects of network characteristics, we also hypothesize that some effects differ between franchisees depending on whether franchisees are low performers, medium performers of high performers. We will then test the hypotheses by means of OLS and quantile regression (QR) analyses using a dataset on 38 franchisees of a Dutch fast food franchise chain. Our results indeed point at differential effects of franchisee networking characteristics for different franchisee groups.

2. Theoretical backgrounds and hypotheses

2.1 Knowledge and organizational learning in franchising contexts
2.1.1 Franchisor and franchisee knowledge differences

Franchisors and franchisees have different types of knowledge (Kalnins and Mayer, 2004, Windsperger, 2004). The franchisor mainly has knowledge on the franchise chain level: ideally, the franchisor knows which attributes of the business format are replicable and worth replicating, how these attributes are created, and in which types of environments they are worth replicating (cf. Winter and Szulanski, 2001). Franchisors typically codify their knowledge and distribute standardized routines in the form of a defined business format to their franchisees (Szulanski and Jensen, 2008; Winter et al., 2012). As a result, the knowledge provided by the franchisor will not be perfect for any one location, but it should be generic enough to be valuable to franchisees at all locations.

However, each franchisee needs knowledge about the local environment of its unit (e.g. legal developments, customer preferences, competition, labour market developments) and the management of its unit (e.g. local HRM policies, local marketing activities) to run the local unit effectively. We define this type of knowledge as franchisee local knowledge. A franchisee’s local knowledge is idiosyncratic, and it is mostly non-codified as opposed to codified (see Kalnins and Mayer, 2004; Knott, 2003). Consequently, the franchisee’s local knowledge is generally not possessed by the franchisor. Some authors refer to such franchisee local knowledge as ‘tacit knowledge’, but that would mean that it is not possible to codify the knowledge. In our view, part of the franchisee’s local knowledge may really be tacit (e.g. knowledge regarding building a good atmosphere on the unit’s work floor) and therefore non-codified. However, other types of local franchisee knowledge may be very easy to codify (e.g. how to place pepperoni on a pizza), but they are not codified because the knowledge remains at the franchise unit and thus there is no need for codification.

2.1.2 Types of franchisee local knowledge

‘Franchisee local knowledge’ is still a rather general classification. We therefore distinguish two main types of local knowledge that are particularly relevant in franchise settings. The first one is ‘local market knowledge’. This refers to knowledge about the local market needs, the competitive situation, and the marketing instruments that can be used locally next to the marketing instruments as imposed by the franchisor. Such marketing instruments typically include: the assortment (i.e. the products and services offered), unit presentation (i.e. interior and exterior), promotion activities, and price levels. It depends on the franchise chain’s centralization level (cf. Windsperger, 2004; Kidwell et al., 2007) how much freedom franchisees have in adopting local marketing instruments, for example in offering new products and services or in adopting their own promotion activities. However, it is not uncommon for franchise systems to allow their franchisees to develop local tailor-made marketing activities, although usually these are developed in addition to the systemwide marketing activities executed by the franchisor (Windsperger, 2004).

The second type of franchisee local knowledge is ‘managerial knowledge’. This refers to the franchisee’s knowledge regarding the management and operation of its franchisee...
local unit(s). These activities are not directly visible for customers, but they can have very important indirect effects on customer satisfaction. The most important areas of the franchisee’s managerial knowledge are knowledge regarding human resource management (HRM) and operations management. First, HRM is regularly identified as a critical driver of business success in retailing and service industries (McLean, 2006, Miller, 2006). However, HR practices are generally scantly incorporated in the franchise agreement and/or handbook and franchisees have a relatively large degree of freedom in conducting their local HRM activities (Brand and Croonen, 2010; Grünhagen et al., 2013). Second, the operations management component of franchisee local managerial knowledge refers to the procedures involved in the local production of the goods and/or services and the procurement methods that allow the unit to acquire the inputs needed to carry out those procedures (cf. Winter and Szulanski, 2001). The relevant procedures and procurement methods depend on the industry and/or franchise chain under study. For example, in a pizza fast food chain these procedures may entail a pepperoni placement procedure or a procedure regarding the boxing of pizzas (Darr et al., 1995), whereas in a clothing retail chain these procedures may entail procedures for fitting clothes or keeping inventories. These examples are not so much related to acquiring a local fit, but to professionalization of the unit’s management. In other situations, however, local operations can be relevant to achieve a local fit. An example is a restaurant that has to have a high quality reliable local network of fresh produce suppliers.

Franchisees probably turn to different people depending on the type of local knowledge they want to acquire; for example, a franchisee may contact network partner A for local market knowledge, whereas it may contact network partner B for local managerial knowledge. It is therefore important to define a specific type of local knowledge to be studied empirically. In the remainder of this paper, we focus on franchisee networks regarding local market knowledge.

### 2.1.3 Franchisee local market knowledge and unit performance

In recent decades, the idea that knowledge is a primary source of competitive advantage of firms has been firmly embedded in (strategic) management thinking (e.g. Tsai, 2001; Haas and Hansen, 2007). As a result, many researchers have studied knowledge management and knowledge transfer between and within organizations including multiunit intra-organizational settings, such as franchise systems (e.g. Winter et al., 2012), or business units within multinational corporations (e.g. Monteiro et al., 2008). These latter studies argue that units participating in knowledge transfer outperform other units because knowledge transfer enables units to acquire critical knowledge that contributes to their competitiveness in their local markets. Also in a franchising context several studies have argued that franchisees can achieve a higher fit with their local environments through local adaptation, which is based on the effective use of local market knowledge (e.g. Kaufmann and Eroglu, 1998; Paik and Choi, 2007). However, other franchising studies have found that local adaptations or deviations from the franchisor’s template may negatively affect performance (e.g. Szulanski and Jensen, 2008; Winter et al., 2012). In our view the exact effects of local adaptation depend on the types and the extent of deviations. The franchising studies which found a negative effect of deviation have focused on relatively ‘radical deviations’ from a template, such as selling nonstandard products or not following certain steps in the replication process.
Our study, however, focuses on local market knowledge which franchisees can use to engage in less radical deviations, namely the local marketing instruments that franchisees use in addition to their franchisor’s standardized and national marketing instruments.

Within the marketing domain, micro marketing studies within retail chains have also demonstrated that the adaptation of for example prices, promotion, and assortment to local circumstances has a considerable positive impact on unit sales (Campo et al., 2000, Campo and Gijsbrechts, 2004). A prerequisite for such local adaptation is up-to-date local market knowledge.

In sum, we thus assume that franchisees that possess or have access to up-to-date local market knowledge have a competitive advantage that is reflected in superior firm performance compared to their peers.

2.2 Network characteristics in franchising contexts

2.2.1 Introduction to franchisee networking partners

A general classification that is made in strategy, innovation and entrepreneurship literature is between external and internal sources of knowledge. Laursen and Salter (2006) point out that external network partners can be very heterogeneous as regards, for example, the type and relevance of knowledge provided. Therefore, it is important to first understand the different types of network partners that franchisees may have and to discuss how these may influence a franchisee’s local knowledge base. We distinguish the following potential network partners that can provide an individual franchisee with local knowledge:

- Network partners within the chain (‘within-chain network partners’, see section 2.2.2). We distinguish two sub types: A. peers (i.e. franchisees from the same chain) and B. other chain members (i.e. the franchisor, and managers of company-owned units in the chain, if present).
- Knowledge sources outside the chain (‘outside-chain network partners’, see section 2.2.3): We distinguish two sub types: A. professionals (i.e. other small business owners, supporting organizations such as banks, accountants and consultants), and B. non-professionals (i.e. family and friends).

2.2.2 ‘Within-chain network partners’

A. Peers

A franchisee’s peers are the franchisees that operate within the same chain. The franchising literature so far has paid very little attention to franchisee interactions in general and more specifically to knowledge sharing among franchisees from the same chain (although some studies have briefly pointed at the relevance in one or two sentences, such as El Akremi et al., 2010; Sorensen and Sorensen, 2001, Kalnins and Mayer, 2004). Only the studies of Darr et al. (1995) and Darr and Kurtzberg (2000) have specifically focused on knowledge transfer among units within a large pizza chain. Within this context, they found knowledge to transfer across units owned by the same franchisee (‘multi-unit franchises’) but not across units owned by different franchisees.
Franchisees from the same chain can very well be relevant knowledge sources because they operate in the same industry with the same business format. As Sorenson and Sørenson (2001) put it, units can transfer knowledge most successfully when they operate from the same knowledge base. Sometimes franchisee local knowledge may be really idiosyncratic and of little value to franchisees operating in other environments (cf. Sorenson and Sørensen, 2001); however, we expect that franchisees can generally benefit from the local knowledge of their peers at relatively low costs. Peers are familiar with the business format and they may have engaged in or experimented with local marketing activities in their attempt to achieve a fit with their local environments (Bradach, 1997; Yin and Zajac, 2004). As a result, they have built their own knowledge base in which knowledge of the business format is combined with their own local marketing knowledge.

B. Other chain members

Another important knowledge provider in any franchise chain is of course the franchisor (e.g. Gorovaia and Windsperger, 2013). Actually, the knowledge transfer of the franchisor to franchisees is an important element of the definition of business format franchising as we know it. However, as pointed out earlier, the knowledge provided by franchisors is typically knowledge at the franchise chain level. As a result, the franchisor is a less obvious source of local knowledge. On the other hand, the franchisor will usually be willing to aid in transferring successful local franchisee practices throughout the franchise chain, since this will probably improve the franchise chain’s performance (Bradach 1997, 1998, Darr et al., 1995, Kalnins and Mayer, 2004). The processes of learning and knowledge acquisition by the franchisor and the system-wide adaptations that result from these processes have been discussed by other scholars (e.g. Bradach 1998, Winter and Szulanski, 2001), and we will therefore not delve deeper into that.

A second type of potentially relevant chain member is formed by the company managers. Many franchise chains are so-called plural chains, consisting of both franchised and company-owned units (e.g. Bradach 1998, Bürkle and Posselt 2008). Similar to our arguments about the potential knowledge transfer from one franchisee to another, there is a possibility of knowledge transfer between managers of company-owned units and franchisees. Company managers and franchisees have many similar problems and issues to deal with in their stores. However, there are also some fundamental differences that have been discussed by numerous authors (e.g. Sorenson and Sørensen, 2001; Yin and Zajac, 2004), which is why we do not consider company managers as peers. Franchisees are independent business owners and have a broader array of responsibilities than company managers. In contrast with company managers, for example, franchisees do their own human resource management, investment decision making, local marketing, and (part of) supplier selection. Franchisees and company managers also have different types of incentives, which makes knowledge transfer less valuable for the company managers. Company managers might also be less inclined to share information with franchisees: the benefits of receiving knowledge themselves are relatively low because company managers do not have the room to engage in local adaptation. Most company managers will focus on information and instructions from the franchisor with which they have a hierarchical relationship.
2.2.3 Outside-chain network partners

A. Professionals

Other (small) business owners may be an important source of knowledge for franchisees. Work of Premaratne (2001) and Shaw (2006) suggests that such informal sources may provide small businesses with a higher and more stable flow of information and advice than formal supporting organizations (e.g., accountants, consultants and/or banks). Especially if these other business owners are active in a similar industry and/or in the same geographic region, they will be able to provide relevant knowledge on, for example local market developments and local governmental regulations. Contacts with such colleagues can be established through local business networks or on an individual basis.

Obviously, franchisees may also have relationships with the abovementioned supporting organizations. Existing small business literature especially highlights the importance of the accountant who is often a trusted highly regarded information source and functions as a general business consultant (Goederham et al., 2004).

B. Non-professionals

First, (potential) customers are a major information source on local market preferences for all firms. Strategic decision makers are responsible for acquiring this type of information, which in franchise chains will usually be organized on the chain level. In some circumstances, however, individual customers can also be part of a franchisee’s network. Many franchise chains operate in B-to-B markets which are often characterized by a limited number of customers with much expertise on the product or services to be purchased and repeated voluminous demand (Ford, 2002). In such circumstances, quite intensive buyer-seller relationships may develop in which knowledge is exchanged on many issues including operations, technology and logistics. In many other situations, especially B-to-C markets, however, individual consumers will probably not be part of the franchisee’s network.

Second, several studies (for example, Lechner et al., 2006) have shown that friends and family are especially relevant in the start-up phase of firms because they can supply mainly financial resources and not so much knowledge. The study of Shaw (2006), however, suggests that friends and family that own a business themselves are actually the most important party providing advice in a small business network.

2.3 Franchisee network characteristics and unit performance: hypotheses

2.3.1. Introduction to the hypotheses

Management researchers adopting a network perspective often argue that a firm’s network provides access to resources, such as (non-codified) knowledge or financial resources, and hence influences the firm’s development and performance (for literature reviews on network research see Borgatti and Foster, 2003, Hoang and Antoncic, 2003; Slotte-Kock and Coviello, 2009). In this paper, we argue that franchisees may enhance their performance through getting access to local market knowledge and that their network characteristics will influence the access to such knowledge. We assume a
network relationship to exist if a franchisee reports to have personal contacts with another actor with the aim to retrieve local market knowledge.

We consider two groups of network characteristics that affect the quantity of knowledge (e.g. amount and level of detail), the quality of knowledge (e.g. relevance, timeliness, uniqueness, accuracy), and the costs of obtaining that knowledge. The first group of network characteristics relates to an actor’s structural position in a certain network (cf. Tsai, 2001; Reinholt et al., 2011). We refer to this as ‘network position’. An actor’s network position can impose constraints or offer opportunities for this actor. In this study a franchisee’s network position presents the franchisee with constraints or opportunities to access local market knowledge. To study the franchisee’s position in its network, we focus on the franchisee’s ‘peer network’ (see Figure 1). The peer network has clear boundaries and consists of all franchisees of the same chain. Each franchisee has a specific position in this network. For example, Figure 1 shows that franchisee 2 has a more central position than franchisee 1, which may lead to certain knowledge advantages for franchisee 2 that may positively affect its unit performance.

Whereas a franchisee’s network position in the peer network reflects a structural network characteristic, the second group of variables is more related to the process of networking. This group of variables reflects a franchisee’s ‘network management’, which refers to how a franchisee manages its ‘primary network’ (see Figure 1). A franchisee’s primary network refers to a franchisee’s direct ties with all types of network partners (see sections 2.2.2 and 2.2.3). The way in which a franchisee manages its direct network ties affects this franchisee’s costs and benefits from networking and ultimately its unit performance.

Below we present our hypotheses regarding how the variables regarding network position and network management affect unit performance.

<Insert Figure 1 about here>

2.3.2 Network position and unit performance

It is often argued that advantageous network positions lead to having power and access to resources. The most important concept reflecting an actor’s network position is centrality. The higher the centrality of an actor, the more access he has to other actors and also the more influence he has as an intermediary between other actors (Hanneman and Riddle, 2005). Several studies have therefore revealed a positive association between an actor’s centrality in a network and performance-related outcomes, such as innovation or productivity (e.g. Hansen, 2002; Tsai, 2001). The main argument here is that central firms can act as an information gateway that disseminates and receives relevant information and knowledge throughout the network (Reinholt et al., 2011; Soh, 2010). As a result, the central firm has greater access to knowledge and other firms’ best practices, which may positively affect this firm’s performance.

A franchisee’s centrality is based on the franchisee’s position in the peer network. More specifically, a franchisee’s centrality reflects this franchisee’s ability to access information and knowledge from its peers, both directly (through the ties that the franchisee maintains) and indirectly (through the ties maintained by the franchisee’s direct partners and the further ties in the network that are connected to those).

In the literature, there are many different specific operationalizations of network centrality, we are particularly interested in two of them: betweenness and eccentricity.
In very simple structures (such as a star, circle, or line), these dimensions tend to covary. However, in more complex and larger networks, such as franchisee peer networks, there can be considerable disjuncture between these characteristics of a position - so that an actor may be located in a position that is advantageous in some ways, and disadvantageous in others (Hanneman and Riddle, 2005).

**Betweenness and unit performance**

In this study, we first focus on betweenness: the extent that a franchisee is located on shortest paths between other franchisees. We argue that franchisees who are high in betweenness are pre-eminently situated to gain access to much of the knowledge that resides in the network: the higher one’s betweenness, the faster knowledge reaches the franchisee and the more complete the knowledge. This implies that both the quantity and quality of the knowledge will be relatively high at relatively low costs. Alternatively, franchisees with low betweenness are on only few connecting paths between others - the knowledge accessed by such franchisees will typically take longer to reach them and will be more limited in quantity and has a higher probability of being distorted. We therefore argue that higher betweenness franchisees are likely to have access to a higher quantity and quality of knowledge to support their business and will therefore perform better than franchisees with low betweenness. This leads to the following hypothesis:

- **H1**: Franchisee betweenness is positively associated with unit performance.

**Eccentricity and unit performance**

While betweenness is a positive aspect of centrality, a widely used negative dimension of centrality is eccentricity. An actor’s eccentricity reflects the ‘longest shortest path’ to all other actors in the network. In other words, eccentricity indicates the maximum number of steps that an actor has to make in order to reach every other actor in the network. An advantageous network position would be characterized by low eccentricity.

The expected effects of a franchisee’s low eccentricity in the peer network are highly similar to the effects of high betweenness; a franchisee has quick access to the knowledge of all other peers in the network, and this brings opportunities to access any knowledge when it is needed at relatively low costs. Moreover, the relatively short paths to other franchisees ensure that the knowledge is timely and not distorted by a relatively long chain of communication. So, for franchisees with high eccentricity in the peer network, both the quantity and the quality of the retrieved knowledge will be relatively poor, which can ultimately negatively affect performance. These considerations result in the following hypothesis:

- **H2**: Franchisee network eccentricity is negatively associated with unit performance.

**2.3.3 Network management and unit performance**

Network management refers to the way a franchisee actually shapes the relationships with all the network partners in its primary network. As pointed out, these network partners can be within-chain or outside-chain partners. In shaping its primary network, a franchisee has to make two important decisions; with whom to network (‘external reliance’) and how frequently (‘networking frequency’). Both these decisions affect the quality and quantity of knowledge that is acquired and the costs involved.
External reliance and unit performance

External reliance is the preference of the franchisee to contact non-peers (i.e. other chain members, and professional and non-professional actors outside the chain) above his peers. The higher the proportion of non-peers, the higher a franchisee’s external reliance. Accessing knowledge from peers or non-peers is not the same; each type of networking partner generally only possesses specific types of knowledge, and also the costs of retrieving the information differ among types of partners. As regards the type of knowledge, an important aspect is the similarity of the knowledge base. Generally speaking, actors with a similar knowledge base find it easier to communicate and the information exchanged is usually relevant and easy to apply in one’s own situation (Darr and Kurzberg, 2000). This type of knowledge exchange is particularly valuable if the actor wants to improve its existing operations (oriented towards exploitation). On the other hand, if an actor is looking for new knowledge that should lead to innovation (oriented towards exploration), it will be necessary to contact actors with a different or dissimilar knowledge base. Obviously, it can take considerable effort to translate this more distant knowledge to one’s own situation.

Table 1 summarizes the main available types of knowledge among the different types of partners, the expected similarities of these partners’ knowledge bases with a specific franchisee’s knowledge, and their associated costs.

<Insert Table 1 here>

Within-chain partners have a large amount of shared knowledge on the franchisor’s business format and how it works in specific locations. Moreover, peers will have hands-on experience with how to run a franchise unit, including how to develop and implement local marketing activities. Depending on their individual backgrounds, other chain members and outside professionals will also have some relevant knowledge about running a business, while outside non-professionals probably do not have this at all. As regards local contextual knowledge (including knowledge about the local competition, the legal environment and customer preferences), professionals from the outside network (e.g. local business owners, consultants and banks) will probably be most valuable. All in all, Table 1 shows how knowledge base similarity diminishes if a franchisee seeks knowledge outside his peer network.

Different types of network partners also differ with respect to the costs that it takes to retrieve information from them. These costs can include time, effort, and/or money. Contacts with within-chain partners, and especially with peers, are relatively efficient. For example, telephone calls or mails can be send throughout the day, and it may be expected that the information provided is to the point and relevant. Since peers are part of the same franchise chain, they may take advantage of communication instruments that are set-up by the franchisor, such as an intranet system (Dada et al., 2012). Personal meetings among within-chain partners are conveniently organized during franchise meetings, commissions or other chain-related gatherings. Contacts with outside-chain partners usually take more effort and time to maintain. It is less appropriate to mail or call at odd hours, it is less acceptable to simply ask questions without giving something in return, it takes more time to explain the questions, answers are less easy to implement and need to be translated to the franchisee’s situation, and sometimes asking questions simply costs money (professional advisors). So, in general the time and effort to contact
peers will be lowest and the costs to contact outside-chain partners (especially professionals) will be highest.

Local marketing activities in business format franchise chains are generally more exploitative than explorative, since they are meant to complement the chain’s national marketing activities. This would imply that franchisees would benefit most from sharing local market knowledge with network partners with a high knowledge base similarity (i.e. peers). Similarly, they would benefit least from network partners with low knowledge base similarity (i.e. outside-chain partners). At the same time, we have argued that the costs of retrieving information are lowest for contacts with peers, and highest for contacts with outside-chain partners, especially professionals. This leads us to expect a negative relationship between high external reliance and franchisee performance.

However, this is not yet the complete story. Our argumentation is based on comparing benefits and costs of knowledge acquisition. It is plausible that not all benefits and costs have similar relevance to all franchisees. We particularly expect that there may be differences between franchisees with high performance, medium performance, and low performance. High performers have been able to reach relatively high sales levels in their units. From this we can infer that these franchisees understand how the franchisor’s business format works and how it should be implemented in their own locations. Moreover, the units of high performers will be relatively large, have more staff and other resources, and are managed by the owner and/or his staff in a professional way. It is thus to be expected that these high performers will have more opportunities and confidence in acquiring more distant knowledge that enables them to use more explorative (and creative) marketing instruments. Additionally, these high performers will have fewer problems translating such more distant knowledge to their own situation, and they consider the costs of retrieving this knowledge (both in time and money) as much less important than the low performers would. To put it differently, we expect differences between franchisees at different points of the performance distribution. Overall, we expect that the negative consequences of external reliance are larger for low performers than for medium and high performers which is summarized in the following hypothesis:

- **H3**: Franchisee external reliance is negatively associated with unit performance, but it is more harmful for low performers than for medium and high performers, in that order.

**Networking frequency and unit performance**

Just as other actors that engage in networking, franchisees face resource constraints, which means they cannot spend excessive amounts of time on networking (cf. Watson, 2007). An important issue here is the frequency with which a franchisee contacts the partners in its primary network. We define a franchisee’s networking frequency as the total number of contacts that a franchisee has with all its network partners during one month. When a franchisee has a high frequency of contacts, it either means that the franchisee spends a lot of time on networking or that the franchisees’ contacts are superficial with relatively short durations. Both these aspects affect the costs and benefits of networking for a franchisee.

The more frequent a franchisee’s contacts, the higher the costs in terms of money, time and effort. In addition to the time actually spent on the communication, some contacts also cost time and effort to organize, and some contacts even cost money
(especially contacts with commercial parties). Moreover, frequent contacts with network partners distract a franchisee from actually running and/or being present in its unit (cf. Watson, 2007), which may lead to negative consequences, such as poorer monitoring of unit employees, which in turn may lead to costly operational mistakes. Additionally, when a franchisee indeed has many contacts with short durations, this may make it more difficult for the franchisee to overcome differences in knowledge bases with its network partners. Short contact moments make it more difficult to have in-depth interactions with network partners and to share rich and in-depth knowledge (cf. Gorovaia and Windsperger, 2013). Such situations may make it more difficult for franchisees to actually reap the knowledge benefits of their network contacts.

Given the above considerations, we hypothesize that when the frequency of networking increases, the costs increasingly outweigh the benefits, implying a negative association between networking frequency and unit performance. Moreover, in a similar vein as our argumentation on external reliance, we expect that a high networking frequency is more problematic for low performing franchisees than for medium and high performers. As we pointed out earlier, low performers will suffer more from the costs of networking than the medium or high performers. Second, low performers may reap even fewer benefits from a high number of superficial contacts than the medium and high performers because of their inability to translate the knowledge to their own situations. These considerations lead to the following hypothesis:

- H4: Franchisee networking frequency is negatively associated with unit performance, but it is even more harmful for low performers than for medium and high performers, in that order.

3. Methodology

3.1 Empirical setting and data collection

3.1.1 Empirical setting and sample

We collected empirical data within one franchise chain to control for country, industry and franchise chain differences. Even though the choice for one franchise chain may limit the external validity of our study, it substantially improves internal validity (Davies et al., 2011). Given that this project is among the first to study the impact of franchisee network characteristics on unit performance, it is important to first establish internal validity since internal validity is an important prerequisite for external validity (cf. Gibbert et al., 2008).

Specific characteristics of the country, industry and the franchise chain may influence the importance of having local market knowledge for franchisees, and the availability of such knowledge. Between countries and industries there may for example be institutional or cultural differences. At the level of franchise chains, there may for example be differences in the geographical dispersion of units (Szulanski and Jensen, 2008), in centralization levels (Windsperger, 2004), or in the use of instruments for knowledge sharing (Dada et al., 2012).

ENJOY (pseudonym) is a Dutch franchise chain in a specific sub sector of the fast food industry. The ENJOY chain started in the mid-1990s, and it had 105 franchised units at the time of data collection (winter of 2009/2010). These units were owned by 78 franchisees, of which 44 participated in our study. However, due to missing data, we
used the responses of 38 franchisees, resulting in a net response rate of 48.7%. Regarding the non-respondents there is no reason to assume that they will have very different network characteristics. Franchisees in one chain generally face similar challenges and face the same requirements regarding local knowledge. However, in order to quantitatively assess non-response bias we have performed several tests by comparing respondents and non-respondents on different dimensions. The Welch t-test demonstrates that the means of total sales between the respondents and non-respondents are the same ($t=.0332$, $p=.97$). The F-test shows that the variances of the sales between the two groups are the same ($F=.6422$, $p=.14$). The Kolmogorov-Smirnov test indicates that the sales volumes of the two groups come from the same distribution ($D=.1284$, $p=.78$). The tests thus indicate that non-response bias is unlikely.

The ENJOY chain has a high level of centralization on several decision areas (cf. Windsperger, 2004), such as assortment, procurement, unit presentation, national promotion activities, accounting systems, employee training, and investments. However, the ENJOY franchisees still have room to make their own local decisions regarding pricing, local promotion and employee recruitment. Franchisees' pricing and local promotion decisions are typically related to their local market knowledge, which is why we have specifically asked the franchisees about the networks partners that provide them with knowledge to make decisions regarding local promotion and pricing in their own units. By focusing on these specific local marketing decisions in our interviews with the franchisees, we were able to make a vague concept as ‘local market knowledge’ easier for them to understand.

### 3.1.2 Procedures regarding data collection

This paper was part of a larger project to explain franchisee network characteristics and to understand their consequences. We collected detailed quantitative and qualitative data for each franchisee respondent. Since the complexity of the topic was high and part of the information might have been regarded as sensitive, we collected the data by means of personal face-to-face interviews (Emans, 2004). An additional advantage of interviews is that they provide the opportunity to gather additional qualitative contextual data that may help in interpreting the findings from the quantitative analysis. Each interview took between 60 and 90 minutes and took place at the franchisee’s unit.

Each interview started with questions on the franchisee’s demographics (e.g. number of units owned, years of experience as an ENJOY franchisee, years of experience in ENJOY’s specific sub sector). Obviously, the largest part of the interview focused on understanding a franchisee’s network position and network management. Since we aimed to collect a large amount of data on these network characteristics, we developed a matrix on an A3 size paper in which we could fill out a franchisee’s network partners in the rows and the answers to all kinds of questions about these network partners in the columns. We first asked the franchisee a question about which five network partners (i.e. specific individuals) they consider most important regarding obtaining ideas for their own local promotion and pricing. These individuals could belong to the category peers, other chain members, professionals and non-professionals. The matrix included different questions on each partner and the relationship with these partners, such as the type of partner, the frequency of contact and a qualitative explanation for the reason why the partner is so important to the respondent. These questions enabled us to measure the franchisee’s primary network. We repeated this procedure for the peer
network, but we then asked a franchisee to indicate the three most important franchisees from the peer network. Obviously, in the analyses we ultimately took into account potential overlap in a franchisee’s peer and primary network.

3.2 Issues of measurement

Table 2 summarizes the measurement properties of the variables in this study.

<Insert Table 2 about here>

3.2.1 Dependent variable: unit performance

The ENJOY franchisor allowed us to use objective sales data per unit from their benchmarking system. The use of sales data has several advantages for our study. First, from a theoretical viewpoint, it is highly likely that sales are directly affected by franchisees’ local marketing activities that result from the franchisee’s local market knowledge. Second, since the franchisor collected the financial performance data via its benchmarking system, the data provide a good insight into the relative performance of each unit viz. the other units. Third, sales data are relatively straightforward compared to data on profitability; data on unit profitability can be distorted because franchisees may have different methods for acquiring their income. Some franchisees may be on their own payroll, whereas others use (part of) unit profits as their income. Additionally, franchisees are generally not obliged to provide their profitability figures to their franchisors. Finally, since fees for the franchisor are often (largely) based on unit sales, unit sales are also a relevant measure from a franchisor’s practical perspective.

We have measured the performance of each as the unit’s total level of sales over a 43-weeks period (in January 2009-October 2009).

3.2.2 Independent variables: franchisee network characteristics

Betweenness. We measured a franchisee’s betweenness as the proportion of shortest paths between all franchisees in the peer network that this specific franchisee is part of. In other words, this measure reflects the extent to which a franchisee is located between its peers. For ease of interpretation, we scaled the variable as a proportion with possible values between 0 and 1.

Eccentricity. We measured a franchisee’s eccentricity as the longest shortest path to all other franchisees in the peer network. In other words, this measures the extent to which the franchisee resides at the edge/outside of the peer network (when eccentricity is high) or whether he has easy access to all (when eccentricity is low). Since there are 38 franchisees in the peer network, the theoretically longest path between franchisees is 37. The shortest possible path is 1.

External reliance. A franchisee’s external reliance is measured as the proportion of the franchisee’s contacts in its primary network that are with non-peers. For ease of interpretation, we scaled the variable as a proportion with possible values between 0 and 1.
Networking frequency. We first measured the number of times per month a franchisee reported being in contact with a network partner from its primary network. We then calculated the total number of times per month the franchisee contacts its network partners. The minimum value of this variable is 0. To clarify; the mean of this variable was 32.59, which is equal to an average of one contact per day.

3.2.3 Control variables

Besides networking effects, there are additional variables that can potentially affect the performance of a franchisee (Fenwick and Strombom, 1998). We included three such variables: the number of years the franchisee has been franchisee at ENJOY, the number of years the franchisee has worked in ENJOY’s specific sub sector of the fast food industry, and the number of national promotion activities initiated by the franchisor in which the franchisee has participated. The latter was measured on a scale from 0 and a maximum number of 3.

3.3 Estimation methods

In our analyses we combine traditional OLS with QR and compare the results for both analyses. This also enabled us to assess the value of applying each method, as is often done in other QR studies (e.g. Ramdani and Van Witteloostuijn, 2010).

Traditional regression methods, such as OLS or logistic regression, are focused on the mean: they summarize the relationship between an outcome and a set of explanatory variables by describing the mean outcome for each fixed value of the explanatory variables—OLS therefore is also known as conditional mean modeling. A drawback of such a model is that it does not describe non-central locations, such as the effect that the explanatory variables may have specifically on observations in the lower-tail or upper-tail of the distribution. Koenker and Bassett (1978) introduced a natural extension of the linear regression model called quantile regression (QR), which models conditional quantiles as functions of a set of explanatory variables. Whereas the traditional linear regression model specifies the change in the conditional mean of the dependent variable associated with a change in the explanatory variables, the QR model specifies the changes in the conditional quantile. The researcher can choose which quantiles (or ‘percentiles’) are of relevance to the research at hand—when the .5 quantile is chosen the model is better known as median-regression.

Since our hypotheses make a distinction between three groups of franchisees (those in the lower tail of the performance distribution, those in the middle, and those in the upper tail), we focus on three percentiles: .25 (representing the effect of the explanatory variables on a franchisee that only does better than a quarter of the franchisees in the sample), .50 (representing the effect of the explanatory variables on a franchisee with median performance), and .75 (representing a franchisee that achieves a performance level that is better than that of three-quarters of the sample)—this way, we can estimate regression coefficients that pertain to franchisees at each of these performance levels and compare coefficients and significance between them.

QR has several statistical advantages over regular regression: it is extremely robust to outliers as well as to distributional assumptions. As a result, it can deal naturally with highly skewed data such as income or sales, without the need to transform such data into more well-behaved datashapes (Koenker, 2005; Hao & Naiman, 2007).
4. Results

4.1 Introduction to the results

Summaries of definitions and key statistics for all variables appear in Tables 3 and 4. Table 4 shows that there are no significant correlations between our two measures of centrality (betweenness and eccentricity) or between our two network management variables (external reliance and frequency); clearly our explanatory variables are each distinct dimensions of franchisee networks. The results of the OLS and QR models are shown in Table 5. QR estimates the regression coefficients of the explanatory variables for franchisees at particular quantiles in the overall performance distribution. In hypotheses 3 and 4 we expect that the performance effects of a franchisee’s network management may be different for high performers than for low or medium performers. Therefore, we estimate the coefficients for three quantiles: .25 (i.e. low-performance franchisees), .50 (i.e. median-performance franchisees), and .75 (i.e. high-performance franchisees). In the distribution of sales in our sample, the .25th quantile equals a total sales volume (over the 43 weeks of measurement) of about €160000,=; the median sales level is €228000,=; and the high-performing franchisees at the .75th quantile of the distribution have a sales level of about €321000,=.. Since sales numbers in the sample vary between 23364 and 455636, and several of our explanatory variables have much smaller values, the coefficients tend to be large. In OLS analyses it is common to transform sales volume before running the analysis, but this is unnecessary in quantile regression.

Since we hypothesize that network characteristics may have different effects on a franchisee depending on the position of the franchisee in the performance distribution, we expect to see differences in parameter estimates and statistical significance between firms in the three considered quantiles. In Table 5, we also show the results of the OLS regression of sales on the same explanatory variables. In this analysis, we leave the sales variable untransformed—this maximizes comparability between OLS and the QR results; besides this, the Shapiro-Wilk statistic of sales is not significant (p < .72), which suggests that sales is quite normally distributed.

4.2 Network position and unit performance

Betweenness and unit performance

Hypothesis 1 states that a franchisee’s betweenness in the peer network is expected to be positively related to unit performance, regardless of whether the franchisee is high or low in the distribution of performance. The OLS regression indeed shows a positive and statistically significant effect: the more a franchisee is located on shortest paths between its peers, the higher its unit performance. However, the QR results show that this effect may not be constant throughout the sample: the high performers have a coefficient that is much larger than that of the low performers, a difference that is statistically significant. Comparing estimates, we can see that the coefficient for centrality for the low performers is statistically significantly lower than the OLS estimate and also statistically significantly lower than that of the medium and high performers. Similarly, the high performers have a betweenness coefficient that is statistically significantly higher than that of the medium and low performers and that of the OLS regression. In sum, franchisees who run the better performing units in the chain benefit more from
their central position in the peer network than the other franchisees. Here, we also see the value of the QR approach, since it clearly shows the differential effects of betweenness, depending on the franchisee’s unit performance position. Overall, hypothesis 1 finds support in that the effect of betweenness is indeed positive throughout. However, the hypothesis did not anticipate that the effect might be significantly stronger for firms that already do well, as compared to those who do poorly or average.

**Eccentricity and unit performance**

Our hypothesis was that eccentricity in the peer network has a negative effect on unit performance: the more a franchisee resides at the periphery of the peer network (rather than being more closely connected throughout), the lower the franchisee’s performance. Indeed, the OLS regression shows this hypothesized negative effect of eccentricity. However, the QR results show that eccentricity is more detrimental to low performers than to medium performers and that high performers suffer least. The negative coefficient for low performers is statistically significantly more negative than both those of the high performers and the OLS result. Similarly, the high performers experience a negative effect that is significantly smaller than that in the OLS model and also than that of the low performers. Only for medium performers the coefficient for eccentricity is not statistically significantly different from that of the OLS regression (but it is different from the eccentricity coefficients of the lower and higher-performing firms). Given the size of the regression coefficients (varying from -10881 for high-performing firms to -29254 for low-performing firms) and the fact that the mean level of eccentricity in this sample is 5, this is a variable that has a strong effect on performance. The low performers in this sample have eccentricity scores of 5 to 7, only among medium and high performers lower eccentricities do occur (mostly between 2 and 5). If a low performer would be able to decrease its eccentricity from 7 to 5, this would provide the franchisee’s store-relevant knowledge to yield an expected increase in sales of €58510 which is quite substantial to firms at that level of unit performance.

Overall, our hypothesis finds support for the expected negative effect of eccentricity, but it neglected the differential effect of eccentricity between high and low performers.

4.3 Network management and unit performance

*External reliance and unit performance*

This variable measures the extent to which the franchisees rely on contacts with non-peers. We hypothesized that the presence of a large proportion of non-peers in a franchisee’s primary network would have a negative effect on sales, especially for those firms that already have low sales. For low performers (Table 5, column QR25) we do indeed find that the higher the proportion of non-peers in a franchisee’s primary network, the lower its unit performance. For medium and high performers, the variable loses significance: franchisees that already have a high performance do not suffer the negative consequences of having to rely on non-peers (however, they also do not draw benefits from them). This means that our hypothesis 3 is partly confirmed; we find indeed a negative effect of external reliance on performance, but only so for low performers. The OLS model shows an effect that is not statistically significant—this approach misses entirely the fact that there is a group of franchisees for whom external reliance does have a negative effect.
Networking frequency and unit performance

In hypothesis 4 we stated our expectation that putting much effort in maintaining active contacts with others comes at the expense of unit performance, especially for those firms that already have low unit performance. The OLS model shows no statistically significant effect of networking frequency. However, when we differentiate between performance levels by means of the QR analyses, a more nuanced view emerges. For low performers, we do find the expected statistically significant negative effect. While we find no effect for the medium performers, we do find that high performers actually benefit, and this effect is statistically significant. Although the negative effect for low performers is in line with our hypothesis, we did not hypothesize the possibility that high performers would benefit from spending much time on their networking activity. Although the estimated coefficients are modest, in comparison to the others, we do note that the variable has a range from 0 to 96, with a mean of about 33. So, when low performers engage in an average networking frequency (which means that they have about daily contact with any of their network partners), they suffer a loss in sales of about €10K. On the other hand, a high performer who networks daily is expected to be able to increase his sales by about €17K as a result.

5. Conclusion, limitations, and implications

5.1 Conclusion: blessing or curse?

This study fills an important knowledge gap in the franchising literature by providing an understanding of how different characteristics of franchisee networks for local knowledge acquisition affect unit performance. Previous studies on knowledge management and learning in franchise chains have often focused on the franchisor’s level and studied how franchisors’ decisions affect knowledge and learning in franchise chains and ultimately performance (e.g. Sorenson and Sørensen, 2001; Kalnins and Mayer, 2004; Jensen and Szulanski, 2007). Our study complements this stream of research by focusing on the franchisees’ level and to study how franchisees acquire their local knowledge and how this affects unit performance. Moreover, we also provide further support for the stream of research arguing that it is important to account for franchisee heterogeneity in explaining franchise phenomena (e.g. Clarkin and Rosa, 2005; Grünhagen and Mittelsteadt, 2005). In doing so, we combined a knowledge perspective with a network perspective, which is relatively new in the franchising literature. After discussing different types of franchisee local knowledge and different types of franchisee networking partners, we developed hypotheses on two types of franchisee network characteristics: 1) the franchisee’s position in the peer network, and 2) the franchisee’s network management. Our results demonstrate that whether these franchisee network characteristics are a blessing or a curse depends on the performance of the franchisee. In that sense our study also demonstrates the value of quantile regression as a more sophisticated estimation method.

First, regarding a franchisee’s position in the peer network, we generally expected positive associations (for betweenness) and negative associations (for eccentricity) with unit performance. Both our hypotheses regarding the effect of network position on unit performance were confirmed in the OLS analyses. However, the QR analyses reveal a more sophisticated picture by showing that high performers benefit even more from
high betweenness than medium and low performers, and that high performers suffer less from low eccentricity. We may say that there is some kind of ‘success effect’: high performance franchisees benefit more from the positive effects and have to fear less from the negative effects of their structural network position. It seems that low performing franchisees do not know how to handle both the opportunities and the drawbacks of their network position. Our explanation for this finding would be that it is very well plausible that the low performing franchisees have serious problems in grasping the essence of the business format they are part of and/or in understanding their local situation, and as a result, in successfully translating and using knowledge from other actors in their own units. They do not know where to look for relevant knowledge; if they see it they will probably not recognize it; and if they do, they will often fail in using it for their own good. At this point, we would conclude that networking is a blessing for the blessed, and can be a curse for the already cursed.

Second, regarding a franchisee’s network management we hypothesized differential effects on unit performance for low, medium and high performers. We expected that the negative effects of a franchisee’s external reliance and networking frequency would be stronger for low performers than for medium and high performers. Whereas the OLS analyses did not show any effects of external reliance or of networking frequency on unit performance, the QR analyses again demonstrate a more sophisticated picture for both variables. Regarding external reliance, there is a negative effect on unit performance for low performers, and no effect for medium and high performers. As regards networking frequency the differences in effects are even more pronounced; for low performers there is a negative effect of networking frequency on unit performance, whereas for high performers the effect is positive. Again, we do find an unexpected ‘success effect’; in contrast with low performing franchisees, high performers do not feel any disadvantages of high external reliance and even benefit from very frequent network contacts. Our hypotheses on the two network management dimensions were built on arguments related to the benefits and costs of network knowledge. It may very well be that the high performers are even more oriented towards explorative knowledge than we expected; that they can use this knowledge effectively, and that their resource scarcity is less than expected. That would mean that the added value of knowledge from dissimilar knowledge bases (i.e. non-peers) would be higher than we thought and that the negative consequences of having to invest time and money are lower. Again, we have to conclude that networking is indeed merely a blessing for the blessed.

Overall, we observe that our hypotheses are confirmed to a large extent, and we conclude that a franchisee’s position in its network, and the way it manages this network are indeed important for the franchisee’s success, and ultimately the success of the franchise chain as a whole.

5.2 Limitations and implications for future research

We conclude this paper by pointing at some limitations and suggestions for further research.

First, we already pointed out that studying a single chain allowed us to control for country, industry and franchise chain differences and thus to improve internal validity at the expense of external validity (cf. Gibbert et al., 2008; Davies et al., 2011). Although there are no reasons to expect radically different findings in other contexts, we
recommend that the study is replicated in multiple countries, industries and franchise chains.

Second, our focal franchise chain has no company-owned units and only a few multi-unit franchisees. Even though this enabled us to study a relatively large group of franchisees with similar characteristics within a single chain, an interesting area for future research would be to study differences in networking behaviors between franchisees and company managers, and between single-unit and multi-unit franchisees. Several franchising researchers (for example Bradach, 1998; Sorenson and Sørensen, 2001) pointed out that franchisees may be more inclined than company managers to engage in local adaptation, which may imply that franchisees are more inclined than company managers to actively engage in networking behaviors. However, there is no empirical research at the unit level to support such a proposition. In a similar vein, multi-unit franchisees may behave differently from single-unit franchisees due to different strategic orientations and a larger scale of activities (Grünhagen and Mittelsteadt, 2005; Kaufmann and Dant, 1996). Multi-unit franchising is not as common in the Netherlands as in some other countries such as the USA; however, we recommend future studies to look for empirical settings to study this variable in more depth.

Third, in this paper we have tested hypotheses in which the franchisee’s networking behavior is an independent variable explaining unit performance, but franchisee networking behavior can also be a relevant dependent variable in itself. Whatever the exact focus of the study, we strongly believe that studies regarding franchisee network behavior can provide highly relevant results for practitioners. Franchisors put a lot of effort and resources in designing and maintaining contractual, hierarchical and informal relationships within their chains and in improving the learning capacity of the chain as a whole. Better insight in knowledge transfer from within and outside the chain towards the franchisees can help in improving the chain’s structure and processes.

Our results indicate that franchisee heterogeneity is an important factor in explaining franchisee phenomena such as network effects. Based on this, we would like to point at the need for more studies looking at this heterogeneity, which would give the franchise community a much better understanding of this complex issue. As a follow up on this study, it would be interesting to take a closer look at the presence and use of slack resources of high performing franchisees, and also at their innovative intent (exploration). Our results are of course also important for franchisors whose task it is to support and manage these different types of franchisees. Further research could address more practical issues such as how to take measures aimed at improving the network benefits of low performing franchisees and/or how to account for network capabilities in franchisee selection and training programmes.

6. References


Overview of figures and tables

![Diagram of a franchisee's peer and primary network]

*This is an illustration for franchisee 1; the structure of the peer network will be the same for all franchisees in the network; however, franchisees have different network positions. Additionally, each franchisee will have a different primary network.

Figure 1: Illustration of a franchisee’s peer and primary network*

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Within-chain network</th>
<th>Outside-chain network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge base similarity</td>
<td>peers: high</td>
<td>professionals: medium</td>
</tr>
<tr>
<td></td>
<td>Other chain members: medium</td>
<td></td>
</tr>
<tr>
<td>Business format knowledge</td>
<td>peers: high</td>
<td>professionals: low</td>
</tr>
<tr>
<td></td>
<td>other chain members: high</td>
<td></td>
</tr>
<tr>
<td>Unit operational knowledge</td>
<td>peers: high</td>
<td>professionals: medium</td>
</tr>
<tr>
<td></td>
<td>other chain members: low/medium</td>
<td></td>
</tr>
<tr>
<td>Local contextual knowledge</td>
<td>peers: low</td>
<td>professionals: medium/high</td>
</tr>
<tr>
<td></td>
<td>other chain members: low</td>
<td></td>
</tr>
</tbody>
</table>

| Costs                                 |                      |                       |
| Communication costs                   | peers: low           | professionals: medium/high | non-professionals: low |
|                                       | other chain members: low |                     |                          |

*Table 1. General characteristics of local market knowledge as present with different types of networking partners*
<table>
<thead>
<tr>
<th>Variables</th>
<th>Measure</th>
<th>Theoretical possible values</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit performance</td>
<td>Total level of unit sales over a period of 43 weeks (from January 2009-October 2009). In case a franchisee has multiple stores; this number refers to the unit in which the franchisee itself is present most often.</td>
<td>≥ 0</td>
<td>Franchisor’s benchmarking system</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betweenness</td>
<td>The proportion of shortest paths between all franchisees that a franchisee is part of in the peer network.</td>
<td>≥ 0 and ≤ 1</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td>Eccentricity</td>
<td>The franchisee’s longest shortest path to all other franchisees in the peer network.</td>
<td>≥ 1 and ≤ 37</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td>External reliance</td>
<td>The proportion of contacts of the franchisee with non-peers as part of its total number of contacts.</td>
<td>≥ 0 and ≤ 1</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td>Networking frequency</td>
<td>The total number of contacts with all its network partners during one month as reported by the franchisee.</td>
<td>≥ 0</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franchisee experience</td>
<td>The franchisee’s experience as an ENJOY franchisee in number of years</td>
<td>≥ 0</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td>Industry experience</td>
<td>The franchisee’s experience in ENJOY’s specific sub sector in the fast food industry in number of years</td>
<td>≥ 0</td>
<td>Franchisee interviews</td>
</tr>
<tr>
<td>National participation</td>
<td>Number of national promotion activities initiated by ENJOY’s franchisor in which the franchisee has participated</td>
<td>≥ 0 and ≤ 3</td>
<td>Franchisor’s benchmarking system</td>
</tr>
</tbody>
</table>

Table 2: Measurement properties
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Min.-max.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective performance</td>
<td>235750</td>
<td>104591</td>
<td>23364-455636</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betweenness</td>
<td>0.10</td>
<td>0.21</td>
<td>0.00-1.00</td>
</tr>
<tr>
<td>Eccentricity</td>
<td>5.02</td>
<td>1.32</td>
<td>1.00-7.00</td>
</tr>
<tr>
<td>External reliance</td>
<td>0.68</td>
<td>0.28</td>
<td>0.00-1.00</td>
</tr>
<tr>
<td>Networking frequency</td>
<td>32.59</td>
<td>28.48</td>
<td>0.00-96.00</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franchisee experience</td>
<td>4.32</td>
<td>3.37</td>
<td>0.00-13.00</td>
</tr>
<tr>
<td>Industry experience</td>
<td>7.04</td>
<td>4.61</td>
<td>0.24-14.00</td>
</tr>
<tr>
<td>National participation</td>
<td>2.43</td>
<td>0.89</td>
<td>0.00-3.00</td>
</tr>
</tbody>
</table>

*Table 3: Descriptives for all variables in the study*
<table>
<thead>
<tr>
<th>Objective performance</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Betweenness</td>
<td>-</td>
<td>0.50***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Eccentricity</td>
<td>-0.35*</td>
<td>-0.09</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. External reliance</td>
<td>-0.15</td>
<td>-0.18</td>
<td>0.12</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Networking frequency</td>
<td>0.06</td>
<td>0.13</td>
<td>0.08</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Franchisee experience</td>
<td>0.53***</td>
<td>0.06</td>
<td>-0.15</td>
<td>-0.18</td>
<td>0.06</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Industry experience</td>
<td>0.49***</td>
<td>0.36*</td>
<td>0.00</td>
<td>0.03</td>
<td>0.22</td>
<td>0.39**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. National participation</td>
<td>-0.29</td>
<td>-0.19</td>
<td>0.34*</td>
<td>0.15</td>
<td>0.11</td>
<td>-0.12</td>
<td>-0.07</td>
<td>-</td>
</tr>
</tbody>
</table>

*** p<.001, ** p<.01, * p < .05

Table 4: Correlation matrix
### Table 5: Results of OLS and QR with unit performance as the dependent variable

<table>
<thead>
<tr>
<th>Variables:</th>
<th>OLS</th>
<th>QR25</th>
<th>QR50</th>
<th>QR75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>282662***</td>
<td>321503***</td>
<td>273983***</td>
<td>292204***</td>
</tr>
<tr>
<td></td>
<td>(65614)</td>
<td>(305)</td>
<td>(30492)</td>
<td>(29234)</td>
</tr>
<tr>
<td>Betweenness</td>
<td>224883**</td>
<td>163951***</td>
<td>198149***</td>
<td>342925***</td>
</tr>
<tr>
<td></td>
<td>(83359)</td>
<td>(387)</td>
<td>(38738)</td>
<td>(37141)</td>
</tr>
<tr>
<td>Eccentricity</td>
<td>-19806*</td>
<td>-29255***</td>
<td>-16049***</td>
<td>-10882**</td>
</tr>
<tr>
<td></td>
<td>(9813)</td>
<td>(46)</td>
<td>(4560)</td>
<td>(4372)</td>
</tr>
<tr>
<td>External reliance</td>
<td>11760</td>
<td>-10153***</td>
<td>-9619</td>
<td>-23224</td>
</tr>
<tr>
<td></td>
<td>(46581)</td>
<td>(216)</td>
<td>(21647)</td>
<td>(20755)</td>
</tr>
<tr>
<td>Networking frequency</td>
<td>-268</td>
<td>-317***</td>
<td>59</td>
<td>566***</td>
</tr>
<tr>
<td></td>
<td>(440)</td>
<td>(2)</td>
<td>(205)</td>
<td>(196)</td>
</tr>
</tbody>
</table>

**Control variables:**

| Franchisee experience | 11370** | 7632*** | 13940*** | 13421*** |
| Industry experience   | 1985     | 3202*** | 796      | -3271**  |
| National participation | -11295  | -16741***| -11310   | -8600    |
| Observations           | 38       | 38      | 38       | 38       |
| R²                     | 0.523    | 0.533   | 0.469    | 0.473    |

Significance levels: * is significant at < 10%, ** is significant at < 5%, and *** is significant at < 1%.

Table 5: Results of OLS and QR with unit performance as the dependent variable