Inner Strength against Competitive Forces: Successful Site Selection for Franchise Network Expansion

Thomas Ehrmann and Brinja Meiseberg*

Abstract For every franchise system, a major step in the leap from unknown to commonplace is developing a strategic plan for growth. The exogenous market perspective holds that evaluating market conditions is most relevant to define promising spots since there are location-specific direct economic effects on performance. The endogenous firm perspective (resource-based view) and the social network approach hold that access to internal and external resources offered at a certain spot determines site attractiveness rather than location-specific market factors. We combine both literature strands and posit hypotheses that explore which perspective dominates location decisions in practice, and that provide clarification as regards the (ir)relevance of decision criteria actually applied for outlet performance. Using concepts from social network analysis, we test these hypotheses on a sample of 201 German franchisees. Results show that for location decisions, both perspectives are taken into account. Yet, franchisee performance rather depends on inner strength criteria. Further, expansion should follow a geographically dispersed cluster-approach, instead of steadily growing from a baseline location.

Keywords: Expansion, franchising, social network analysis, RBV

1 Introduction

"There is often a large gap between theory and practice...
Furthermore, the gap between theory and practice in practice is much larger than the gap between theory and practice in theory." Jeff Case, SNPM

For every franchise system, a major step in the leap from unknown to commonplace is developing a strategic plan for growth. For successful system expansion, system management must determine the location strategy that will best maintain

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and extend the chain's competitive advantage. Location decisions can be based on strengths found in local markets – following the *market perspective* – or on the expanding chain's own strengths – following the *firm perspective*.

Taking a *market perspective*, location theory anecdotally avers that there are three key determinants of firm performance, which are "location, location, and location" (Jones and Simmons 1987; Park and Khan 2006). Classical and neoclassical location theory identifies evaluating market conditions (Christensen and Drejer 2005; Ingene and Yu 1982; James et al. 1975; Lee and McCracken 1982; Powers 1997; Simons 1992) as most relevant in determining attractive spots because of location-specific direct economic effects on performance (i.e. demand effects in Hotelling's model (1929))[1]. When following this perspective, market knowledge of the system centre is essential for guiding expansion.

Research in strategic management, however, has a long history of using the *firm perspective*, that is, the resource-based view of the firm (RBV) to explain differential firm performance (Barney 2001; Peteraf 1993). Tying resources to competitive advantage, the RBV suggests that resources enable the generation of Ricardian rents and quasi-rents (Conner 1991; Peteraf 1993). Yet, the RBV focuses its attention almost exclusively on resources and capabilities internal to the firm. That is, the RBV envisions firms as independent entities, which does not cover exchange patterns in a network of entrepreneurs whose intranetwork relationships can function as privileged channels of resource acquisition, conveying knowledge, information, or best practices. Consequently, the RBV provides only a partial account of firm performance in view of the accumulated evidence on the proliferation and significance of interfirm alliances in recent years (Lavie 2006). Accordingly, scholars have drawn on network literature to stress the performance impact of external resources available to the firm through its networks (Gnyawali and Madhavan 2001; Gulati 1999; McEvily and Marcus 2005).

To account for external resources that are transmitted by self-organization among (more or less) independent entrepreneurs, the RBV has recently been extended using the social network perspective (Lavie 2006). Together, the RBV and the social network approach provide what we call an "inner strength perspective" on interconnected firms, which holds that firms can combine internal and external resources to achieve competitive advantage (Gulati et al. 2000). Following this "inner strength perspective", resource access offered by network embeddedness at a certain spot determines location attractiveness rather than location-specific eco-

[1] Hotelling's (1929) location model demonstrates the relationship between location, pricing behavior and profits of firms. In the basic model, consumers are identical and are evenly dispersed along a line of fixed length. There are two firms selling an identical product, each firm is located at one end of the line. Consumers face a transportation cost for overcoming distance. Firms maximize their profits by increasing their consumer pool. Each firm in turn will move slightly towards the other to gain the other's customers. If only one firm can relocate and the other is fixed, the relocating firm will move close to the other. Consequently, the first firm's profits increase significantly, the second firm incurs a significant loss. Here, profits depend directly on the location that determines the size of the consumer pool and thus the demand level attainable.

nomic factors. Then, for planning expansion successfully, central planning competencies may not be superior to network self-organization.

From a practitioner standpoint, it is notable that the thrust of academic literature on location strategies continues to focus on largely theoretical, unapplied scenarios in technique development rather than practical usage within the organisational context of the firm (Dasci and Laporte 2005; González-Benito 2002; Sakashita 2000; Wood and Tasker 2008). In practice, there are many systems that rely instead of sophisticated modelling on intuition guided by experience and "common sense" (Hernandez and Bennison 2000). Here, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch and Byrom 2004). Clarke et al. (2003) note that despite its importance, researchers ignore the essential role of pragmatic judgement, often organized along the line of checklist factors based on experience, which is largely underplayed in the academic literature on outlet forecasting.

Against this background, when expansion decisions should result in choosing profitable locations, how does location decision-making *in practice* balance the market perspective with the inner strength approach: does market-based location theory, or the inner strength perspective, dominate pragmatic decisions? That is, do exogenous location factors or endogenous network characteristics affect judgements more, and which criteria are more useful for forecasting outlet performance? How can systems organize decision-making to enhance outlet success – is central planning or encouraging network self-organization better?

To examine these questions and extend the literature on successful expansion strategies in franchising, we combine the literature strands on traditional location factors and the inner strength perspective. Using concepts from social network analysis, we test several hypotheses on a German retail franchise system. First, we explore how location decisions are made in practice, i.e. which theoretical perspective prevails, and second, we shed light on the (ir)relevance of location decision criteria actually applied for outlet performance. We offer managerial implications for how to organize expansion for best performance outcomes.

The paper is organized as follows: next, we review expansion-related literature on location planning that assumes direct economic effects and we specify inner strength benefits for franchisees as social network members. We link these benefits to network structure. In section 3, we develop hypotheses on market and network characteristics that affect franchisee performance. In section 4 we describe our data and methods, in section 5 we report the results. Section 6 concludes.

2 Theoretical Framework

Management literature emphasizes that franchising facilitates rapid growth (Castrogiovanni and Justis 2002; Dnes 1991; Hall and Dixon 1988). Rapid growth is desirable for franchisors as it yields high outlet share, high outlet share generates

high market share, and high market share stands to gain high profitability. As most services and physical outputs that franchise systems provide are difficult to protect from imitation (Thompson 1994), optimal exploitation of the product offering necessitates expansion to deter copycats and pre-empt market entries of competitors.

A key challenge for expanding systems is to identify the factors that make attractive locations – what defines a "promising spot"? Because location decisions are a critical variable in every system's long-term profitability, in a nutshell, strategically planned expansion is paramount to future success. Yet, literature on franchise expansion is dominated by research on *why* to use franchising as a strategy to expand rather than grow a business through company-owned outlets (Combs and Ketchen 2003; Dant et al. 1996; Kaufmann and Dant 1996). Although research addresses retail store location strategies, the problem of positioning franchisees receives little attention (Kolli and Evans 1999).

From a practitioner standpoint, it is notable that academic literature on location strategies continues to focus on largely theoretical, unapplied scenarios in technique development rather than practical usage within the organisational context of the firm (Dasci and Laporte 2005; González-Benito 2002; Sakashita 2000; Wood and Tasker 2008). Though the majority of the literature portrays the site selection process more as a complex data manipulation and modelling challenge, it is in fact a blend of "art and science" (ReVelle and Eiselt 2005; Wood and Tasker 2008). That is, despite the simultaneous advent of low cost computing and increasing availability of data – giving managers the opportunity to take a much more rational approach to decision-making –, research on retailers' site assessment procedures uncovers that there are many who rely instead of sophisticated modelling on intuition, guided by experience and "common sense" (Hernández and Bennison 2000).[2] So, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch and Byrom 2004). While recognizing the benefit that highly quantitative, technological and data-rich methods can have for decision-support, the fact that models by definition remain simplifications of reality renders subjective experience and judgement still essential in successful site selection (Rogers 1992). Data modelling processes do not provide the single solution to forecasting challenges: "Knowledge management initiatives […] easily fail if they are conceived as technology problems. The difficult thing, of course, is that knowledge management then requires a broad understanding of social, technical, and cognitive aspects of *human organizations*" (Wood and Tasker 2008). Clarke et al. (2003) note that despite its practical importance, researchers still ignore the essential role of pragmatic judgement, which thus is largely underplayed in the academic literature on outlet forecasting. So, what criteria drive and should drive pragmatic decisions?

[2] Some regard the late 1980s as "the golden age" for store location analysis, characterized by the "abandonment of the intuitive approach to location decision-making". Yet in practice, the application of sophisticated models has always been limited (Birkin et al. 2002).

Location decisions require balancing the costs and benefits of a location in present and future. Based on the *market perspective*, location theory suggests that there are differences in location quality.[3] Some spots are more lucrative than others as they have a greater potential to be profitable. Traditional retail location models stress profit impacts of structural determinants beyond individual firm control, particularly, of demographic and socioeconomic characteristics of the local or regional area, of traffic infrastructure, competition, and costs (Ghosh and McLafferty 1982; Ingene and Yu 1982; Lee and McCracken 1982; Khan 1999; Park and Khan 2006; Peterson 2003; Simons 1992).

Turning to the *firm perspective*, strategic management research has long since used the RBV to explain differential firm performance (Barney 2001; Peteraf 1993). Rooted in the early contribution of Penrose (1959), the RBV adopts an inward-looking view, conceptualizing firms as heterogeneous entities. These entities are envisioned as bundles of idiosyncratic resources that push competitive advantage by enabling the generation or Ricardian rents and quasi-rents (Conner 1991; Peteraf 1993). Yet, focusing on resources and capabilities *internal* to the firm does not capture network relationships that can include *cooperative exchange*. Thus, the RBV must be extended to account for the fact that by means of cooperative exchange, embeddedness of firms in networks of relationships holds significant implications for firm performance (Gulati et al. 2000). Lavie (2006) broadens the RBV framework by integrating the social network perspective to explain how interconnected firms combine network resources and internal resource endowments for competitive advantage. In this vain, we use the social network approach as part of the "inner strength perspective".

So far, social networks largely represent a sociological concept. But Granovetter (1985) has pointed out early that the "mixing of [economic and non-economic] activities" is the "social embeddedness of the economy", which hints at the interpenetration of the two spheres of economic and non-economic action. "Embeddedness" refers to the process by which social relations shape economic action in ways that some mainstream economic schemes overlook. As Granovetter has shown in seminal papers (1973; 1985), it is the intermixing of economic and non-economic activities where "non-economic activity affects the costs and the available techniques for economic activity" (Granovetter 2005). The economist Robert Gibbons (2005) gave a forward-looking interpretation of interdisciplinary work in this field by pointing out that sociology adds new independent variables (networks) to the economic (performance) equation. As a new combination to the field of franchising research, social network theory can advance economic insights. We enrich economic reasoning with a network perspective to analyse performance implications of expansion decisions in franchise networks.

A social network is a relational structure of individuals tied by social relations. The social network model features the key element of trust-based behaviour. En-

[3] See Huff's (1964) early contribution, Craig et al. (1984), Ghosh and McLafferty (1987), Jones and Simmons (1990), Kelly et al. (1993), Christensen and Drejer (2005), Park and Khan (2005).

trepreneurs benefit from trust-based relationships as these often provide access to diverse knowledge that is relevant to the entrepreneurial venture (Uzzi 1996). Knowledge exchange can encompass best practices, "strategic" knowledge, or "knowledge of knowledge", i.e. knowledge where specific expertise can be found (Burt 1992).[4] Interfranchisee relationships make up franchisees' "connective capital". "Connective capital" is the stock of human capital that an individual can access through connections to others and that is developed with the purpose if tapping into the knowledge of co-workers via communication links (Ichniowski et al. 2003). Because knowledge assets are often considered the foundation of competitive advantage, connective capital takes the role of an input to the system's production function. Sydow (1998) argues that franchising has become a means to transfer knowledge across organizational boundaries.

Yet often, knowledge is "sticky" and needs personal contacts to be transferred (Windsperger 2004). Sharing knowledge then requires time-consuming personal interaction (Nonaka and Takeuchi 1995). Regular face-to-face contacts are easier arranged in proximity. Also trust as a basis for exchange rather develops between proximate agents (Bachmann and Lane 1996; Williamson 1999). Thus, access to knowledge resources can be an essential driver of choosing proximate sites.[5]

These observations indicate that the degree to which franchisees can avail themselves of advantages inherent to their social context depends on individual network positioning. The position in the network determines individual opportunities to form relationships and acquire resources via network embeddedness. Network positioning can vary in several terms, for example, the number of relationships ("ties") a franchisee ("vertex") can entertain, the strength of ties (time, capital, or emotional investments in a relationship), or the (non-)membership of sub-network structures (e.g. regional clusters). For instance, entertaining many ties can provide better access to critical competencies of others due to a large number or variety of information sources. Thus, relational patterns play a vital role in shaping franchisee business outcomes. Hence, it is important to examine the effect of network structure on firm performance from a strategic perspective (Gulati et al. 2000). By making adequate expansion decisions, the system centre can promote the development of a richer set of interfranchisee connections. Following the inner strength perspective, effects of embeddedness may then determine a site's performance prospects rather than location-specific direct economic effects. We

[4] Examples of franchisees' knowledge assets are local market know-how on marketing, human resources, quality control, or innovation capabilities that cannot be easily transferred and acquired by the franchisor (Windsperger 2004).

[5] In a globalized world, where capital and knowledge travel at high speed, we would expect economic activity to spread over space. Yet, a tendency for geographic concentration occurs ("location paradox"). The reason may be that competitive advantage is local: due to frequent interaction opportunities in proximity, trust and the informal barter of know-how are decisively encouraged: "informal conversations were pervasive and served as an important source of up-to-date information about competitors, customers, markets, and technologies […] often of more value than more conventional by less timely forums such as industrial journals" (Enright 2000).

analyse, first, which criteria following the market and inner strength perspectives dominate pragmatic location decisions. The first general hypothesis runs:

$cluster\_size_i = f\ (regional\_economics_j, customer\_accessibility_j, competition_j, costs_j, network\_strength_i)$, with $network\_strength_i = g\ (franchisor\_support_i, supraregional\_embeddedness_i)$, j = cluster index, i = franchisee index.

Second, we test if the determinants of site decisions are performance-relevant as well. Widening the scope of network variables, the second hypothesis is:

$franchisee\_performance_i = h\ (regional\_economics_j, customer\_accessibility_j, competition_j, costs_j, network\_strength_i, subnetwork\_strength_i)$, with $subnetwork\_strength_i = m\ (regional\_embeddedness_i)$.

In the next section, we develop specific hypotheses on market and inner strength criteria that may determine site attractiveness and enhance performance.

3 Development of Hypotheses

3.1 Market Perspective Criteria

Conventional wisdom has it that there are three prerequisites of retail success, which are "location, location, and location". Location models account for structural determinants beyond individual firms' control: for regional demographic characteristics, expenditure levels, income, traffic infrastructure, competition, and costs (Bush et al. 1976; Ghosh and McLafferty 1982; Khan 1999). Suggesting that population density closely parallels retail sales and providing a sales indicator for outsiders' propensity to shop in the area, data on the area's total population (Schmidt and Oldfield 1999) assesses a "size of market effect". Models also include measures of customers' convenience to access outlets, since distance strongly influences the probability of patronage (Lord 1993; Rudd et al. 1983). "Accessibility" can refer to transport means available, to proximity of "places of interest" like work, customers' homes, or leisure activities, to outlet visibility, or to time investments necessary to master driving distances in the trading area (Ghosh and McLafferty 1982). Also, little competition from firms with a similar product offering, and low costs, can make an area attractive by presenting less threats to outlet performance than highly competitive, high-cost areas. Thus, potentially profitable economic conditions can seem attractive for the positioning of many franchisees. Then, cluster size becomes large, as such areas are expected to provide the best performance prospects.

Hypothesis 1. *(H1). Potentially profitable market conditions positively impact a) cluster size, and b) franchisee performance.*

3.2 Inner Strength Perspective Criteria

Network Strength: Franchisor Support. Evidence shows that most people tend to free-ride. The problem of opportunistic behaviour is exacerbated by monitoring difficulties that arise with network growth, when franchisee presence is larger and more broadly dispersed. Opportunism can take any form of undersupplying quality by withholding effort to decrease individual costs, at the expense of other system members. Monitoring is a key strategy in restricting free-riding (Brickley and Dark 1987; Lafontaine and Slate 2001; Lal 1990; Michael 1999). In addition to monitoring by the franchisor, proximate franchisees can monitor each other (Fama 1980). Furthermore, exposure to repeated interaction displays similar effects on free-riding tendencies as heightened levels of monitoring: first, franchisees who frequently interact perceive an increased level of visibility of their actions. Second, interaction with others promotes a common spirit. Third, a norm of fair dealing can emerge when normative conformity evolves due to a set of unwritten mutual expectations (Kidwell et al. 2007). While Axelrod (1984) focuses on the evolution of cooperation based on rational self-interest, researchers in the sociology of collective action emphasize affective bonds that develop when parties in a relationship interact. Then, interaction provides a source of motivation that encourages team values and curbs free-riding (Kidwell and Bennett 1993). When free-riding that is bound to decrease customer retention systemwide, is limited, franchisee performance benefits from positive externalities through interunit customer transfer. Research shows that free-riding has adverse effects also on the opportunistic franchisee's performance (Kidwell et al. 2007). Thus, every network member profits from reducing free-riding.

So the franchisor can align efforts of distant franchisees by placing distant outlets proximately to one another, which allows peer monitoring and provides interaction opportunities. Then, high distance to the franchisor implies large clusters.

Franchisor-supplied resources are further subject to scale economies. Costs of supervision or supplies transport can be divided across multiple units if these are located proximately. Also, franchisees starting a distant outlet may prefer settling proximately to others to be able to approach others for support that the franchisor cannot offer from a distance.

Hypothesis 2a. *(H2a). High distance to the franchisor positively impacts a) cluster size, and b) franchisee performance.*

As a competing hypothesis, risk-averse franchisors can prefer continuous expansion from their baseline location. Inma and Debowski (2006) find that new franchisors tend to limit expansion to the inception area because of a lack of system infrastructure and market knowledge in new territories, which limit outlet performance. So, franchisors may not approve of opening distant outlets or only do so rarely (if applicants have high entrepreneurial abilities e.g.). Probably, then few franchisees qualify for remote outlets, so large clusters are near the system centre.

Hypothesis 2b. *(H2b). High distance to the franchisor negatively impacts a) cluster size, and b) franchisee performance.*

Network Strength: Supraregional Embeddedness. An important criterion for positioning franchisees can be the distance to other system franchisees. Distance determines opportunities for frequent face-to-face interaction. Interaction helps establishing trusting relationships and realizing networking benefits like knowledge exchange. Also, shared resources like marketing budgets can be used more effectively when market presence is high, that is, when many outlets are located proximately. Higher effectiveness can increase form and brand demand: demand increases for the system's product portfolio result from higher form demand, that is, from higher consumer propensity to spend on the product *kind* vs. alternative income allocations, or from stronger brand demand, i.e. the system's heightened competitiveness relative to other systems (Kaufman and Rangan (1990) term this upside effect "relative preference for the brand"). Ghosh and Craig (1991) argue that these demand increases lead to net sales increase despite higher intrasystem competition. Finding adequate franchisees who are willing to settle near already operating franchisees can thus be easier and expansion may be faster in such areas than when franchisors seek to develop remote areas. Possibly, the effects described above are limited to a certain geographical radius. We call the area in which such effects can occur the "supraregional cluster".

Hypothesis 3a. *(H3a). High embeddedness in the supraregional cluster positively impacts a) cluster size and b) franchisee performance.*

The continual conflict of the convenience-choice interplay suggests that consumers decide on merchandise locations in relation to the time and effort necessary to accomplish buying tasks (Mertes 1964). Similar to the reservation price concept, there can be a reservation distance that consumers are maximally willing to travel (Ghosh and Craig 1991). As franchisee offerings are alike, customers may scarcely exhibit outlet loyalties once a more conveniently located new outlet exists. Thus, many franchisees in the supraregional area can intensify cannibalization. Then, individual performance may decrease because demand spreads over more outlets. Lower performance, in turn, may reduce franchisee motivation to interact and cooperate. In addition, interaction on a supraregional scale can become costly due to investments in overcoming distance (like transport and communication costs). Information gained through interaction may further be irrelevant as in the supraregional area, franchisees' market environments may be quite different. Also, ties are weaker when individual network investments are spread over more relationships, because each relationship is less intense. Then, motivation to share resources tends to be low and incentives for opportunism tend to be strong. Thus, high supraregional embeddedness may negatively influence performance prospects and thus, location decisions.

Hypothesis 3b. *(H3b). High embeddedness in the supraregional cluster negatively impacts a) cluster size and b) franchisee performance.*

Subnetwork Strength: Regional Embeddedness. As the input obtainable in the supraregional cluster may be of little relevance when franchisees operate in different market environments, it may be that the most important sources of knowledge are located very closely. We term this radius a "regional cluster". In the regional cluster, proximity promotes frequent face-to-face-interaction and trust-building that is basic to cooperative exchange (Bachmann and Lane 1996; Williamson 1999). Trusting relationships have lower transaction costs of cooperation in terms of financial and time investments. Embeddedness in regional networks further effectively limits free-riding. Here, engaging in opportunistic acts becomes costly due to reputational effects, when losing trust of network partners is sanctioned by receiving less cooperative input. Since proximity also results in greater transparency, it offers benchmarking opportunities which can motivate franchisees and amplify peer pressure on devoting efforts to enhance performance. Also, well-connected franchisees can better articulate common interests towards the franchisor. Occupying a network position that offers high embeddedness in the regional structure thus facilitates realizing network benefits.[6]

Hypothesis 4a. *(H4a). High embeddedness in the regional cluster positively impacts franchisee performance.*

Some studies stress that heightened intersystem competitiveness offsets individual losses of increased competition. Yet, prior to complete market development, franchisees often draw customers from beyond their usual trading areas who become the basis for revenue expectations (Farrell 1984). Here, the *perception* that cannibalization occurs can already result in demotivation and conflict detrimental to network functioning. Then, cooperative exchange is reduced to safeguard one's market position. A further disadvantafe in dense regional structures can be intellectual inbreeding ("lock-in"), meaning that over-reliance is placed on regional knowledge. The latter process slows down the detection of changing needs. Then, embeddedness in regional relationships restricts performance.

Hypothesis 4b. *(H4b). High embeddedness in the regional cluster negatively impacts franchisee performance.*

For network expansion strategies to be effective, those criteria that determine franchisee positioning should be relevant to franchisee performance, as in the long run, individual performance determines system success.

Hypothesis 5. *(H5). Criteria that impact location decisions of franchise outlets in a positive way also influence franchisee performance positively.*

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[6] Since the number of ties a franchisee can entertain in his regional cluster directly depends on the number of franchisees present in the cluster, we cannot use this network characteristic to explain cluster size. Therefore, we focus on performance effects.

4 Data, Methods and Variables

4.1 Sample

The hypotheses are tested on cross-sectional data collected from franchisees from one services and one retail system operating in Germany. In Germany, retail is still the largest industry using franchising (in sales 2008, 36%), but services become increasingly strong (33%). System 1 specializes in travel services. The importance and complexity of vertical and horizontal cooperative relations is a dominant characteristic of the travel services industry (Fyall and Garrod 2005; Tinsley and Lynch 2007). System 2 specializes in apparel retail. Fashion retailing is particularly dependent on informal network exchange in order to keep up with the industry's constantly changing trends (Uzzi 1996). We select these systems as they have a long-standing relationship with the university, which facilitates information access. Like many medium-sized German retail franchises, the systems apply rule-of-thumb location decision-making. Both systems stress the importance of premium locations, vaguely describing these as "first-rate sites" with "access to a broad, solvent customer base". We distributed self-administered postal questionnaires that featured a cover letter assuring franchisees of anonymity and a university address for response forwarding among all first (second) system franchisees in late 2007 (2006). The specific formulation of the Likert-type questionnaire items emerged from a qualitative-explorative pre-study involving franchisors, consultants, and franchisee focus groups. Together, 201 responses arrived in early 2008 (2007). The response rate is at 33% (47%). Due to missing data, the regression sample encompasses 173 franchisees. 74% (26%) of sample franchisees belong to the first (second) system.

4.2 Methods

We use a stepwise Ordinary Least Squares Regression (OLS) and control for absence of multicollinearity, for homoscedasticity and normal distribution of disturbance terms, using Variance Inflation Factors (VIFs) and correlations, White- and Newey-West-Tests and the Kolmogorov-Smirnov-Test. VIFs are all lower than two. Both the White- and the Newey-West-Tests show heteroscedasticity, so the premise of constant variance of the disturbance terms has to be rejected. We employ heteroscedasticity-consistent error estimates using Newey-West consistent covariances. We also use two-stage least squares regression because interaction opportunities in the regional cluster directly depend on the regional cluster size. Potential simultaneity issues could be involved since the other independent variables that affect performance are expected to affect cluster size as well, so OLS could lead to inconsistent coefficient estimates. To correct for this issue, we use

2SLS, where regional embeddedness is estimated based on the other independent variables that are expected to influence cluster size. The estimated values for regional embeddedness are then used in the second stage of the 2SLS regression. The first stage is: $regional\ embeddedness_i = f\ (regional\_economics_j, customer\_accessibility_j, competition_j, costs_j, franchisor\_support_i, supraregional\_ embeddedness_i)$. The second stage is: $franchisee\_performance_i = h\ (regional\_economics_j, customer\_accessibility_j, competition_j, franchisor\_support_i, supraregional\_embeddedness_i, regional\_embeddedness_i\text{^})$, where $regional\_embeddedness_i$ ^ is the estimated value from the first regression.

To trace nonresponse bias, we compare early and late responders (Armstrong and Overton 1977) in each system. "Late responders" completed the questionnaire over three weeks after the first group. As promoted by the high response rates, Mann-Whitney-Tests do not show evidence for nonresponse bias. We also compare the average sampled observation in each system with the average outlet-owner computed from the population of each chain along the dimensions age, number of years in business, and performance. To obtain information on the characteristics of the populations, officials in the chains were contacted. No evidence of nonresponse biases emerged.

4.3 Variables

4.3.1 Dependent Variables

Cluster Size. The idea is that location criteria impact cluster size: in areas that are considered as "attractive" according to these criteria, clusters become large, because many franchisees settle there as they assess performance prospect as high.

A major problem of empirical studies on clustering is to implement the concept of proximity. Drawing boundaries is a matter of degree and understanding the linkages and complementarities across units that are relevant to competition (Porter 2000). We locate each franchisee at the centre of a series of concentric circles of different radii. Following Kelly et al. (1993), for each circle diameter, we measure franchisee performance against the franchisee number positioned within the diameter, and choose the radius with the highest strongly significant coefficient as an appropriate cluster size. The cut-off distance is 45km (ca. 25m). This distance corresponds to Kalnins' (2004) distance measure for interaction effects. For every franchisee, we measure the number of vertices present in this cut-off distance. CLUSTER SIZE ranges from 0 to 15.

Performance. Typical measures of retail success are sales and profits. Researchers commonly cannot obtain profitability data for many businesses, but sales information often is available as a performance metric (Singh and Mitchell 2005). Sales volume is only a short-term measure of a store's competitive

strength. Yet, long-term implications suggest a strong linkage of sales and profitability (Buzzell and Gale 1987).

By fostering mutual support, collaboration plays an important intervening role in the relationship between business organizational design and performance. Sales growth reflects the acquisition of new customers and increased purchases by current customers. Both aspects are influenced by interfranchisee cooperation that promotes meeting customer demands. Thus, cooperation is the tool that enhances sales growth, as franchisees can directly convert input obtained from others into sales. Using sales growth as performance measure – some studies use sales growth in combination with data on market share, product innovation, or stock growth, all of which are not useful for the sample firms – is consistent with previous research on collaborative relationships (Collins and Clark 2003; Lee et al. 2001; Park and Luo 2001; Sarkar et al. 2001; Singh and Mitchell 2005; Stuart 2000). Hence, we select this precise, location-specific performance indicator that reflects outlet sustainability and growth.[7]

4.3.2 Independent and Control Variables

Regional Economic Conditions. We size up market potential with a set of demographic and socioeconomic variables (data from the Federal Statistical Office): total population, GDP, number of income tax payers, income tax total, average working population, and business insolvencies (Ingene and Yu 1982; James et al. 1975; Khan 1999; Lee and McCracken 1982; Park and Khan 2006; Simons 1992). We use data for those counties that are within each franchisee's regional cluster boundaries, as cluster-specific data are unavailable. Factor analysis allows for a reduction in dimensions as all variables load heavily on the factor REC.[8]

Accessibility. Ascribing general geographic attributes to accurate locations is difficult ("geographical fallacy"; Ingene 1984). For each cluster, we measure the

[7] For the first system, we can obtain data on total sales of the last business year and on franchisee satisfaction with their business performance. We use this data as further dependent variables. Satisfaction items ask respondents to evaluate their recent performance relative to different comparison levels. Comparison levels are (1) alternative activities, (2) average industry sales growth, (3) own income expectations, and (4) own sales objectives. Anchoring success by reference to comparison levels is in line with Anderson and Narus (1990). The results of a principal component factor analysis show the four items to load highly on one factor. We build a scale that averages the sum of the scores on the four items, using equal weights. Cronbach's alpha is 0.82. Inspections of item-to-total and inter-item correlations also provide support for scale reliability. The inner strength variables show the same significant results for satisfaction and for total sales as for growth; there are no significant results for market conditions. Over 50% of the sample franchisees joined their system in the last ten years; we suggest that over time, market conditions do not vary dramatically.

[8] The factor solution is robust (>93% explained variance, eigenvalue >1, KMO 0.79, significant Bartlett-test). Cronbach's Alpha (0.73) and the inspection of item-to-total and inter-item correlations provide support for scale reliability. All variables are significant when introduced into Model 0 separately.

time investment required to reach the nearest highway. The variable TRAFFIC is a proxy for the convenience of infrastructure available, which widens trading areas. Data are acquired from mapchart.com, a chargeable geoinformation system.

Competition. We use the number of firms in the same product category (according to the business directories) as an indicator of competitive intensity in the area, COMP.

Distance to the Franchisor. Following Brickley and Dark (1987) and Minkler (1990), geographic distance was calculated as the number of kilometers that lie in between a franchised outlet and the chain's head office, DISTSC.

Supraregional Embeddedness. The measure SEM assesses interaction opportunities between franchisees in the same chain by counting the "vertex degree", i.e. the number of franchisees within the supraregional area (we use double the "cluster size"-radius). The measure corresponds to Minkler's (1990) outlet density, calculated as the number of stores within a certain radius. Following De Nooy et al. (2005), we consider "directed ties" (doubled degrees), because in each franchisee pair, there are two potential sources of contact initiation (the two franchisees).

Regional Embeddedness. We measure how many ties a vertex can entertain in its regional cluster (the "cluster size"-radius). Validity of the measure REM is checked by correlating it with the number of franchised outlets within each geographic area. In pre-studies, three other retail and services franchisors reported a similar radius of 50km (30m) as an appropriate interaction radius.

Controls. We control for the age of the franchisee-franchisor relationship, as franchisee experience may influence sales. This measure, AGE, is consistent with Dant and Nasr (1998). Franchisees were asked to indicate the year in which they opened their outlet. We further control for outlet size (Windsperger and Yurdakul 2008), using the number of other employees of an outlet as a proxy (SIZE). We further use a dummy variable SYSTEM to control for differences between systems. The travel (apparel) system is coded as 0 (1). Table 1 gives an overview of hypotheses and variables.

Table 1. Overview of Hypotheses.

Hypotheses		Perspective	Variable
1	Potentially profitable market conditions positively impact a) cluster size, and b) franchisee performance.	Market	REC, TRAFFIC, COMP, COSTS
2a (b)	High distance to the franchisor positively (negatively) impacts a) cluster size, and b) franchisee performance.	"Inner Strength"	DISTSC
3a (b)	High embeddedness in the supraregional cluster positively (negatively) impacts a) cluster size and b) franchisee performance.		SEM
4a (b)	High embeddedness in the regional cluster positively (negatively) impacts franchisee performance.		REM
5a	Criteria that impact location decisions of franchise outlets in a positive way also influence franchisee performance positively..		

Age of Franchisor-Franchisee Relationship, Outlet Size, System Dummy		AGE, SIZE, SYSTEM

5 Results

Table 2 displays OLS and 2SLS results for H1-H5. Table 3 displays responses to items on franchisee network interaction. Table 4 exhibits descriptive statistics.[9]

Table 2. Results.

	Model 0		Model 1		Model 2	
Dependent Variable	Cluster Size		Performance		Performance	
	OLS		OLS		2SLS	
C	-20.069	(34.257)	-208772.020	(272791.430)	-202343.487	(202392.6)
REC	0.576**	(0.336)	935.882	(13444.102)	940.425	(12098.67)
TRAFFIC	-0.287***	(0.040)	-9217.834**	(3568.948)	-10122.921**	(3740.359)
COMP	-0.038**	(0.015)	-630.139	(1026.476)	-681.095	(990.929)
COSTS	-0.006**	(0.002)				
DISTSC	0.001*	(0.001)	17.623	(74.112)	15.394	(80.073)
SEM	0.078***	(0.015)	-3255.988***	(698.183)	-3128.440***	(712.538)
REM			9190.878***	(2376.205)	8990.171***	(2611.592)
AGE	0.013	(0.017)	144.551	(1364.571)	132.376	(1134.622)
SIZE	-0.114*	(0.073)	-1989.325	(4463.497)	-1934.031	(4516.878)
SYSTEM	-1.711***	(0.463)	213919.122***	(34479.919)	199858.930***	(28760.780)
N	173		173		173	
F	32.215 ***		7.274***		9.882 ***	
R^2	0.616		0.424		0.403	
Adj. R^2	0.597		0.390		0.377	

Beta coefficients reported. Standard errors in parentheses. Significance levels (two-tailed): *** p <

[9] We use costs as an instrument in the first stage of the 2SLS regression to estimate regional embeddedness. We measure costs using business taxes as a proxy, so costs do not influence the performance measure (sales growth), but possibly, location decisions as tax affects franchisee profit.

0.001; ** p < 0.01; * p < 0.05; † p < 0.1.

Table 3. Evaluation of Network Interaction and Cooperation

Questionnaire Item	Agreement	
	1. System	2. System
"In case of questions, I can contact other franchisees anytime."	93%	81%
"I know many system franchisees personally."	41%	61%
"I regularly discuss business matters with other system franchisees."	74%	64%
"I am very satisfied with my relationships to the other network members."	95%	95%
"I often meet other franchisees, even apart from meetings organized by the system center."	87%	56%
"When problems with the franchisor occur, franchisees stick together."	78%	56%
"The franchisees use every possibility to exert influence on the franchisor via councils and committees."	69%	69%
"None of the system franchisees acts primarily to his/her own advantage."	81%	46%
"In general, all system franchisees fulfill their duties."	85%	76%
"As a member of the system, I am a lone wolf" vs. "… I am part of a community."	75% (community)	52% (community)

Measured on a 7-point scale: 1 – 7, strongly agree – strongly disagree, the three affirmative answers are "agreement"

Potentially profitable market conditions in terms of good regional economic conditions and good site accessibility positively influence decisions to locate franchisees at a certain spot, and thus they enhance cluster sizes; high intensity of competition and high costs negatively influence decisions and cluster sizes. So, H1 is supported. High distance to the franchisor makes distant franchisees locate proximately, so high distance leads to larger clusters (H2a). Many opportunities for interaction with other system franchisees on a supraregional scale correspond to larger regional clusters (H3a). Thus, market and inner strength perspective criteria *both* influence location decisions. Yet, H5 is hardly supported: those criteria that affect location decisions do not determine franchisee performance. Only accessibility shows a significant impact on performance. The other market criteria, i.e. socioeconomic and demographic factors and competitive intensity, are insignificant (as is the network criterion of distance to the franchisor). Instead, inner strength criteria impact success: embeddedness in regional clusters (H4) enhances franchisee performance (table 2). The idea is that embeddedness can offer privileged access to others' resources like know-how. Yet, embeddedness in the supraregional cluster strongly decreases performance (H3b). We sugget this effect occurs because dense structures of franchisees increase cannibalization of sales

and reduce motivation to cooperate. Following these results, success in franchising is much less influenced by market perspective criteria than by the inner strength of network structure.[10]

To test if cooperative interaction as proposed by the network model is a feature of these systems, franchisees answer several questions (table 3). For example, the availability of others for support provides a latent indicator for cooperative interaction: if perceived availability is low, interaction and access to support should be low too, and vice versa. Although this indirect measure does not prove that "available" franchisees are positioned *in the regional cluster*, the probability is high that *proximate* franchisees are approached for support first. Also, regional embeddedness correlates highly with availability, so interaction is strong for *many proximate* relationship opportunities.[11] Then, networking benefits can occur.

Results are stable even when applying different components (factor solutions, single variables) or methods (OLS, 2SLS). A reduced form model (without REM) yields the same results with respect to signs and significance levels for effects of the other variables on performance. The highest correlation among independent variables (0.702) used in the same model is below the common 0.8 cut-off level (Hair et al. 1998).[12] The correlation table backs the OLS and 2SLS results. We checked our results in interviews with the franchisor and system franchisees. They support the findings. Interviewees believed that market characteristics strongly affect location attractiveness, that the structure of ties among system members affects social and economic behaviour, and that input obtained through interaction enhances success. The next section provides a discussion.

6 Discussion

Based on the two theoretical streams of the market and the firm perspective, this study analyses what criteria determine location decisions for franchise system expansion in practice. Further, we shed light on the (ir)relevance of decision criteria actually applied for outlet performance. Location decisions can be based on strengths found in local markets, following the *market perspective*, and the expanding system's own strengths, following the *firm perspective*. Taking a *market*

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[10] Still, we accept that some "basic standard" of economic characteristics (for total population or GDP e.g.) must exist in clusters so that benefits of network resources can be used profitably.

[11] This idea is supported by franchisee statements on their interaction structures. The interaction levels in both systems are high. The items for access to others' support and knowing others personally correlate strongly with performance (0.402, $p<0.03$; 0.367, $p<0.02$).

[12] We also split the sample into two subgroups, the first (second) of which comprises the more (less) successful franchisees, and calculate the power of statistical tests for each variable; all values (H1-H4) are above the cut-off-level of 0.8 (Cohen 1977). We further test the null hypothesis that the proportion of variance of a dependent variable *Y* explained by a set of predictors is zero. Expecting that the predictors account for 25% of the variance of the dependent variable in the population (assuming a minimum R^2 of 0.25), the power analysis again yields values above 0.8. Thus, we suggest that the power is sufficient to make inferences from the results obtained.

	Mean	St. Dev.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. CLUSTER SIZE	3.328	3.338	1.000										
2. PERFORMANCE	1148.352	178324.014	0.406***	1.000									
3. REC	0.000	1.000	0.390***	0.014	1.000								
4. TRAFFIC	12.060	3.704	-0.516***	-0.192**	-0.111	1.000							
5. COMP	9.717	8.875	-0.120†	-0.247**	-0.036	0.167*	1.000						
6. COSTS	298.682	70.423	-0.296***	0.011	-0.113	0.067	0.150*	1.000					
7. DISTSC	296.046	175.058	0.102*	-0.190	-0.453***	0.034	-0.145*	0.030	1.000				
8. SEM	21.682	18.548	0.702***	-0.300***	0.363***	-0.297***	0.017	-0.190**	-0.202	1.000			
9. REM	6.657	6.676	1.000***	0.406***	0.390***	-0.516***	-0.120†	-0.296***	0.102*	0.702***	1.000		
10. AGE	1998.859	6.542	0.213**	-0.272***	0.024	-0.011	0.084	0.050	-0.007	0.251***	0.213**	1.000	
11. SIZE	3.881	2.200	-0.003	-0.171*	-0.071	0.073	-0.063	-0.091	0.056	0.127†	-0.003	0.126†	1.000
12. SYSTEM			-0.436***	0.517***	0.017	0.136†	-0.261***	0.051	-0.127†	-0.464***	-0.436***	-0.461***	-0.182*

Significance levels (two-tailed): *** p < 0.001; ** p < 0.01; * p < 0.05; † p < 0.1.

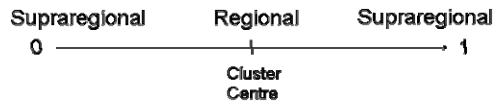
Table 4. Descriptive Statistics.

perspective, traditional location theory suggests that structural market conditions beyond individual firms' control, like demographic and socioeconomic data of the area, accessibility, competition, or costs, have direct effects on performance. The *firm perspective* (RBV) however, suggests that resources and capabilities *internal* to the firm explain competitive advantage. The RBV has recently been extended using the *social network perspective* to account for external resources available in networks of entrepreneurs (Lavie 2006). From this "*inner strength perspective*" follows that resource access at a certain spot determines location attractiveness rather than location-specific market factors.

We find that in practice, location decisions are based on both perspectives: both exogenous market-based characteristics and endogeneous inner strength criteria determine decisions.

Yet, market perspective criteria do hardly impact franchisee performance. Instead, inner strength criteria do, but only with respect to (supra)regional network structures: Embeddedness in regional clusters enhances performance. The underlying logic is that in regional clusters, frequent face-to-face interaction facilitates cooperative exchange. Yet, many franchisees in the supraregional area decrease performance. The puzzle of countervailing effects in regional and supraregional clusters can be disentangled as follows: Let us assume that customers are distributed on a straight line from 0 to 1. First, franchisees are located around the cluster's centre, that is, on the line's "middle" (figure 1). Thereby, they try to capture the majority of customers (also, from the cluster's edges). Clustering then heightens form and brand demand and can encourage cooperation to jointly advance the system's competitive edge. Hence, positive effects of cooperation prevail.

Fig. 1. Supraregional and Regional Cluster Dimensions.



Over time, regional clusters develop into supraregional clusters when new franchisees enter the system and are positioned more remotely. Then, a regional cluster loses its customers at the edges to these franchisees. That is, the reason for choosing a positioning in the "middle" becomes obsolete as exogenously, demand-dragging into the regional cluster is weakened.[13] Thus, negative competitive effects occur. These are combined, endogenously, with negative cooperative effects because entertaining distant ties requires high networking investments and be-

[13] Distance to the nearest larger community is an explanatory variable for per capita sales for many city sizes (Ferber 1958). Regional clusters centering on larger communities provide a point of attraction, dragging demand within cluster boundaries. Population, however, is not uniformly distributed in space: total population usually increases with diminishing returns to scale from the clusters' centre, as densely-populated regions are less likely to span a large (supraregional and above) than a small (regional) radius. For supraregional clusters, demand-dragging is thus less probable to result in significant performance-enhancing customer gains from outside the cluster.

cause cooperation is reduced to safeguard individual positionings in face of enforced competition. Then, demand effects outweigh strategic effects.

There are essential managerial implications for the franchisee level:[14] Providing an armour against competitive forces, inner strength renders franchisees relatively independent from market conditions. Whereas independent ventures cannot but take market criteria into consideration when deciding on the "right location", because inner strength support does not exist here, franchisees who have a stake in deciding on their actual locations can and should consider site attractiveness on the basis of performance implications of network structure. That is, although prospective franchisees are aware of the advantages of franchising over independent ventures – with respect to financial and business benefits and a greater choice of sectors (Kaufmann 1999) –, and accordingly, choose the franchise option instead of independence, they do not capitalize on franchising advantages early on when deciding where to settle. Hence, an earlier orientation towards adopting a consistent "franchisee identity" is desirable for franchisees to enhance individual outlet performance and expansion success. Further, opportunities to benefit from inner strength must be seized by displaying adequate efforts, by cultivating interaction and fair exchange.

Research has shown that for many franchise systems, unplanned growth has led to over-expansion and performance decline (Hoffman and Preble 1991). On the franchisor level, results suggest that chances for successful expansion are enhanced when focussing on optimizing network configuration. The results show that location planning cannot be reduced to central knowledge and data management by the system centre: Franchising, as a key strategy in the business growth, depends much more on developing quality relationships in the network than on central knowledge about economic characteristics of geographical markets. Due to the relevance of inner-strength, providing franchisees' with interaction opportunities is important. First, fanchisee screening and selection must be responsive to cooperative orientations. As Burt (1992) observes, "To the extent that people play an active role in shaping their relationships, then a player who knows how to structure a network to provide high opportunities knows whom to include in the network". Second, franchisors can encourage intra-network knowledge transfer (Hoffman and Preble 1991) by incentivizing cooperative behaviour (which both systems do now). In practice, other franchisors have set up "big brother programs", where new franchisees are placed under the care of a veteran franchisee, providing assistance in bookkeeping, mechanical work and labour disputes, or motivational talks, until they can run the business on their own. Gassenheimer et al. (1996) conclude that "responsibility lies with franchisors to […] encourage franchisees to work together".

[14] A word of caution seems in order as regards infering processes from spatial patterns: Place versus periphery definitions are clearly imperfect. We explore mechanisms underlying superior performance of clustered franchisees, rather than try defining exact cluster ranges. Also, network and site characteristics are dynamic and path-dependent, which may alter a site's attractiveness.

Additionally, results (for H3 and H4) suggest that franchisors could use a geographically dispersed cluster-approach instead of steadily growing from a baseline location. According to Kelly et al. (1993), when sales growth exceeds expectations, retailers usually expand existing outlets or expand to new locations within the same geographical trade area. However, a third valuable option can be expanding by placing new outlets more remotely. Chaudhuri et al. (2001) suggest that franchisors open company-owned stores at more profitable locations, while leaving the less profitable ones for franchise outlets. Yet, based on the study results, ex-ante definitions of “promising” locations might need re-evaluation.

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