THE INFLUENCE OF NETWORK DESIGN ON FIRM PERFORMANCE – PERSPECTIVES AND EMPIRICAL EVIDENCE

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PART A

I. THE NETWORK FORM OF ORGANISATION

"The merit notion that, in a free society, each individual will rise to the level justified by his or her competence conflicts with the observation that no one travels that road entirely alone. The social context within which individual maturation occurs strongly conditions what otherwise equally competent individuals can achieve"
(Loury, 1977, p. 176)

Of all the phenomena that have gripped the business world in recent years, few match the impact of networks. In the ongoing evolution of the dominant organisational paradigm and mode of competition along the continuum of single, autonomous firms to dyadic alliances to networks to virtual companies, the current period is marked by a rapidly growing prevalence of the network form of organisation (Parkhe, Wasserman & Ralston, 2006). Several environmental shifts have opened up rewarding opportunities for such interfirm cooperations – including the proceeding globalisation of markets, the rise of more technologically advanced economies, the convergence of and rapid shifts in technologies, as well as regulatory changes in and across nations (Gulati, 1995). Networks are reshaping the global business architecture. The ubiquity of networks, and networking, at the industry, firm, group, and individual levels has attracted significant research attention (Parkhe et al., 2006).

In the realm of strategic management and business administration literature, the term "network" often refers to long-term relations between firms, like joint ventures, R&D agreements, franchising, or licensing (Gulati, 1995; Johanson & Mattsson, 1987; Lechner, 2001; McGee, Dowling & Megginson, 1995; Witt, 1999). Empirical studies have documented the dramatic growth of such alliances in numerous industrial sectors, the multitude of reasons why firms have entered into such partnerships, and the wide variety of contractual arrangements firms use to formalise relations (Contractor & Lorange, 1988; Contractor, Wasserman & Faust, 2006; Dhanaraj & Parkhe, 2006; Gulati, 1995; Harrigan, 1986; 1989; Lavie, 2006).

Yet, although many researchers emphasise the functionality of "networks" for managing resource dependencies and fostering learning and knowledge exchange (Podolny & Page, 1998;

Witt, 2004), what they actually mean by the term "network" varies considerably (Adler & Kwon, 2002). In this vein, Uzzi (1996) points out that there are different types of interfirm networks, and that the type in which an organisation is active determines potential effects of networking on performance. At one extreme, networks may be loose collections of firms (Dhanaraj & Parkhe, 2006); these structures resemble prototypical markets and tend to be impersonal, diffuse, and shifting in membership (Baker, 1990); at the other extreme, networks are finite, close-knit groups of firms that maintain ongoing, exclusive relationships (Uzzi, 1996). Powell (1990) argues that when firms have impersonal, arm's-length relationships with each other, the pattern of exchange has a market-like structure; when they maintain "embedded" ties, this pattern of exchange produces a network.

The term "embeddedness", refers to the key feature of Granovetter's (1985; 2005) and Uzzi's (1996) seminal approaches: the idea that networks can operate on a logic of exchange that differs from the logic of markets, as ongoing social ties shape actors' expectations and opportunities in ways different from the economic logic of market behaviour. Hence, embeddedness results in outcomes not predicted by standard economic explanations. Uzzi (1996; 1997) argues that embeddedness can shift actors' motivations from the narrow pursuit of immediate economic gains towards cooperative interaction based on trust and reciprocity (Adler & Kwon, 2002; Powell, 1990). Embedded ties allow firms to acquire resources cheaper than what could be obtained on markets, through market-like relationships, or by vertical integration; also, they allow firms to secure resources that would not be available on markets at all, like reputation or customer contacts. Thus, by creating economic opportunities that are difficult to replicate in any other organisational form (Uzzi, 1997), embeddedness in personal relationships can serve as a prime coping response to individual resource scarcity in the quest for competitive advantage and economic rents (Baum, Calabrese & Silverman, 2000; Goerzen, 2007; Gulati, Nohria & Zaheer, 2000).

However, Uzzi (1996) further points out that "overembeddedness" can turn personal relationships, although a potentially valuable asset, into a liability; for example, because of costs involved in building and sustaining social ties or because acquired input is redundant or irrelevant.

Even though social ties can constitute an attractive means to overcome individual resource constraints, obviously, they are not a panacea to organisational challenges per se.

Building on these observations, a recent stream of research applies social network theory to analyse interfirm relationships and examine the impact of cooperation, communication, learning, and imitation on a firm's actions and performance (Granovetter, 2005; Hagedoorn, 2006; Joshi, 2006; Labianca & Brass, 2006; Lavie, 2006). Consistent with this literature, this thesis is based on the premise that economic explanations for entrepreneurial success are incomplete and undersocialized. While research on planning and management of networks has often conceptualised networks as impersonal, institutional arrangements (Bourdieu & Wacquant, 1992; Furubotn & Pejovich, 1972; Parkhe et al., 2006; Powell, 1990) and has widely treated the "human factor" of organisational design implicitly (Uzzi, 1996; 1997), performance effects of network structures in fact depend on individuals who must convert organisational potential into reality.

Following Granovetter (1985; 2005) and Uzzi (1996; 1997), this dissertation focuses on a social approach to network research in analysing the influence of network design on firm performance. First, its findings bear normative implications for the successful design of network structure and network member selection at the management level, that are possibly of interest to networks that are organised inefficiently in their present evolutional stage or that are still in formation. Second, the findings may be of interest to current and prospective economic actors as regards the rewarding design of individual networking activities. The conceptual approach and the major literature voids that this thesis seeks to address are outlined below.

II. CONCEPTUAL APPROACH AND CONTRIBUTION TO THE LITERATURE

1. Theoretical Background

> *"Economic action is embedded in social relations which sometimes facilitate and at other times derail exchange […] An organization's network position, network structure, and distribution of embedded exchange relationships shape performance such that performance reaches a threshold as embeddedness in a network increases. After that point, the positive effect of embeddedness reverses itself"*
> (Uzzi, 1996, p. 674f.)

So far, social networks largely represent a sociological concept (Witt, 2004). Recently, the success of organisation networks has spawned new conjectures about the competitive advantage of social forms of organisation relative to market-based exchange systems (Dhanaraj & Parkhe, 2006; Hagedoorn, 2006; Inkpen & Tsang, 2005; Uzzi, 1996). Central to these conjectures is the "embeddedness" argument, which offers a potential link between sociological and economic accounts of business behaviour (Uzzi, 1996; 1997).

"Embeddedness" refers to the process by which social relations shape economic action in ways that some mainstream economic schemes overlook or misspecify when they assume that social ties affect economic behaviour only minimally, or simply reduce the efficiency of the price system (Crosby & Stephens, 1987; Granovetter, 1985; Uzzi, 1996). Granovetter (1985) has pointed out early that the "mixing of [economic and non-economic] activities" is the "'social embeddedness' of the economy" Granovetter (2005, p. 35), which relates to the extent to which economic action is linked to or depends on actions or institutions that are non-economic in content, goals or processes. 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, p. 35).

Granovetter's (1973; 1985; 2005) idea is that much social life revolves around a non-economic focus. Individual actors can achieve savings when they pursue economic goals through non-economic institutions and practices to whose costs they made little or no contribution; for example, employers who recruit through social networks do not need to – and probably could not – pay to create the trust and obligations that motivate friends and relatives to help one another

find employment. The notion is that people often deploy resources from outside the economy to enjoy cost advantages in producing goods and services; such deployment resembles arbitrage in using resources acquired cheaply in one setting for profit generation in another. Then, social structure has an impact on economic outcomes (Granovetter, 2005).

The economist Robert Gibbons (2005) gives a forward-looking interpretation of interdisciplinary work in this field. He points out that sociology adds new independent variables (networks) to the economic (performance) equation. Thereby, social network theory can advance economic approaches.

A social network is a relational structure of actors tied by social relations. Social networks form when individuals engage in transitive connections that integrate exchange processes in a personal context. Sociologists take individual persons as the nodes of the network and investigate communication or information flows along ties among these persons (Bavelas, 1948; Freeman, 1978/79; Granovetter, 1973; Witt, 2004). Whenever the person under survey has more than one contact, researchers can speak of a "network" (Witt, 2004).

Sociological approaches to network theory have a varied and an impressive lineage, including the sociometry of small groups (Moreno, 1934), the psychology of sentiments (Heider, 1946), cultural anthropology (Nadel, 1957), and graph theoretic mathematics (Harary, 1959); building on this interdisciplinary foundation, researchers have made major theoretical and empirical contributions (e.g. Brass, 1984; Burt, 1992; 2000; Granovetter, 1973, 1985; Gulati & Gargiulo, 1999; Hite & Hesterly, 2001; Krackhardt, 1990; Madhavan, Koka & Prescott, 1998; Podolny, 2001; Powell, 1990; Rodan & Galunic, 2004; Uzzi, 1996; 1997) as well as methodological breakthroughs (Carrington, Scott & Wasserman, 2004; Parkhe et al., 2006; Wasserman & Faust, 1994). Sociologists have developed core principles about the interactions of social structure, information flow, ability to punish or reward, and trust creation that recur in their analyses of political, economic and other institutions (Granovetter, 2005).

Based on sociological insights, a recent stream of research applies social network theory to the study of interorganisational relationships (Grandori & Soda, 1995; Hagedoorn, 2006; Joshi,

2006; Labianca & Brass, 2006; Lavie, 2006; Nohria, 1992). This growing body of research criticises theories that explain firm strategies and performance exclusively on the basis of unilateral immediate profit-seeking behaviour in competition-oriented environments (Granovetter, 1985; Gulati, 1995; Lavie, 2006; Nohria, 1992). Instead, social network research examines impacts of cooperation, communication, learning, and imitation, based on the thinking that individuals can interact in personal relationships that include trust and reciprocity.

Concerning trust, Granovetter (2005) argues that the confidence that others will do the "right thing" despite clear incentives to the contrary, emerges, if it does at all, in the context of a social network. Trust reduces transactional uncertainty and creates opportunities for exchange that is difficult to price or enforce contractually. Concerning reciprocity, social network logic implies that cooperation is not only based on mutual advantage, but that embeddedness tends to move individuals from self-seeking actors towards becoming members of a community with (some) common interests, a shared identity, and a commitment to a common goal (similar, Adler & Kwon, 2002). As Putnam (1993, p. 182f.) explains, the idea of reciprocity is not "I'll do this for you, because you are more powerful than I", nor "I'll do this for you now, if you do that for me now," but rather "I'll do this for you now, knowing that somewhere down the road you'll do something for me".

Accordingly, Larson (1992) observes that "thicker" information on strategic actions, know-how in production, and profit margins is transferred through interfirm embedded ties, thereby promoting learning in ways that arm's length exchange cannot. Lazerson (1995) reports that successful entrepreneurial business networks are defined by coordination devices that promote knowledge transfer and learning; Romo and Schwartz (1995) find that embedded actors in regional networks satisfice rather than maximise on price, and that they shift their focus from the narrow economically rational goal of winning immediate gain and exploiting others' dependency to cultivating cooperative ties (Uzzi, 1997). Uzzi and Gillespie's (2002) analysis shows that firms that embed their commercial bank exchanges in social attachments establish noncontractual governance arrangements of trust and reciprocity that facilitate the transfer of distinctive resources, like fiscal expertise, supplier referrals, and credit. Uzzi and Lancaster (2004) estab-

lish that embedded relationships between U.S. law firms and their respective clients decrease prices asked from these clients, as embedded ties lower transaction costs and at the same time, engender motivation to share these cost savings mutually rather than self-servingly gain all the additional benefits. Nebus (2006) points out that when individuals use social ties to other persons for acquiring advice, they do so with an unwritten but understood promise of future service for the knowledge obtained in mind.

As regards economic effects of such relationships, the so-called "network success hypothesis" assumes a positive relation between the networking activities of actors and their performance (Witt, 2004). The premise is that networks are the opportunity structures through which actors obtain input that promotes identifying and exploiting economic opportunities (Low & Abrahamson, 1999). Accordingly, research emphasises the importance of social ties for business success because of the "social capital" inherent in social networks (Adler & Kwon, 2002).[1]

Social scientists have offered a number of definitions of "social capital". Yet, the concept is still in an emerging phase, comprising different connotations from various scholarly perspectives (Adler & Kwon, 2002; De Carolis & Saparito, 2006; Hirsch & Levin, 1999). Loury (1992, p. 100) states that social capital refers to "naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace". Adler & Kwon (2002, p. 23ff.) put it, "Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor. […] Social capital theory is a story about how social networks provide resources to lower-level aggregates – organisations within societies, units within organisations, and individuals within units – with which the lower-level aggregates can reshape the higher-level aggregates and renegotiate their place within them". Nahapiet and Ghoshal (1998, p. 234) argue that social capital is "the sum of the actual and potential resources embedded within, available through, and derived from the network of

[1] For the introductory part of this thesis, a social network is defined as a durable form of social capital that is created and maintained by social history and ongoing collective action, that is underpinned by a strategic orientation, a sense of common interest, and the expectation of gains (similar, Olsen, 1965). On differences and similarities in definitions of the "umbrella concept" of social capital, see Adler & Kwon, 2002.

relationships possessed by an individual or social unit". Although most definitions are broadly similar, they vary in their focus – some definitions concentrate a) exclusively on an actor's relations with network-external actors ("bridging" social capital), b) solely on relations among actors within a collectivity ("bonding" social capital), or c) on both (Adler & Kwon, 2002; Gittell & Vidal, 1998; Putnam, 2000).

In general, researchers use the notion of "social capital" to refer to both the social relationships that exist among actors and to the assets that are mobilised through these relationships (Burt, 1992; Gant, Ichniowski & Shaw, 2002; Nahapiet & Ghoshal, 1998; Putnam, 1993). Social capital has informed the study of families, education, public health, community life, democracy and governance, economic development, and general problems of collective action (for overviews, see e.g. Adler & Kwon, 2002; Jackman & Miller, 1998; Woolcock, 1998); in organisation studies, too, the concept of social capital is gaining currency as a powerful factor in explaining actors' relative success in different arenas (Adler & Kwon, 2002).

Burt (1992, p. 7) links social capital and individual performance by characterizing social capital as a resource that creates an advantage in "the way in which social structure renders competition imperfect by creating entrepreneurial opportunities for certain players and not for others" and brings a higher rate of return on investments. Both the entrepreneurship (Aldrich & Zimmer, 1986; Uzzi, 1996; Walker, Kogut & Shan, 1997) and the social capital literature (Adler & Kwon, 2002; Burt, 1992; De Carolis & Saparito, 2006; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998) emphasise the importance of social capital as the primary link to resources necessary for firm survival and growth (Morse, Fowler & Lawrence, 2007). Social capital can enhance performance directly by providing actors with access to information, financial capital, emotional support, legitimacy, or competitive capabilities, and can offer indirect benefits by leveraging the productivity of internal resources (Florin, Lubatkin & Schulze, 2003; Stam & Elfring, 2008). Burt (1997, p. 359) integrates the idea of social capital in a broader context, "social capital is the contextual complement to human capital. Social capital predicts that returns to intelligence, education and seniority depend in some part on a person's location in the social structure of a market or hierarchy. While human capital refers to individual ability, social capital refers to

opportunity. Some portion of the value a manager adds to a firm is his or her ability to coordinate other people: identifying opportunities to add value within an organisation and getting the right people together to develop the opportunities. Know who, when, and how to coordinate is a function of the manager's network of contacts within and beyond the firm. Certain network forms deemed social capital can enhance the manager's ability to identify and develop opportunities. Managers with more social capital get higher returns to their human capital because they are positioned to identify and develop more rewarding opportunities". Coleman (1988) illustrates the benefit of social capital with the example of a social scientist who catches up on the latest research in related fields through everyday interaction with colleagues.

That is, although the encyclopaedias of yore may largely be replaced by web surfing today, the modern workplace retains its social properties – for a variety of reasons, people still seek to supplement knowledge obtained through other means with input from a network of individuals (Parkhe et al., 2006). In this vein, Koza and Dant (2007, 281f.) argue, "Information should be viewed as an investment that one channel member makes in another […], and communication provides the means of transfer of knowledge between channel member firms. [Members] strive to put in place integrating mechanisms that enable effective interaction, hence allowing the greatest chance for each to succeed". Then, embeddedness in personal relationships can serve as a prime coping response to individual resource scarcity, which is essential in the quest for competitive advantage and economic rents (Baum et al., 2000; Gulati et al., 2000).

Yet, research has often concentrated on beneficial effects of networking. Although early social exchange theorists and network researchers have considered *both* the positive and negative aspects of relationships (e.g. Homans, 1961; Tagiuri, 1958; Thibaut & Kelley, 1959; White, 1961), over the past two decades, scholars have focused very intensively on the *positive* aspects of network relationships (Labianca & Brass, 2006). As a result, dysfunctionalities and costs of

networking activities remain underexplored. This shortcoming in network research exacerbates an in-depth understanding of how collective action should be organised (Parkhe et al., 2006).[2]

As De Carolis, Litzky and Eddleston (2009) point out, not all well-connected, aspiring entrepreneurs are able to successfully launch a business. Reasons are that on the one hand, resources available through relationships can be redundant or irrelevant. In this vein, Adler and Kwon (2002, p. 26) observe, "In life we cannot expect to derive any value from social ties to actors who lack the ability to help us". On the other hand, often, relationships provide *potential* benefits only (Srivastava, Shervani & Fahey, 1998), meaning that obtainable input – like information access, emotional support, or legitimacy – explains performance only to the extent that actors capture the economic value that it can create (Crook, Ketchen, Combs & Todd, 2008). In addition, sustaining social relations does not come at zero cost, but there are investments involved in building and maintaining relationships (Nahapiet & Ghoshal, 1998; Nasrallah, Levitt & Glynn, 2003; Uzzi, 1996). Uzzi (1997) points out that "overembeddedness" can stifle effective economic action if the social aspects of exchange supersede the economic imperatives. Coleman (1994, p. 302) highlights that "a given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others".

Adler and Kwon (2002) and Lin (1999) establish that research would benefit from a more systematic assessment of risks as well as benefits of social capital to understand better the downsides of social relationships, both for the focal actor and for others. Therefore, they deem research on the differential access to resources and the positive and negative effects of social capital a high priority: "while we understand a lot about market failures and bureaucratic failures, more research on the distinctive forms of social capital failure would be an important antidote to romantic illusions about Gemeinschaft" (Adler & Kwon, 2002, p. 35). As social structure can

[2] Recent exceptions are: Poppo, Zhou and Zenger (2008) who argue that long-standing embedded ties lack broad oversight mechanisms that interject and promote changes in response to issues of strategic fit or alignment; Ernst and Bamford (2005) and Gulati and Gargiulo (1999) who caution that over time, inter-organizational exchanges may become rigid and fail to restructure when necessary; Goerzen (2007) who finds that repeated partnerships are associated with lower firm performance; or Uzzi and Spiro (2005) who analyse the network of Broadway actors and observe that network effects can be parabolic, i.e. performance increases up to a threshold, after which point the positive effects reverse. Though, empirical studies examining negative effects of embedded ties on performance remain nascent (Poppo et al., 2008).

differ in its usefulness for reaching economic ends, obviously, relationships per se are not a panacea to organisational challenges and individual resource scarcity.

So basically, the network acts as a social boundary of demarcation around opportunities and constraints that are assembled in embedded ties (Uzzi, 1996). Managers as well as individual network members seeking to build effective networks first need to understand under what conditions social structure confers potential advantages and how that can actually be converted to economic or other advantage. Just as the architect needs to understand what makes buildings stay up rather than fall down (Koka, Madhavan & Prescott, 2006), network strategists need to understand how to design network structure at the management level to provide network members with the opportunities to realise network-inherent benefits. Also, they need a viable strategy for how to select the "right" actors to form the network, too. At the same time, the individual network actors need to grasp how to design individual networking activities, so that the opportunities inherent in social structure are adequately used to promote individual performance.

Against this background, there are a number of underexplored issues in network research. In this thesis, there are five main chapters. Each of the five chapters gives attention to a particular topic with some underexplored innate issues. The generic approach that binds these chapters together is the idea of analysing the influence of network design on firm performance through expanding economic reasoning with sociological approaches. The specific gaps addressed by each chapter are not necessarily exclusive, but some appear in different contexts in more than one chapter. Thereby, this thesis seeks to address several core research questions from different perspectives that are commissioned to stimulate theory development on building effective networks. The organising principle which integrates the five chapters, an overview of the main contributions offered by this thesis, and the methodological foundations applied to provide these contributions, are laid out in the following.

2. Research Approach and Contribution

*Organising Principle – Analysing Network Effects on Performance in the Context of a Lifecycle Perspective***.**

Parkhe et al. (2006) stress the need to focus on process issues by placing network research temporally and topically in its broader context (see figure 1; following Parkhe et al., 2006). "Temporal" contextualisation uses the time dimension as an organising principle, from network birth to growth to maturity to death (see Monge & Contractor, 2003). In a parallel track, "topical" contextualisation focuses on central topics of interest to managers and researchers along various phases of a network's lifecycle (Parkhe et al., 2006). Following the lifecycle concept as an organising principle enables the study of performance as an effect of changes in social construction (De Rond & Bouchikhi, 2004). In this vein, Low and Abrahamson (1997) highlight that research must pay more attention to the lifecycle context in which organising occurs, *as different relationship structures are essential to performance in different lifecycle stages*.

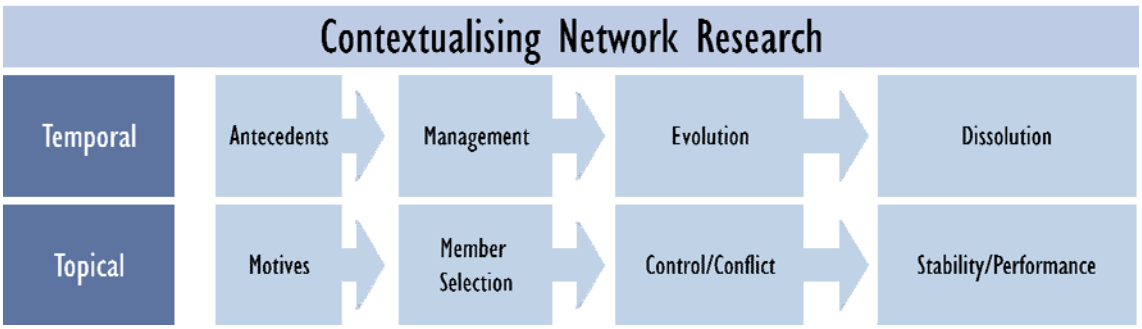

Figure 1: Temporal and Topical Contextualisation

Based on Parkhe et al.'s (2006) contextualisation, each chapter focuses on a central topic of interest to managers and researchers along different phases of a network's lifecycle. The first chapter marks the beginning of the lifecycle, starting with the subject of successful selection of network participants based on their individual social capital external to the network (Chapter I). From member selection, the second chapter proceeds to the topic of the configuration of network participants in an overall network structure (Chapter II). With the initial structure being established, the third chapter addresses location decision-making during subsequent network expansion (Chapter III). As an extension to expansion, the fourth chapter examines the success-

ful internationalisation of cultural goods that are created in network teams (Chapter IV). Each chapter is a logical predecessor of the following chapters, as decisions in previous lifecycle stages make subsequent network performance, at least to some extent, path-dependent. The last chapter embraces the previous ones by offering some insights on feedback from consumer networks on the success of business activity in general, which may affect network organisations along each lifecycle stage (Chapter V).

The organising principle of the lifecycle perspective is the first dimension along which chapters are structured. The second dimension classifies the sources of input that actors seek to acquire, as input can originate externally or internally to the focal (network) organisation (see figure 2). Other than Chapter I that concentrates on resources available external to the network organisation, Chapters II-IV focus on access to network-internal resources. Chapter V considers resources available to individual economic actors from external networks. The major contributions of this thesis are outlined below.

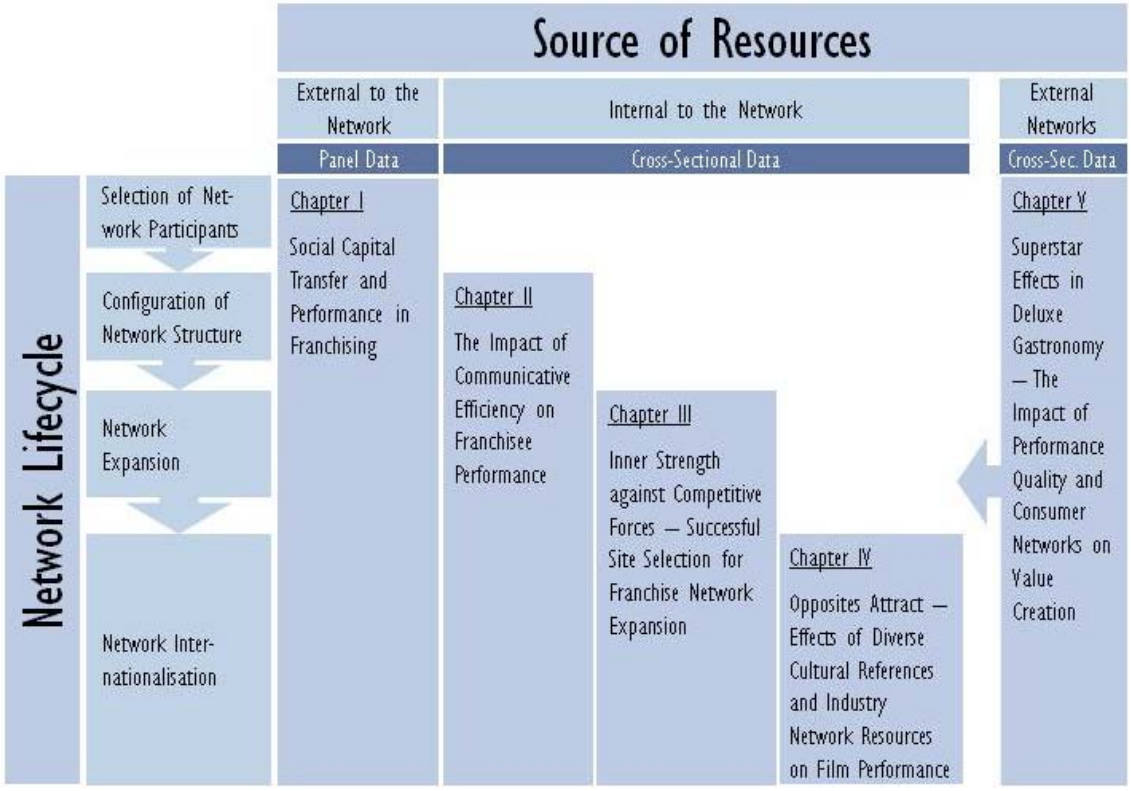

Figure 2: Organisation of Chapters

Contribution I: Expansion of Interdisciplinary Network Research.

Based on the network lifecycle – that is itself an avenue for future research (Parkhe et al., 2006) – as an organising principle, the generic contribution of the five chapters is the extension of interdisciplinary network research. Here, "interdisciplinarity" refers to expanding the use of social network theory as an enrichment of economic reasoning, to examine effects of network structure and networking activities on performance. So far, research on planning and management of networks in general has widely treated the "human factor" of organisational design implicitly (Inkpen, 1996; Jarillo, 1988; Tallman, Jenkins, Henry & Pinch, 2004; Tsai, 2001). This constitutes a major shortcoming since the alleged superiority of networks to other organisational designs depends on individuals within the organisation, as these must convert organisational potential into reality.

Advocating the combination of sociological and economic approaches, Granovetter (2005, p. 47) argues, "While economic models can be simpler if the interaction of the economy with non-economic aspects of social life remains inside a black box, this strategy abstracts from many social phenomena that strongly affect costs and available techniques for economic action. Excluding such phenomena is risky if prediction is the goal. […] The disciplines that neighbor economics have made considerable progress in unpacking the dynamics of social phenomena, and a more efficient strategy would be to engage in interdisciplinary cooperation of the sort that trade theory commends to nations. My goal here has been to suggest some such linkages, which remain largely unexplored, and pose one of the greatest intellectual challenges to the social sciences".

The interdisciplinary set-up is further motivated by Dant's (2008, p. 93) argument for worthwhile diversity in research perspectives, as he notes, "Authors are beginning to examine research questions from a phenomenological perspective rather than within the confines of single theoretical frameworks". Combining economic and network perspectives precedes the ability to observe the effects tested here ("insights follow method"). As Brown and Dant (2008, p. 6) point out, "Strong contributions to the retailing literature [...] stem from the new insights provided by those [different] methods".

The first three chapters in this thesis focus on franchising networks. They employ a social capital/social network perspective to the analysis of performance effects in a way that is new to the franchising context. Accordingly, the first three chapters are inspired by the question of whether and how theories that have not yet been applied to franchising networks can expand our knowledge of franchising. They further apply a variety of measures and mathematical tools from social network analysis, prompted by the question of what research methods or empirical techniques could provide advancements to franchising research. Chapter IV combines team diversity research and team social capital research with an economic approach to performance outcomes, Chapter V combines the analysis of economic outcomes and Superstar theory based on a focus on consumers' social networks.

Contribution II: Analysis of Determinants of Network Members' Individual Performance.

Research has often concentrated on beneficial effects of networking (Labianca & Brass, 2006). As a result, dysfunctionalities and costs of networking activities still remain underexplored. This shortcoming in network research exacerbates an in-depth understanding of how collective action should be organised (Parkhe et al., 2006). Adler and Kwon (2002) and Lin (1999) argue that research would benefit from a more systematic assessment of risks as well as benefits of social capital to understand better the downsides of social relationships, both for the focal actor and for others. Therefore, they deem research on the differential access to resources as well as positive and negative effects of social structure a high priority: "while we understand a lot about market failures and bureaucratic failures, more research on the distinctive forms of social capital failure would be an important antidote to romantic illusions about Gemeinschaft" (Adler & Kwon, 2002, p. 35). Accordingly, Chapters II-IV consider positive as well as negative effects of social structure on network units' performance to provide implications with respect to under what structural and relational conditions networking benefits outweigh networking costs, and when this situation is reversed.

In addition, individual performance of franchisees is a major underexplored issue: Dant (2008, p. 92) argues, "much of what we know about franchising is based on investigations of the franchisors to the virtual exclusion of research focused on the franchisee perspective". Although

franchisees are essential ingredients in successful franchise chains and franchising is so important in today's economy, few studies examine determinants of *franchisee performance* (Dant, 2008; Michael & Combs, 2008). Chapters I-III extend research on franchisee performance, addressing the core question of what makes a franchisee successful.

For analysing performance effects, researchers must keep in mind the inherent network characteristic of structure-player duality. Lin (2001, p. 12) explains, "social capital contains three ingredients: resources embedded in a social structure; accessibility to such social resources by individuals; and use or mobilisation of such social resources by individuals in purposive actions. Thus conceived, social capital contains three elements intersecting structure and action: the structural (embeddedness), opportunity (accessibility) and action-oriented (use) aspects". In a similar vein, Parkhe et al. (2006) illustrate the importance of both individual members and their configuration in the overall network by the following example: consider carbon atoms, which can be structured in different ways. One arrangement yields graphite, the soft, greasy, black substance used in pencils. Another yields diamonds, the hardest known substance found in nature. And an even harder substance (called "buckeyballs", or C_{60}) can be manufactured. The different outcomes depend on differences in linking the individual atoms to form an overall structure. Yet, while the bonds between the atoms are important, so are the atoms themselves – are they of carbon or hydrogen or nitrogen? Parkhe et al. (2006, p. 562) point out that such alternative views "are often treated in passing, if at all", and systematic recognition "will help delineate the scope and mission of network theory in the coming years". Accordingly, Chapters II and III focus on opportunities induced by network structure and provide some implications for how these opportunities must be consciously used by network members to realise beneficial, and avoid disruptive, effects on performance.

Contribution III: Focus on Cultural Aspects in Network Research.

Surprisingly little attention has been paid to cultural aspects of network research; particularly, to the cross-cultural, cross-national aspects of networks. Boyacigiller and Adler (1991) emphasise that organisation science in the United States is a "parochial dinosaur", where empirical research tends to concentrate on North American organisations, limiting the generalisability of

current theories to firms not in North America and to firms embedded in cultures not derived from an Anglo-Saxon heritage; yet, in a world economy where international networks are thriving, network theory must accept and more fully embrace the phenomenon of globalisation (Parkhe et al., 2006).

For Chapters IV and V, the focus shifts from franchising in non-cultural industries to networks in cultural industries, i.e. in motion pictures and deluxe cuisine. Chapter IV concentrates on cross-cultural aspects of network performance. Chapter V completes the analyses by examining effects of feedback from consumer networks on business activity in general, that may also affect network performance along each lifecycle stage examined in the previous chapters.

Methodological Approach.

To analyse these issues in detail, mathematical and methodological groundings of social network analysis can be employed. To describe a network's actors and structure, sociologists have developed numerous quantitative measures. Social network measures originated in the sociology literature exploring social groups, social cohesion (the extent to which people "stick together"), positions, status, dominance, conformity, social exchange, reciprocity, influence, and other forms of relationships among individuals (Lavie, 2006). These theories gained mathematical appeal with the development of the distinction between strong and weak ties (Granovetter, 1973); the notion of structural holes (Burt, 1992); network density (Burt, 1992, 1997; Coleman, 1988; 1994); centrality measures of network positions (Bonacich, 1987; Freeman, 1979; Ibarra, 1993; Podolny, 1993); cohesion (Coleman, Katz & Menzel, 1957); and structural equivalence, the similarity in actors' patterns of ties (Burt, 1987; Lavie, 2006).[3] Based on Granovetter's (2005) work, the central concepts are explained in the following:

(1) *Strong Ties and Weak Ties*. Investments in terms of time, capital and affection vary over an actor's network ties. Those ties that receive more investments are termed "strong ties"; in network logic, these ties are usually ties to people considered as "friends", whereas "weak ties" are ties to people who are merely "acquaintances". Granovetter's (1973; 1983) idea of "the strength

[3] For detailed descriptions of these concepts, see De Nooy, Mrvar & Batagelj, 2005.

of weak ties" is an influential concept that describes how weak ties are better sources of information when individuals need to go beyond what their friends know, for example, to find a job or obtain a scarce service. Here, the idea is that less redundant information can be acquired through weak ties than through strong ties, as acquaintances know people that the information-seeking actor does not know. Thus, acquaintances can provide more novel information, whereas close contacts tend to move in the same circles as the focal actor, so the information they share overlaps considerably with what the actor already knows. The novelty effect arises in part because acquaintances are typically less similar to the focal actor than friends, and in part because they spend less time with this actor. Thereby, acquaintances connect the focal actor to the wider world. Viewed on a broader scale, if each person's close contacts know each other, they form a closely knit clique. Due to individual time restraints e.g., individuals are then connected to other cliques through weak rather than strong ties. Thus, from a "bird's-eye view" on the overall network, weak ties determine the extent of information diffusion in large-scale social structures. One manifestation of this idea is that in scientific fields, new information and innovative ideas are more efficiently diffused through weak ties (Granovetter, 1983). There are many more weak ties in social networks than strong ones, and often, weak ties may carry information of limited significance. But the important point is that such ties are much more probable than strong ones to transmit unique, nonredundant information across otherwise disconnected segments of social networks (Granovetter, 2005).

(2) *Structural Holes*. Burt (1992) extends the "weak tie" argument by emphasising that it is not the quality of particular ties that is centrally important, but rather the way different parts of a network are linked. He emphasises the strategic advantage that those individuals may enjoy who have ties into multiple networks that are largely separated from one another. These persons can access resources from unique parts of their network, can hear about impending threats and opportunities more quickly than others, and can better find out about the quality of exchange partners (Zaheer & Bell, 2005). Such actors are in a privileged position for both resource acquisition and transmission: they can both make informed decisions, and play a broker role by strategically transferring or holding back information. Thereby, they benefit from information arbitrage

(Burt, 2004). Insofar as such individuals constitute the only route through which resources, like information, may flow from one part of a network to another part, these actors benefit from "structural holes" in the network (Granovetter, 2005).

(3) *Network Density*. If a social network consists of *n* actors, "density" refers to the proportion of the possible $n*(n-1)/2$ connections among these actors that actually exist. The denser a network, the more different paths are there along which information and ideas can travel between any actor pair. For instance, greater density makes norms of "proper behaviour" more likely to be encountered repeatedly, be discussed and agreed upon; it also renders free-riding in terms of deviance from such norms harder to hide and, thus, punishment more probable. As an upside effect, collective action that depends on overcoming free-rider problems is more likely to happen in dense social networks, since actors in such networks typically come to share norms that discourage free-riding and emphasise trust. On the downside, in dense structures, actors tend to confirm each others' views and opinions, as they all have similar input at their disposal (termed "echo-room problem"; Burt, 2005). Such a homogeneous information base bears the risk of losing touch with market developments ("collective blindness"; Nahapiet & Ghoshal, 1998). Redundant input then prevents actors from realising and acting on challenges to performance. All else equal, larger groups will have a lower network density because people have cognitive, emotional, spatial and temporal limits on how many social ties they can sustain (Granovetter, 2005).

In applying these and other social network measures to the study of firm performance, scholars often focus on the firm's "ego-network", which encompasses the focal firm (termed "ego"), its set of partners ("alters"), and their connecting ties (Wasserman & Faust, 1994). Some studies establish the different effects of strong ties and weak ties on firm performance (Delmestri, Montanari & Usai, 2005; Lavie, 2006; Rowley, Behrens & Krackhardt, 2000). Ahuja (2000) examines the effects of ties and structural holes on innovation output. Meiseberg, Ehrmann and Dormann (2008) analyse how the number of contacts and structural holes influences movie performance. De Carolis et al. (2009) and Lee, Lee and Pennings (2001) show that the number of ties to other organisations and to venture capital firms is associated with new venture creation

and sales growth of start-up firms. Baum et al. (2000) demonstrate that the number of alliance partners and the structural equivalence of firms explain differences in the performance of start-up firms. Others explore effects of network centrality or density on outcomes (Provan & Milward, 1995; Provan & Sebastian, 1998; Tsai, 2001).

One limitation of all network research, that also applies here, arises from the fact that empirical studies must use quantitative measures to estimate information that is essentially qualitative and cumulative in nature. The problem refers to data collection as well as data evaluation (Daft & Lengel, 1986; Witt, 2004). In the following chapters, where possible, the studies attempt to incorporate qualitative aspects of exchange relations, to ensure that opportunities of network structure are adequately used by network members.

Furthermore, Lavie (2006) points out that network studies have often utilized performance measures other than economic rents, which would provide a better understanding of performance effects of social structure. Chapters I-III combine objective measures like sales and sales growth, as variables that are close proxies for profit (Buzzell & Gale, 1987), with subjective measures of business success, to provide a more reliable account of business performance.

First, in the following, this thesis will have a closer look at the networks of individual actors, concentrating on resources (revenues and information) that new franchisees can gather *external* to the franchise network from their social relations to customers (Chapter I). Subsequently, the focus shifts to social networks of franchisees *inside* the franchise network, where resources (mainly information) are acquired using social relations to fellow system franchisees (Chapters II and III). The first three chapters quantify individual performance effects of networking activities, which means the focus is on each individual franchisee's relationships. Extending this perspective, in Chapter IV, all relations among a team of network actors to other network teams within the overall industry network, and the performance effects of individual teams' (instead of individual persons') networking activities are examined. For the analyses in Chapters I-IV, a number of measures from social network theory are employed; the application of several of these measures is innovative, especially to the franchising context. To "create a truly networked point of view" (Witt, 2004, p. 392), Chapter V deals with feedback from consumers' social net-

works on business activity in general. The next section summarizes the chapters and provides more detail on the specific research questions addressed by each chapter.

III. SUMMARY OF CHAPTERS – PERSPECTIVES AND EMPIRICAL EVIDENCE

1. Selection of Network Participants: Social Capital Transfer and Performance in Franchising

"Just as for a child, the conditions under which an organization is born and the course of its development in infancy have important consequences for its later life"
(Boeker, 1989, p. 490)

The entrepreneurship literature has long assumed that entrepreneurial success can be attributed to some set of demographic factors, personality traits, or psychological variables that hold across different contexts. But as equivocal research results show, most characteristics have different effects on performance in different environments. Accordingly, Low and Abrahamson (1997, p. 435) point out that so far, "Entrepreneurship research has paid insufficient attention to the context in which new businesses are started. Consequently, efforts to identify factors that consistently lead to entrepreneurial success have failed. This is because what works in one context will not necessarily work in another. Even worse, factors that lead to success in one context may lead to failure in another".

A newer stream of research emphasises the importance of networks, and the social capital inherent in them, for new firms. Social capital is understood as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual" (Nahapiet & Ghoshal, 1998, p. 243), that "creates entrepreneurial opportunities for certain players and not for others" (Burt, 1992, p. 7). Yet often, relationships provide potential benefits only (Srivastava et al., 1998), by offering access to resources like information, emotional support, or legitimacy. Such resource access explains performance only to the extent that entrepreneurs capture the economic value that these resources create (Crook et al., 2008). However, resources obtainable from customer relationships – in terms of revenues – provide actual benefits to entrepreneurs and are central to profit generation across different contexts (Gupta, Lehmann & Stuart, 2004; Srivastava et al., 1998; Yli-Renko & Janakiraman, 2008).

Accordingly, this chapter examines the role of the entrepreneur's social capital with customers for the performance development of new ventures in franchising. Anecdotal evidence shows that under conditions of quality uncertainty, when a well-reputed seller leaves the firm and starts an entrepreneurial venture, customers may choose to continue patronizing the seller rather than the seller's former firm. Sellers that can transfer customers from their former occupation into the franchise environment have a starting advantage, since their established customer base provides some "certain" sales and referrals. Like for other entrepreneurs, such customer capital may offer a head start for new franchisees as well.

Based on panel data from 175 franchise outlets, the study results show a strong connection between the franchisee's customer capital and short-term performance after system entry. The effect is even stronger if franchisees understand utilizing customer relationships as a source of information. However, transferring customer capital does not provide long-term advantages: benefits of transferred customer relationships cease over time as other system franchisees catch up in building a customer base and acquiring know-how. The empirical results offer practical implications for franchisees and franchisors and entrepreneurs in general.

The contribution of the first chapter is the following:

- First, prior studies on social capital with customers examine primarily technology-based firms (Yli-Renko & Janakiraman, 2008) and selected relationships like "key customers" (Abratt & Kelly, 2002; De Clercq & Rangarajan, 2008; Venkataraman, Van De Ven, Buckeye & Hudson, 1990; Yli-Renko, Autio & Sapienza, 2001a; Yli-Renko, Sapienza & Hay, 2001b), and do neither address transfer of social capital nor consider the franchising context. Thus, the study adds to the broader discourse on the role of customer relationships for start-up performance and development in general, by focusing on franchising in particular. Combining the literature on social capital, especially with customers, and new venture performance, is innovative to franchising research. Therefore, the study sheds some light on the question of whether and how theories that have not yet been applied to franchising networks can expand our knowledge of franchising.

- Second, few studies have analysed the determinants of franchisee performance (Dant, 2008; Michael & Combs, 2008). This study extends research on franchisee performance.
- Third, the findings on determinants of franchisees performance provide insight into the question whether there are attributes that franchisors should look for in applicants when selecting network members, and what these attributes might be. The few existing empirical studies on franchisee selection criteria focus on demographic factors like age, and business or industry experience, on personality, or on financial strength (Altinay & Miles, 2006; Clarkin & Swavely, 2006; Jambulingan & Nevin, 1999; Wang & Altinay, 2008; Williams, 1999). Yet, there is little empirical support for which criteria in fact lead to desired results (Birley & Westhead, 1994; Jambulingam & Nevin, 1999; Saraogi, 2009). Previous studies have pointed out that successful franchisee selection calls for further research (Clarkin & Swavely, 2006; Saraogi, 2009; Wang & Altinay, 2008). Jambulingam and Nevin (1999, p. 364) argue, "the ideal in building and maintaining a high quality network of franchisees is a selection method that would qualify prospective franchisees based on their likely future performance". Gibb and Davies (1990, p. 16) set out that "it is perhaps an unrealistic expectation that it will be possible definitely to pick winners or indeed to produce a comprehensive theory that leads to this. But arguably it is better to make further strides towards better understanding of the factors that influence the growth process". This study offers some normative implications for more successful selection.
- Additionally, the results indicate that consumers do not necessarily choose the franchisor brand before choosing a specific franchise outlet to purchase. Loyalties can rather be based on the entrepreneur, *who makes consumers choose the brand*. Directing attention to the question of whether "consumers indeed choose the brand before patronizing a specific franchised outlet as widely believed", Dant (2008, p. 93) points this issue out as another major research gap.

Thereby, this chapter offers managerial implications to both franchisors and franchisees, and entrepreneurs in general, for how social capital with customers can enhance performance, by exploring these specific gaps in the literature:

1. "How can theories that have not yet been applied to franchising networks expand our knowledge of franchising?"
2. "What makes a franchisee successful? Are there biographical, personality, or behavioural attributes that franchisors should look for in franchisees?"
3. "Do consumers indeed choose the brand before patronizing a specific franchised outlet as widely believed?"

2. Configuration of Network Participants: The Impact of Communicative Efficiency on Franchisee Performance

"Never give a party if you will be the most interesting person there"
Mickey Friedman, Novelist

Research in strategic management emphasises the functionality of networks for managing resource dependencies and fostering learning and knowledge exchange (Podolny & Page, 1998). With respect to these activities, networks can provide efficiency advantages that markets or hierarchies do not possess. Yet, realising these advantages depends on interaction between network members. Thus, network partners play a significant role in shaping the resource-based competitive advantage of the firm (Afuah, 2000; Lavie, 2006; Lee et al., 2001; Stuart, 2000). This idea applies also in the franchising context (Darr & Kurtzberg, 2000).

The objective of this study is to examine how franchise network members can organise networking activities efficiently, to enhance franchisee performance and to reinforce the superiority of the network form of organisation to alternative organisational designs. Conceptualising the franchise organisation as a *social network arrangement*, this research argues that *efficient resource transmission among franchisees* is essential in the quest for competitive advantage and economic rents, and is the key to higher individual (and in aggregation, collective) performance. The analysis is based on the premise that interfranchisee communication is the strategic means for efficient exchange. For analysing the way to efficient exchange, the study proposes the concept of "communicative efficiency". This concept addresses franchisee opportunities and efforts to use networking efficiently – i.e. to match the acquisition of network resources and benefits thereof with networking investments in the most rewarding way. Communicative efficiency builds on two properties. The first property is network configuration: franchisee network positioning, as relationship embeddedness, determines communication opportunities. Yet, the quality of an organisation depends on the quality of the individuals that make it up. Hence, the second property is communication efforts of franchisees.

The study analyses how the system management can act on these two properties to substantiate the network's superiority to alternative organisational designs and how franchisees can build their networks to realise individual performance gains. Applying concepts and measures from social network analysis, several hypotheses on the linkages between efficiency's two properties and franchisee performance are tested, using 121 fashion retail franchisees. The results clearly demonstrate that efficient exchange renders linked units more astute collectively than they are individually.

The contribution of the second chapter is the following:

- First, social network theory and the empirical techniques that this theory provides are innovative to franchising research, thus the chapter sheds some light on whether and how theories and empirical techniques that have not yet been applied to franchising networks could provide advancements to franchising research.
- Second, few studies examine franchisee performance (Dant, 2008; Michael & Combs, 2008). The study provides some insights in franchisee performance.
- Third, networks can provide efficiency advantages for managing resource dependencies that markets or hierarchies do not possess. Yet, few studies analyse aspects of efficiency in franchising (Kubitschek, 2001). This research examines how resource exchange among network members can be organised efficiently. Thereby, the study offers implications concerning under what conditions potential efficiency advantages inherent to the network form of organisation can actually be realized, so that the network form of organisation tends to constitute the superior organisational design for conducting the business activity at hand.
- Fourth, research has investigated the use of interfirm communication for effective interaction (Tikoo, 2002). Mohr, Fisher and Nevin (1996) point out that communication is the most important element to successful interfirm exchange. Mohr and Sohi (1995) further note that studies tend to focus on positive effects of communication, whereas detrimental flows remain an important research issue. Moreover, in franchising, communication has been examined largely with respect to the franchisor-franchisee relationship

only (Kidwell, Nygaard & Silkoset, 2007). This chapter focuses both on positive and negative effects of communication and concentrates on the franchisee level. Thereby, it offers some results concerning the research gap emphasised by Nebus (2006, p. 615), which is "when needing knowledge, whom people should contact in forming their advice network".

- Fifth, Lavie (2006) points out that studies have often focused on the impact of direct ties only, although indirect ties can affect the competitive advantage of the interconnected firm as well. Benefits may result from a second-order effect in which a firm has access to the network resources of a partner of its alliance partner. Then, the firm may even use a partnering strategy in which it allies with a partner that does not possess valuable resources, but that provides access to others owning desirable resources. Lavie (2006, p. 651) highlights that, "Social network theories offer a promising approach for pursuing this avenue, insofar as they acknowledge the role of indirect ties" (Ahuja, 2000; Gulati et al., 2000). This chapter considers the influence of both direct and indirect ties simultaneously.

Thereby, to both franchisors and franchisees, this chapter offers managerial implications for how to promote communicative efficiency, exploring these specific gaps in the literature:

1. "How can theories that have not yet been applied to franchising networks expand our knowledge of franchising? What research methods or empirical techniques could provide advancements to franchising research?"
2. "What makes a franchisee successful?"
3. "Under what conditions can potential efficiency advantages inherent to the network form of organisation actually be realized, so that the network form of organisation tends to be the superior organisational design for conducting business activity?"
4. "How can communication be organised efficiently on the franchisee-level? What positive and negative effects of communication do occur among franchisees? When needing knowledge, with whom should franchisees communicate in their network?"
5. "What is the impact of direct ties vs. indirect ties?"

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

"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 Research

For every franchise system, a major step in the leap from the unknown to the commonplace is developing a strategic plan for growth. That growth requires the management of the franchise chain to adopt a location strategy, which will ideally maintain and extend the chain's competitive advantage. Therefore, choosing locations that provide new system outlets with high performance prospects appears promising. Addressing this location issue in the context of retail franchising, this chapter deals with ways to enhance system expansion success.

Location decisions can be based on strengths found in local markets – following the *market perspective* – or on the expanding system's own strengths – following the *firm perspective*. The exogenous *market perspective* holds that evaluating market conditions is most relevant to determine promising spots because there are location-specific direct economic effects on performance (i.e. demand effects in Hotelling's model; e.g. see Christensen & Drejer, 2005; Ingene & Yu, 1982; James, Walker & Etzel, 1975; Lee & McCracken, 1982; Powers, 1997; Simons, 1992). The endogenous *firm perspective*, i.e. the resource-based view that considers a firm's internal resources (Barney, 2001; Peteraf, 1993), has recently been extended using the social network approach that regards a firm's externally available resources (Lavie, 2006). Thereby, the *firm perspective and the social network approach* together provide what this study calls an "*inner strength perspective*" on interconnected firms. The inner strength perspective holds that firms can combine internal and external resources to achieve competitive advantage. Following this perspective, resource access offered at a certain spot can determine a location's attractiveness rather than location-specific market factors.

This research combines the literature strands on the market and the inner strength perspective and posits hypotheses, first, to explore which perspective dominates location decisions for ex-

pansion in practice, and second, to provide clarification as regards the relevance or otherwise of the decisive criteria for outlet performance. Using concepts from social network analysis, hypotheses are tested on a sample of 201 German franchisees.

Results show location decisions rely on both perspectives; yet, franchisee performance depends rather more on inner strength factors. Providing a shield against competitive forces, inner strength renders franchisees relatively independent of market characteristics. Based on the study results, prior definitions of promising locations might benefit from a re-evaluation. Further, there is evidence that expansion is better served by following a geographically dispersed cluster-approach, than by growing steadily from a baseline location.

The contribution of the third chapter is the following:

- First, so far, the resource-based view (RBV) has tended to envision firms as independent entities, where individual resources belong exclusively to each independent firm. In an increasingly networked business world, featuring significant sharing and/or exchange of resources, such an assumption is tenuous; individual firms' inputs into network organisations can comprise shared and nonshared resources, which together generate rents (Parkhe et al., 2006). By combining the RBV and social network theory, this research proposes an "inner strength perspective" on interconnected firms. Lavie (2006) and Parkhe et al. (2006) point out that the meshing of network theory with the RBV deepens and enriches both perspectives. This combined perspective is innovative in its application to franchising research.
- Second, few studies examine franchisee performance (Dant, 2008; Michael & Combs, 2008). The study provides some insights in franchisee performance by providing clarification as regards the relevance or otherwise of location decision criteria actually applied in practice for outlet performance.
- Third, this research picks up the gap between theory and practice: Clarke, Mackaness and Ball (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. From a practitioner's 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 & Laporte, 2005; González-Benito, 2002; Sakashita, 2000; Wood & Tasker, 2008). This study explores which of two theoretical approaches, i.e. market-based location theory, or the inner strength perspective, dominates decisions during expansion in practice.

Thereby, this chapter offers managerial implications to franchisors and franchisees as regards how to organise location decision-making to enhance outlet success, by exploring these specific gaps in the literature:

1. "How can theories that have not yet been applied to franchising networks expand our knowledge of franchising?"
2. "What makes a franchisee successful?"
3. "Does market-based location theory, or the inner strength perspective, dominate pragmatic decisions, i.e. do exogenous location factors or endogenous network characteristics have more effect on judgements? Which criteria are more useful for forecasting outlet performance?"

4. Network Internationalisation: Opposites Attract – Effects of Diverse Cultural References and Industry Network Resources on Film Performance

"We know that an announcement 'British Film' outside a movie theatre will chill the hardiest away from its door"
(Joseph Schenck, former President of United Artists; cited by Low, Richards & Manvell, 2005, p. 298)

This study offers a new framework for organising a motion picture in a way that enhances chances for box-office success in export markets without jeopardizing domestic performance. In an increasingly global economy, an issue imperative to consider when launching a product internationally is the receptiveness of members of a culture to objects and ideas that originate from other cultures. For international success, movies as cultural content products need to provide a certain amount of cultural familiarity and identification potential to diverse audiences, so that audiences understand what they are offered, while still being provided with sufficient novelty to enjoy it. This research is based on the following premise: (1) the composition of the *movie team*, as the basis for contributing different cultural backgrounds along with creativity and talent to movie creation, and as a highly visible movie ingredient, as well as (2) essential *movie characteristics* will need to suit audiences not only in the home market, but in culturally diverse export markets. The study suggests that capitalizing on diversity in these two "input categories" helps provide ample points of reference, that is, higher familiarity, to audiences in diverse markets.

This research combines and expands two strands of research for the moviemaking industry: the economic approach to movie performance (Litman, 2000; Marvasti & Canterbery, 2005; Scott, 2004), and the team diversity approach to team performance (Horwitz & Horwitz, 2007; Stewart, 2006; Williams & O'Reilly, 1998). A number of hypotheses on the relation of movie team composition – considering team members' deep-level diversity attributes (cultural background, tenure, connectivity, education), and surface-level diversity attributes (status, age, gender) – and of movie characteristics (sets, movie content) to a movie's domestic and export performance are tested, using a sample of German top-ten movies of 1990-2005. Thereby, the study explores

differences in factors that determine motion picture success at home and abroad. Further, the relation of composition and characteristics to total performance is examined.

Results show that offering familiarity to export markets, particularly in a cultural context (cultural background, movie sets), is strongly rewarded abroad. Yet, for domestic success, diversity in social network resources is essential. Such diversity reduces the danger of "groupthink" and enhances creative potential available for movie creation. In general, both domestic and overall success depend on the other deep-level and the surface-level attributes apart from cultural variables, whereas export success does marginally so. The findings demonstrate that despite the unpredictable shifts in the structure of consumer preferences for motion picture entertainment often claimed, there clearly is a distribution of success in the movie industry that can be impacted by management.

The contribution of the fourth chapter is the following:

- First, surprisingly little attention has been paid to the cross-national, cross-cultural aspects of networks; yet, in a world economy where international networks are thriving, network theory must accept and more fully embrace the phenomenon of globalisation (Parkhe et al., 2006). Since movie producers can rarely build on systematic research when attempting to customize movies to different cultural settings, this chapter seeks to provide some findings on the cross-cultural aspects of network design and performance. The study provides managerial implications for how to target international audiences more effectively.
- Second, Oh, Labianca and Chung (2006) note that the two concepts of groups and social capital have rarely been paired together, with the result that a simultaneous understanding of intragroup and intergroup relationships, and of group effectiveness, has remained beyond reach (Parkhe et al., 2006).[4] Chapter IV combines team diversity research and the idea of team social capital with an economic approach to performance. So, the chap-

[4] The terms "team" and "group" are treated as equivalents here, as the majority of small group and team researchers have used the two terms interchangeably (Ilgen, 1999).

ter sheds some light on whether and how the merger of these theories can extend the understanding of rent streams in cultural industries.

- Third, in a similar vein, Joshi (2006) advances research on personal networks by focusing on teams instead of individuals, based on the observation that teams are increasingly used in the workplace. He notes that when "examining the outcomes of team diversity, researchers have typically focused on the internal functioning of teams […]. This approach limits our understanding of the complex nature of a team's interactions and does not allow a full appreciation of the processes by which diversity can influence team functioning. Diversity in a team allows for access to a diverse array of external networks" (p. 583) that are sources of diverse perspectives, knowledge, and information that can enhance a team's social and knowledge-based capital and improve team performance (Parkhe et al., 2006). Guimerà, Uzzi, Spiro and Nunes Amaral (2005, p. 697) argue that "research shows that the right balance of diversity on a team is elusive. Although diversity may potentially spur creativity, it typically promotes conflict and miscommunication […]. It also runs counter to the security most individuals experience in working and sharing ideas with past collaborators". This chapter provides some insights on the impact of team diversity, including diversity in culture and social network resources, on team performance.

Thereby, this chapter gives heed to a more sophisticated understanding of movie success factors in an intercultural context, which may be of use to economic actors in motion pictures and related industries, by exploring these specific gaps in the literature:

1. "How can motion picture entertainment be customized to different cultural settings?"
2. "How can theories that have rarely been applied to the relationship structures of teams expand our knowledge of the (economic) effects of team relationships?"
3. "How does team diversity (in cultural backgrounds and social network membership e.g.) affect team performance?"

5. Feedback from External Networks on Firm Performance: Superstar Effects in Deluxe Gastronomy – The Impact of Performance Quality and Consumer Networks on Value Creation

"In the future everyone will be world-famous for 15 minutes"
Andy Warhol (1928-1987)

We live in a world centred on stardom and hits. A surprisingly large number of markets are developing, or have already developed, into so-called "winner-take-all" markets, where rewards tend to be concentrated in the hands of a few top performers, with small differences in talent or effort giving rise to enormous differences in incomes (Frank & Cook, 1995).

Research provides evidence that these star effects occur in mass markets. In mass markets, often, a large number of people are willing to pay a premium to consume the services of those few individuals whom they perceive as the "best" performers. Here, Rosen (1981) was first to explain a strong connection between a person's talent and income. In contrast to mass markets, deep-pocket markets remain underresearched. A "deep-pocket" market is characterized by the fact that a relatively small number of consumers are willing to pay a large premium to consume the services of the few "best" performers. Then, in deep-pocket markets too, Superstars may command high rents.

This study analyses whether Superstar effects (disproportionate income effects) exist in the deep-pocket market for quality gastronomy in Germany, and what factors determine the stars' rents. In quality gastronomy, the stars can be the restaurant chefs. Building on Rosen's (1981) and Adler's (1985) central theories on star effects, two potential sources of stardom are explored. Following Rosen (1981), this research tests if *quality differences* between the *chefs*' performances have a direct effect on financial rewards (termed "direct Superstar effect"). Following Adler (1985), it assesses the income effect of a *media presence* of *chefs* (termed "classical Superstar effect"). Chefs who use the media to attract attention to their cooking and to promote discussion in consumer networks about their activities could become stars rather than others who are less present in the media. Thereby, the study deals with an economic issue of gen-

eral interest: does it pay more to develop your skills in your core business to perfection, or to maintain the current level of skills and invest in self-marketing?

Analysing a sample of 288 restaurants, for potential star effects by differences in quality, the results show that higher quality increases chefs' revenues. Yet, revenues do not increase disproportionately, and achieving higher quality requires substantial investments in exquisite ingredients, excellent staff and prime ambience. This problem, also called the "agony of the stars", has manifested itself in the bankruptcies of European three-star restaurants in recent years. As regards potential star effects by differences in media presence, there is a positive impact of TV appearances on financial rewards. Yet, these income effects are moderate as well, so there is neither a direct, nor a classical Superstar effect in quality gastronomy. The findings suggest that although both perfection of skills and self-marketing have similarly positive income effects, self-marketing seems both the less risky and the less stressful way to enhance income.

The contribution of the fifth chapter is the following:

- First, adding to the merging of different theories, the study investigates the impact of feedback from consumer networks on business activity and the explanatory value such networks may have for understanding economic outcomes in deluxe gastronomy.
- Second, research demonstrates that star effects in cultural industries occur in mass markets. Chung and Cox (1994), Hamlen (1994) and Sochay (1994), and Lucifora and Simmons (2003) provide evidence for Superstar effects in the music industry and the film industry, as well as in professional soccer. Complementing research on cultural mass markets, this study provides insights on the occurrence of such effects in cultural deep-pocket markets, too, as these have remained underresearched so far.
- Third, by analysing two potential explanations for superior income – actual skills and media presence –, the study addresses an economic issue of general interest, which is whether it "pays more to develop one's skills in one's core business to perfection, or to invest in self-marketing".

Thereby, the chapter provides implications concerning effects of feedback from consumer networks on business activity in general, by exploring these specific gaps in the literature:

1. “Does an impact of consumer networks on business activity help explain economic outcomes in deluxe gastronomy?”
2. “Are there Superstar effects in deep-pocket cultural markets?”
3. “Does it pay more to develop one’s skills in the core business to perfection, or to maintain the current level of skills and invest in self-marketing?”

IV. INTEGRATIVE FRAMEWORK

The core of this dissertation contains five modular chapters. These chapters are woven together by the idea of analysing the impact of social structure on performance in different stages of a network's lifecycle, through expanding economic reasoning with sociological approaches. Figure 3 displays the framework that integrates the five chapters. The left hand side of the figure acknowledges the central importance of examining the impact of social structure on performance in different lifecycle stages. The column headings organise the studies according to the sources of resources that actors seek to acquire. Also, they consider the origin of the data that is analysed in terms of their cross-sectional vs. longitudinal character. Cross-sectional and longitudinal methods complement each other in producing insights on economic outcomes being subject to social structure. As the chapters are modular in nature, they can be read solitarily according to individual foci of interest.

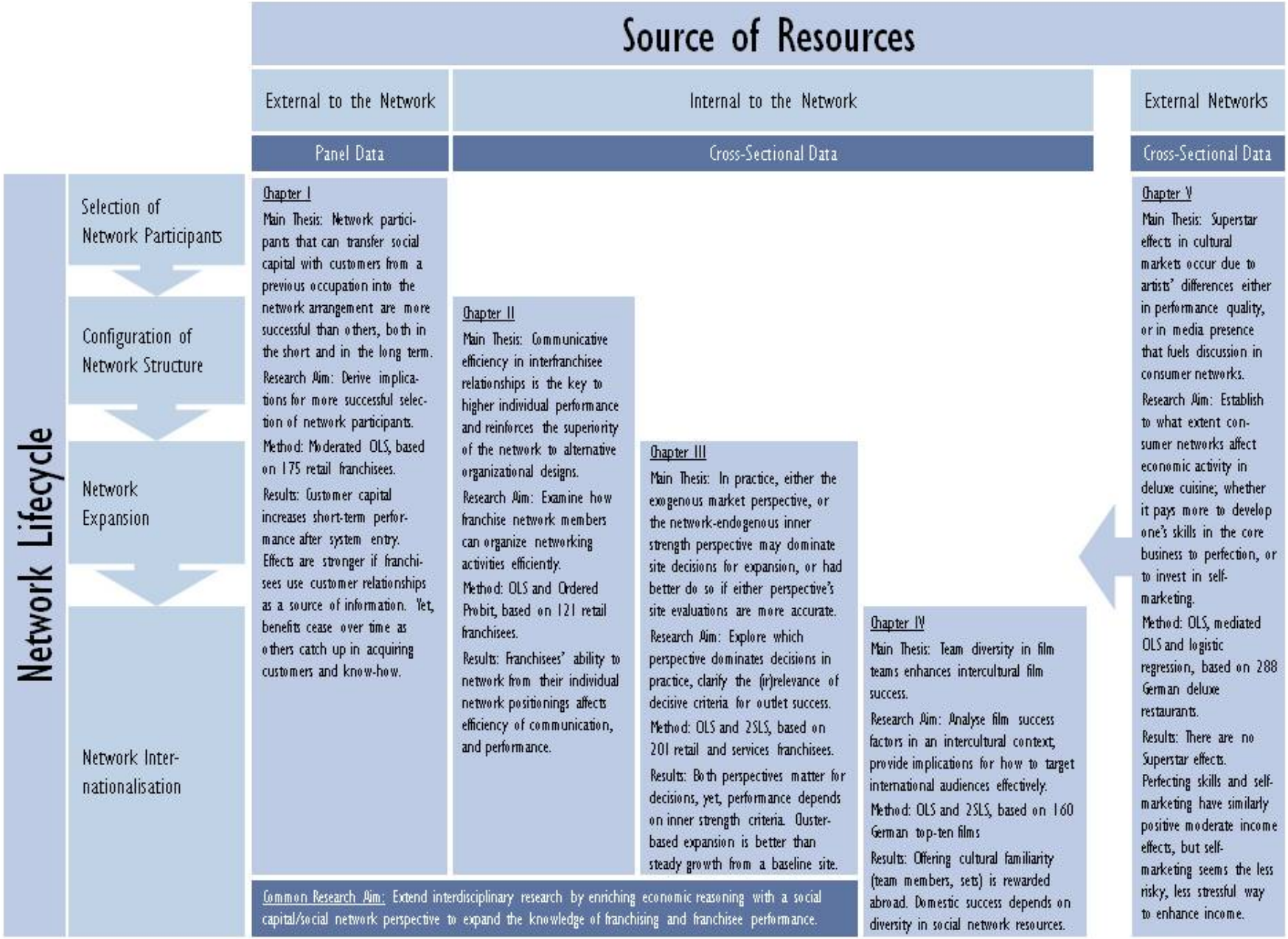

Figure 3: Integrative Framework

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PART B

I. SOCIAL CAPITAL TRANSFER AND PERFORMANCE IN FRANCHISING

1. Abstract

This chapter examines the role of franchisees' *social capital with customers* for the performance development of new franchising ventures. Entrepreneurs that can transfer customers from their former occupation into the franchise arrangement have a starting advantage, since an established customer base provides some "certain" sales and referrals. Using panel data from 175 outlets, the empirical analysis shows a strong connection between a franchisee's customer capital and short-term performance after system entry. Effects are even stronger if franchisees understand utilizing customer relationships as a source of information. However, benefits of transferred customers cease over time as others catch up in acquiring customers and know-how.

2. Introduction

"Just as for a child, the conditions under which an organization is born and the course of its development in infancy have important consequences for its later life"
(Boeker, 1989, p. 490)

The franchise system of distribution better suits the needs of some prospective entrepreneurs than others. Some franchisees prosper, stay within their system, and make major contributions to the system's success – other franchisees fail in all areas (Jambulingam & Nevin, 1999). Only a small proportion of entrepreneurs has the potential for substantial wealth creation (Birley & Westhead, 1994; Cooper, Gimeno-Gascon & Woo, 1994; Gilbert, McDougall & Audretsch, 2006; Reynolds, 1987). Chains would greatly benefit if franchisors were more able to detect future high-performing franchisees in the pool of applicants and accept them into the system, rather than low performers (Jambulingam & Nevin, 1999). Yet, to date, although franchisees are an essential ingredient in successful chains and franchising is so important in today's economy, few studies have analysed the determinants of franchisee performance (Dant, 2008; Michael & Combs, 2008). This chapter addresses the question of what makes a franchisee successful.

The entrepreneurship literature has long assumed that entrepreneurial success can be attributed to some set of demographic factors, personality traits, or psychological variables that hold across different contexts (De Carolis & Saparito, 2006; Low & Abrahamson, 1997). But as equivocal research results show, most characteristics are context-dependent, thus have different effects on performance in different environments. Another stream of research emphasises the importance of networks, and the social capital inherent in them, for new firms (Aldrich & Zimmer, 1986). Social capital is "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual" (Nahapiet & Ghoshal, 1998, p. 243) that creates "entrepreneurial opportunities for certain players and not for others" (Burt, 1992, p. 7). Yet, as De Carolis, Litzkie and Eddleston (2009) point out, not all well-connected, aspiring entrepreneurs are able to successfully launch a business. Thus, relationships differ in their usefulness for reaching entrepreneurial ends (Combs & Ketchen, 1999). Focusing on performance ends, of all the social capital firms have in terms of relationships with other actors, *customer relationships* are the most central to their profit gener-

ating purpose (Gupta, Lehmann & Stuart, 2004; Srivastava, Shervani & Fahey, 1998; Yli-Renko & Janakiraman, 2008).

Drawing on De Carolis et al.'s (2009) and De Carolis and Saparito's (2006) work on the impact of social capital and personal factors in exploiting entrepreneurial opportunities, and on De Clercq and Rangarajan's (2008) and Reuber and Fischer's (2005) work on how customer relationships affect new firms, this study focuses on social capital with customers for explaining start-up success. The thinking is that positive effects of a steady inflow of customers are less context-dependent than other factors' effects.

In customer relationships, entrepreneurs build up reputation (Reuber & Fischer, 2005). The value of a good reputation and social ties with customers is the following: first, a good reputation motivates customers to continue a relationship with a firm (Dollinger, Golden & Saxton, 1997). Second, social ties transfer expectations about people's behaviour from a prior social setting to a new business transaction (Shane & Cable, 2002; Uzzi, 1996). Following these insights, the idea is that entrepreneurs can use their customer relationships – those that they have built in another occupation, prior to system entry – as an asset for starting as a franchisee. Entrepreneurs who can transfer customers from their previous into their subsequent occupation have a starting advantage, since an established customer base provides "certain" sales and referrals. Here, "social capital transfer" describes the entrepreneur's ability to transfer social capital in terms of customer relationships into the franchise arrangement.

Consistent with the literature on how entrepreneurs use relationships for competitive advantage, this study is based on the premise that economic explanations for entrepreneurial success are incomplete and undersocialized. By combining the literature on social capital and new venture performance for the franchising context, this chapter makes several contributions. First, it extends research on franchisee performance (Dant, 2008; Michael & Combs, 2008). Second, prior studies on new firms' relationships with customers examine primarily technology-based firms (Yli-Renko & Janakiraman, 2008) and selected relationships like "key customers" (Abratt & Kelly, 2002; De Clercq & Rangarajan, 2008; Venkataraman, Van De Ven, Buckeye & Hudson,

1990; Yli-Renko, Autio & Sapienza, 2001a; Yli-Renko, Sapienza & Hay, 2001b), and do neither address transfer of social capital nor consider the franchising context. Thus, this study adds to the broader discourse on the role of customer relationships for start-up performance and development. Third, the few empirical studies on franchisee selection (Altinay & Miles, 2006; Clarkin & Swavely, 2006; Wang & Altinay, 2008; Williams, 1999) provide little evidence for how to select potentially better performing franchisees (Birley & Westhead, 1994; Jambulingam & Nevin, 1999; Saraogi, 2009). The results offer some implications for more successful selection. The next section outlines the literature on entrepreneurial performance and social capital with customers. Then, hypotheses on performance effects of social capital transfer are developed. In section 4 data and methods are described, section 5 reports the results. Section 6 concludes.

3. Theoretical Background and Hypotheses

To date, few studies have analysed the determinants of franchisee performance (Dant, 2008). Research has addressed the exploitation of entrepreneurial opportunities in terms of starting a franchised or an independent firm, but little is known about the success of these exploitation attempts (De Carolis & Saparito, 2006; Kaufmann, 1999; Lumpkin & Lichtenstein, 2005; Williams, 1999).

However, studies have analysed performance differences among *independent* founders. The belief that the entrepreneurial firm is an extension of the entrepreneur has led many researchers to examine the entrepreneur's personal characteristics (Gilbert et al., 2006). A plethora of factors has been considered (e.g. Box, White & Barr, 1993; Cooper et al., 1994; Davidsson & Honig, 2003; Ensley, Pearson & Amason, 2002; Sapienza & Grimm, 1997; Shrader & Siegel, 2007; Siegel, Siegel & MacMillan, 1993; Vanaelst, Clarysse, Wright, Lockett, Moray & S'Jegers, 2006). Demographic studies examine characteristics like the entrepreneur's age, gender, family background, education and experience. Personality and psychological studies examine variables like the need for achievement, risk aversion, self-reliance, values and beliefs. Behavioural studies consider behaviour and decision-making based on communicative, managerial, manufacturing, marketing, organisational, or technical skills (Chrisman, Bauerschmidt & Hofer, 1998; Gilbert et al., 2006; Shrader & Siegel, 2007). By examining these factors, research demonstrates that entrepreneurs are in fact heterogeneous. Yet, results concerning the link between these factors and performance (in terms of sales, growth, ROI, or survival e.g.) are ambiguous, since the performance impact of many factors is context-dependent (Low & Abrahamson, 1997; Newbert, 2005; Shrader & Siegel, 2007; West & Noel, 2009). Factors that lead to success in one context can lead to failure in another, which may also apply to franchising ventures (Low & Abrahamson, 1997). Still, identifying potentially better performing franchisees is central to each chain's prospects in the marketplace. Jambulingam and Nevin (1999, p. 364)

argue, "the ideal in building and maintaining a high quality network of franchisees is a selection method that would qualify prospective franchisees based on their likely future performance".[5]

Another stream of research emphasises the importance of networks, and the social capital inherent in them, for new firms (Aldrich & Zimmer, 1986). Low and Abrahamson (1997, p. 437) point out that "entrepreneurship is a social process", where organisations emerge because critical stakeholders commit to the organisation's concept and their support is required for venture success. Researchers use the notion of social capital to refer both to the relationships that exist among individuals and to the assets that are mobilised through social relationships (Burt, 1992; Gant, Ichniowski & Shaw, 2002; Nahapiet & Ghoshal, 1998; Putnam, 1993). Burt (1992, p. 7) links social capital and performance by characterizing social capital as a resource that creates an advantage in "the way in which social structure renders competition imperfect by creating entrepreneurial opportunities for certain players and not for others" and brings a higher rate of return on investments. Both the entrepreneurship (Aldrich & Zimmer, 1986; Uzzi, 1996; Walker, Kogut & Shan, 1997) and the social capital literature (Adler & Kwon, 2002; Burt, 1992; De Carolis & Saparito, 2006; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998) emphasise the importance of social capital as the primary link to resources necessary for firm survival and growth (Morse, Fowler & Lawrence, 2007).[6] Social capital can enhance performance directly by providing entrepreneurs with access to information, financial capital, emotional support, legitimacy, or competitive capabilities, and can offer indirect benefits by leveraging the productivity of internal resources (Florin, Lubatkin & Schulze, 2003; Stam & Elfring, 2008).

Yet, as De Carolis et al. (2009) point out, not all well-connected, aspiring entrepreneurs are able to successfully launch a business. So, social capital is not universally beneficial for performance

[5] Empirical studies on franchisee selection criteria focus on demographic factors like age and business or industry experience, personality, or financial strength (Altinay & Miles, 2006; Clarkin & Swavely, 2006; Jambulingan & Nevin, 1999; Wang & Altinay, 2008; Williams, 1998). Yet, there is little empirical support for which criteria lead to the desired results (Birley & Westhead, 1994; Jambulingam & Nevin, 1999; Saraogi, 2009). Successful franchisee selection calls for further research (Clarkin & Swavely, 2006; Saraogi, 2009; Wang & Altinay, 2008).

[6] Two mechanisms explain why social ties provide access to resources under information asymmetry (Podolny, 1994). First, ties create social obligations that cause parties to behave generously towards each other (Gulati, 1995). Second, decision makers may be interested in preserving the exchange of private information, to be able to remove some ambiguity from decisions (Burt, 1992). The first rationale offers a socialized view of decision-making; the second is consistent with a self-interested perspective.

either – for example, because of investments involved in building and maintaining relationships, or since available resources are redundant or irrelevant (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Nasrallah, Levitt & Glynn, 2003; Uzzi, 1996). As Adler and Kwon (2002, p. 26) observe, "In life we cannot expect to derive any value from social ties to actors who lack the ability to help us". Hence, relationships differ in their usefulness for reaching entrepreneurial ends.[7]

Focusing on performance ends, of all the social capital firms have in terms of relationships with other actors, customer relationships are the most central to their profit generating purpose (Gupta et al., 2004; Srivastava et al., 1998; Yli-Renko & Janakiraman, 2008). Often, relationships provide *potential* benefits only (Srivastava et al., 1998), meaning obtainable resources – like information access, emotional support, or legitimacy – explain performance only to the extent that organisations capture the economic value that they create (Crook, Ketchen, Combs & Todd, 2008). Yet, resources obtainable from relationships with customers in terms of *revenues* provide *actual* benefits to the entrepreneur (in addition to potential benefits like access to information that the entrepreneur may be able to exploit and convert into revenues in the future). Thus, social capital with customers is relevant for performance across multiple contexts.[8] Research shows that social capital in terms of customer relationships and the assets mobilised thereby, "customer capital" (Bontis, 1999; Duffy, 2000; St-Onge, 1996), serves as a barrier against customer switching (Jones, Mothersbaugh & Beatty, 2000). Reichheld (1996) identifies six economic benefits of retaining customers: (1) savings on customers' acquisition or replacement costs, (2) guaranteed base profits as existing customers are likely to have a minimum spend per period, (3) growth in per-customer revenue as over time, existing customers are likely to earn more, have more varied needs and spend more, (4) reductions in relative operating costs as firms can spread costs over more customers and over a longer period, (5) free of charge refer-

[7] "A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others" (Coleman, 1990, p. 302).

[8] Sveiby (1989; 1997) pioneers the inclusion of customer capital as intangible assets of firms. He classifies three customer types according to their contributions to value creation. The first type improves employees' learning and ideas; the second enhances external structure through referrals to new customers or establishment of prestige; the third enhances the internal structure through leveraging R&D or knowledge transfer.

rals of new customers from existing customers, and (6) price premiums as existing customers do not usually wait for promotions before deciding to purchase, particular with new versions of products. Thus, sustained customer relationships increase performance (Dawkins & Reichheld, 1990; Reichheld, 1996).

In customer relationships, over time, the entrepreneur can build a reputation (Wickham, 2001). Reputation is the extent to which an actor is held in high regard by external stakeholders and is determined by the value of the actor's previous efforts (Fischer & Reuber, 2007; Roberts & Dowling, 2002). A well-reputed firm is believed to have the ability and willingness to maintain promised quality standards (Erdem & Swait, 2004). Two basic insights on the value of reputation and ties with customers are that first, a good reputation motivates customers to continue a relationship with a firm (Dollinger et al., 1997), and second, social ties between parties transfer expectations about people's behaviour from a prior social setting to a new business transaction (Shane & Cable, 2002; Uzzi, 1996).

Building on these insights, the idea is that entrepreneurs can use customer relationships that they have established in another occupation, prior to system entry, as an asset for starting as a franchisee. Entrepreneurs who can transfer customers from the previous into their subsequent occupation have a starting advantage, since an established customer base provides "certain" sales and referrals. Here, "social capital transfer" describes the entrepreneur's ability to transfer social capital in terms of customer relationships into the franchise arrangement. Social capital transfer can occur because there are information asymmetries in markets. Entrepreneurs possess information about their business that others do not. Customers face risks when selecting among firms as firms vary in the ability to provide good service and may act opportunistically towards them. If the entrepreneur has met customer expectations particularly well before, customers may choose to continue patronizing the entrepreneur after start-up rather than the entrepreneur's former firm.

There is anecdotal evidence that customers in fact follow a seller when the seller leaves the firm and starts in or founds another. The first customer of SAP, the British chemical company ICI,

was previously an IBM customer that had been served by a member of the SAP founders' team at IBM. When the Saatchi brothers left Saatchie & Saatchi and founded M & C Saatchi in 1995, they took along top clients. In 2000, UTA Telecom followed their creative advisors from Lintas to BBDO. One (telecommunications) and mobilcom austria accompanied creative directors who had served them before to new agencies. Marketing Director S. Mathony (Booz & Company) states, "Giving up a cooperation involves risks. Thus, for some customers, it is worthwhile to follow a trusted seller" when this seller moves to another firm (extradienst, 2009, p. 4; translated from German).[9] Similarly, Bolton, Katok and Ockenfels (2004) note that in the insurance industry, customers are often more loyal to the salesperson than to the company. Cooper and Dunkelberg (1986) find that entrepreneurs are oriented towards the same or similar customers like their former firms, and often stay in the same geographical area, which facilitates customer transfer.

Benefits of sustained customer relationships can be even stronger when customers provide critical information (Shane & Venkataraman, 2000). Social capital with customers can enhance the entrepreneur's ability to obtain (nonpublic) information by offering better timing, relevance, and quality of information and lower information-gathering costs (Adler & Kwon, 2002; Burt, 1992; Nahapiet & Ghoshal, 1998; Podolny, 1994; Uzzi, 1996). For example, customers can refine entrepreneurs' knowledge about customer preferences which helps to provide satisfactory services (Gupta & Zeithaml, 2006; Ramani & Kumar, 2008; Rayport & Jaworski, 2005; Srinivasan, Anderson & Ponnavolu, 2002). Customers also provide information to other consumers, as they tend to spread word of mouth if they feel good about the relationship with a firm and believe that a firm offers economic value (Ramani & Kumar, 2008; Reichheld, 2006). Thereby, they bring in new customers.

H1a: Social capital transfer enhances franchisee start-up performance.

H1b: The effect of social capital transfer on performance is stronger if customers serve as an important source of information.

[9] In advertising, customers are often more loyal to those who handle the customer contact than to the creative personnel, because the latter produce unobservable input, but the contact persons work directly alongside the customer. Customer transfer enhances sellers' career prospects, "With a big budget up his sleeve, a newcomer [...] has a different standing and different [i.e. much better] career prospects" (extradienst, 2009, p. 4; translated from German).

Initial resources may predispose entrepreneurs to certain paths or equip them with unequal abilities to meet challenges, but they do not predetermine the future. Rather, the subsequent unfolding of events, including key decisions and management practices of the entrepreneur, shapes the new firm's performance (Cooper et al., 1994). Yet, reputation differences are quite stable over time, and an entrepreneur's good reputation with customers is difficult to replicate in the short term (Fischer & Reuber, 2007; Roberts & Dowling, 2002). So, a good reputation with customers at start-up may bind customers over a longer term, with all the positive effects of customer retention on performance. The reputation-performance-effect may even operate in both directions (McGuire, Schneeweis & Branch, 1990): a firm's reputation with its customers increases its performance and in turn, sound performance affects its reputation positively, which reinforces existing relationships and helps to attract more and more new customers. Then, social capital transfer is not just a starting advantage, but a lasting advantage.

H2: Social capital transfer enhances franchisee long-term performance.

4. Sample, Variables, and Methods

4.1 Sample

The sample comprises 175 franchisees of two chains in pet retail and pet supplies. Retail is the largest German industry in franchising (in 2008 sales, 36%). The context selected for the study possesses multiple desired characteristics, including customer motivation, uncertainty and experience properties. Fischer and Reuber (2007) argue that consumers are motivated to pay closer attention to a firm when they perceive that important outcomes depend on it.[10] The sample context is a high-motivation context because of the emotional component involved for consumers. So, customers are motivated to monitor the seller's efforts. The seller's efforts are particularly important in industries that are characterized by consumer uncertainty. The sample context is characterized by uncertainty because quality differences in the offering may initially be hard to spot, but consumers will learn about the quality of their purchase later. This study prefers a consequential context because risk-free exchanges are less relevant to trust development and reputation-building, and it prefers an experience context because such contexts enable consumers to observe and evaluate behaviours of sellers (Sirdeshmukh, Singh & Sabol, 2002). Thus, in the sample context, consumers have both the motivation and the opportunity to decide to stick to a seller because of previously satisfactory services. As there are industry-specific effects on performance (Short, Ketchen, Palmer & Hult, 2007), this research focuses on a single industry to control for that fact.

Common wisdom holds that industry experience is not essential for franchisees as the franchisor provides training and support. Yet, transfer will rather occur when entrepreneurs are in the same industry as their former firm. Many sample franchisees (51%) have been active in the industry before system entry. Thus, the context provides a good background for analysing the hypotheses.

[10] They further point out that in high-motivation contexts, a firm's individual reputation is more important than the overall reputation of the category to which the firm belongs. So the entrepreneur's reputation can count more than the franchisor's reputation. Additionally, franchisor reputation is the same for all franchisees, so differences depend on the entrepreneur.

The first (second) system was founded in 1994 (2004) and has 230 (25) franchisees. Self-administered postal questionnaires with a letter assuring franchisees of anonymity and a university address for responses were distributed among all outlets in late 2007. The formulation of the questionnaire items emerged from a qualitative-explorative pre-study involving franchisors, consultants, and franchisee focus groups. Responses arrived until February 2008. In four rounds of follow-up calls, non-respondents were contacted for telephone interviews. The response rate is 65% (100%) in the first (second) system. In case of multiple ownership, franchisees were asked to focus on their first outlet.[11] For the first system, the study includes data from a larger project on franchisor quality by the International Centre for Franchising and Cooperation. This data enables to track system development and conduct more stringent tests on sample representativeness (see also Chrisman, Chua & Steiner, 2002; Chrisman and McMullan, 2000). Due to missing data, the analysis is based on 157 franchisees.

4.2 Dependent Variables

Research suggests that capturing the multidimensionality of new firm performance requires objective and subjective measures to achieve triangulation (Baron & Tang, 2009; Brush & Vanderwerf, 1992; Chandler & Hanks, 1993; Stam & Elfring, 2008; Zahra, Neubaum & El-Hagrassey, 2002). So, this study uses both.

Following Zahra et al. (2002), this study uses the objective performance criteria of *total sales* and *growth*. Sales are the most common indicator of new venture performance (Birley & Westhead, 1994; Brush & Vanderwerf, 1992; Cooper, Woo & Dunkelberg, 1989; Dess & Robinson, 1984; Gilbert et al., 2006; Roberts & Dowling, 2002; Stam & Elfring, 2008). Although sales volume is only a short-term measure of a store's competitive strength, long-term implications suggest a strong linkage of sales and profitability (Buzzell & Gale, 1987). The most common indicators of new venture growth are growth in sales, employment, and market share (Gilbert et al., 2006). Empirical studies show strong links among these measures (Baron & Tang,

[11] Some research on customer relationships in entrepreneurial contexts (Reuber & Fischer, 2005; Yli-Renko et al., 2001b) prefers to focus on companies that are no more than ten years old (yet, for example, De Clerq & Rangarajan (2008) do not follow this approach). Here, 91% of franchisees joined later than 1996.

2009). Following Amason, Shrader and Tompson (2006), Chrisman and Leslie (1989), Covin, Green and Slevin (2006), Covin, Slevin and Heeley (1999); Florin et al. (2003), and Sapienza, Smith and Gannon (1988), this research uses sales growth, which is consistent with previous research on network forms of organisations (Collins & Clark, 2003; Lee, Lee & Pennings, 2001; Park & Luo, 2001; Sarkar, Echambadi, Cavusgil & Aulakh, 2001; Singh & Mitchell, 2005; Stuart, 2000).

For measuring sales and growth, respondents filled in a series of blanks, as done in prior studies (Zahra, 1996b, 1996c; Zahra & Bogner, 2000; Zahra et al., 2002). Brush and Vanderwerf (1992) and Chandler and Hanks (1993) establish high accuracy and reliability of such founder reported performance data. Franchisees were asked for sales volume for one year after start-up, for analysing the short-term effect of social capital transfer. For addressing lasting effects, a three year time lag is chosen, in line with the literature (Homburg, Droll & Totzek, 2008; McGee, Dowling & Megginson, 1995; Reinartz, Krafft & Hoyer, 2004; Rust, Moorman & Dickson, 2002). For sales growth, this study uses a three-year compounded annual rate, as the literature suggests (McGee et al., 1995; West, 2007).

Because this research collects self-reported data from a single source, there are concerns of common method bias. Prior research recommends comparing primary and secondary data to establish validity of survey-based measures (Brush & Vanderwerf, 1992; Chandler & Hanks, 1993, McDougall & Robinson, 1990; Stam & Elfring, 2008; Zahra, 1996a, 1996b, 1996c; Zahra et al., 2002). Corroborating data on past performance for a subsample of 25 firms could be obtained from system sources. Results somewhat alleviate concerns; correlations are 0.97 for first year sales, 0.91 for growth (both $p < 0.01$).

Perceived performance is measured with the previously validated scale used by West (2007; based on Dess & Robinson, 1984; see also, West & Noel, 2009). Although manager personality and aspiration levels could affect perceived performance evaluations, subjective measures have shown strong reliability and validity (Dess & Robinson, 1984; Stam & Elfring, 2008). The scale's first item assesses the percentage of ideal performance being achieved in the first year

after system entry ("ideal" is 100%); its other two items assess initial growth and overall performance in the first year "relative to competitors in the system who are comparable in age" (Abeele & Christiaens, 1986; Dess & Robinson, 1984; Sapienza et al., 1988; West, 2007; West & Noel, 2009). Porter (1980) argues that firms are aware of their competitors' activities, a position substantiated by Brush and Vanderwerf (1992). In both systems, sales data is shared in the system, so franchisees can assess relative performance. In line with West and Noel (2009) and Stam and Elfring (2008), the items use a seven-point agreement scale (for the latter two items, anchored by the performance descriptors of 1, "much worse," to 7, "much better"; the first item's percentages are transformed on a 7-point scale). A composite scale is built by summing and averaging the item scores, using equal weights. Reliability of the scale is assessed by Cronbach's alpha. The alpha value of 0.96 is well above the lower acceptability limit of 0.60 (Hair, Anderson, Tatham & Black, 1998). Item-to-total and inter-item correlations confirm construct reliability. When factor analysed, all factor loadings are highly significant, which also indicates convergent validity (Bagozzi, Yi & Phillips, 1991; Homburg et al., 2008). A substantially similar scale has been reliably used in other research on new ventures (Lumpkin & Dess, 1995).

4.3 Independent and Control Variables

Social Capital Transfer. This research uses franchisee-reported data as real time data on all customers of all entrepreneurs of both systems prior to and after system entry is not obtainable. To assess social capital transfer and information, this study uses items from previously validated scales, adapted to the study context. As indicators of social capital with customers, retention and loyalty measures are used most often (Chang & Tseng, 2005; Duffy, 2000; Edvinsson & Malone, 1997). Dawkins and Reichheld's (1990) seminal paper on retention suggests measuring the number of customers staying as a percentage of the original number over a specific period. Duffy (2000) measures customer capital as the number of customers present and the annual sales per customer. Wiesel, Skiera and Villanueva (2008) propose a model to monitor customer assets by the number of total, new, and lost customers, the cash flow per customer, and the retention rate. Hitt, Shimizu, Uhlenbruck and Bierman (2006) quantify „relational capital" with

clients in law firms by the number of clients, a percentage value of the client's sales of total sales, and annual compensation received from the client. Following these approaches, franchisees were asked to assess customer capital in the first year after system entry in terms of (1) the number of transferred customers, (2) the percentage of transferred customers of the previous customers (present in the year prior to system entry), (3) the percentage of transferred customers of their franchise outlet customers, and (4) the transferred sales volume. Answers are transformed into categories from 1-5 (1 – low, 5 – high values). A composite scale is built by summing and averaging the four items' scores, using equal weights. Scale reliability is assessed by Cronbach's alpha (0.82), item-to-total and inter-item correlations, all of which confirm construct reliability. When factor analysed, all factor loadings are highly significant, indicating convergent validity (Bagozzi et al., 1991; Homburg et al., 2008).[12]

Information. Ramani and Kumar (2008) develop a comprehensive model of a firm's "interaction orientation". The model reflects a firm's ability to interact with customers and take advantage of information provided by them. Measures of entrepreneurs' ability to benefit from customer information used here correspond to items used in their study. Franchisees rate "I encourage my customers to share opinions of my products and/or services with me" and "I encourage my customers to share opinions of my products and/or services with other customers" (see also Macy, Farias, Rosa & Moore, 2007; Macy & Moore, 2004; Ramani & Kumar, 2008; Sorensen, Folker & Brigham, 2008). Gains from interaction are addressed with the items "I use information from my customers, like feedback on products, to improve my business activities", "My current customer contacts help me attract new customers"; previous studies use related items to assess the impact of customer information on outcomes (De Clercq & Rangarajan, 2008; Dyer, 1997; Ramani & Kumar, 2008; Yli-Renko et al., 2001a).[13] Franchisees indicate agreement with each item

[12] The situation is more complex when customers have multiple suppliers or a few customers spend disproportionately. The study does not attempt to specify these issues. Franchisees were confident as regards their ability to observe customer transfer. Measuring transfer based on entrepreneurs' perceptions follows Roberts and Dowling (2002) who explain that using perceptional measures poses no problem per se (see also Benjamin & Podolny, 1999; Dowling, 2001). One third of sample franchisees could not transfer any customer.

[13] Survey-based measures of knowledge acquisition have previously been effectively used by Simonin (1997), Yli-Renko et al. (2001a), Zahra et al. (2000) and Zander and Kogut (1995).

on a 7-point scale (7 – strongly agree, 1 – strongly disagree). The composite scale's Cronbach's alpha (0.91), item-to-total and inter-item correlations support reliability.

Franchisees interviewed in the pre-stage all suggested that the approaches taken were appropriate for gathering information on the study context. The study further controls for common method bias in the self-reported variables using Harman's single factor test. The test yields more than one factor, no factor accounts for most of the variance; thus, following Podsakoff, MacKenzie and Lee (2003), common method bias should not be an issue.

Control Variables. The study controls for effects of variables that are commonly used in entrepreneurial and franchising research (Baron & Tang, 2009; Cooper et al., 1994; Jambulingam & Nevin, 1999; Low & Abrahamson, 1999; Newbert, Kirchhoff & Walsh, 2007): franchisee age and education measured in years; gender (1 – male, 0 – female), prior self-employment, prior leadership position and prior industry experience are dummies (1 – yes, 0 – no); franchisee "background" counts family members and friends who were self-employed prior to the franchisee's system entry. The study includes each franchisee's year of system entry, so that performance is comparable over time, a system dummy (1 – larger, 0 – smaller system), outlet size (measured by the number of employees, following Yli-Renko and Janakiraman (2008), in categories of 1-3, 4-6, etc.), GDP of the outlet's area, and the competitive situation in terms of the number of other system outlets in the area, at system entry.[14]

4.4 Methods

Cross Sectional Data. Initial investigation reveals that the dependent variables are not normally distributed. Following Chrisman et al. (2002) and Kennedy (1979), this research takes natural logarithms to examine the relationship between social capital transfer and performance (H1a). Following Shane, Shankar and Aravindakshan (2006), nonlog variables are used for robustness checks: the regression results do not show substantive differences from the regression with log variables. For testing the implications of customer information on the relationship postulated in

[14] The analysis also controls for non-system competition on a yearly basis, using 2003 to 2006 data; there are no significant results. It further examines if franchisees start their business in the geographical area in which they were active before system entry. Starting a business in the home market correlates with customer transfer (0.48, $p < 0.1$), but neither with the information variable, nor with sales.

H1a, the study estimates moderated OLS regressions (Aiken & West, 1991; Baron & Kenny, 1986). These are appropriate to reveal whether a moderator variable has an influence on the strength and/or form of the relationship between an independent and a dependent variable. Following the methodology by Sharma, Durand and Gur-Arie (1981), to examine interaction effects, information input is treated as a moderator based on the argument that leads up to H1b. The interaction term used in the regressions is the product term of the mean-adjusted scales for social capital transfer and information. The analysis controls for absence of multicollinearity with Variance Inflation Factors (all below three), and for normal distribution of disturbances with Kolmogorov-Smirnov-Tests.

Balanced Panel Data. For testing H2, following Roberts and Dowling (2002), a first-order autoregressive model is used to capture the intertemporal effects of the regressors on sales performance:

$$PERFORMANCE_{it} = a_0 + a_1*SCTRANSFER_{it-1} + a_2*INFORMATION_{it-1} + a_3*SCTRANSFER_{it-1}*INFORMATION_{it-1} + b_0*PERFORMANCE_{it-1} + e_{it},$$

where $PERFORMANCE_{it}$ $(PERFORMANCE_{it-1})$ is third (first) year performance of firm i.[15]

A fundamental assumption of regression analysis is that the independent variables are uncorrelated with the disturbance term. Otherwise, OLS coefficients can be biased. Here, it is expected that the independent variables that influence first year performance influence third year performance as well, and first year performance is included as a regressor variable. So, potential simultaneity issues arise. The standard approach in cases where a regressor variable is correlated with the residuals is to estimate the equation using instrumental variables regression (Maddala, 2001). As instrumental variables regression, two-stage least squares (2SLS) is employed. Prior industry experience is used as an instrumental variable. The variable fulfils the criteria of relevance and exogeneity (Maddala, 2001) since it influences first year performance (see Models 0-1), and does not influence third year performance directly according to correlations and auxiliary regressions, but only indirectly via first year performance. The logic is that experience provides new franchisees with a know-how advantage at start-up, but that this advantage erodes as

[15] Higher initial performance allows investments in additional marketing or customer acquisition and binding activities e.g., which can affect future performance.

other new franchisees acquire the same skills over time. OLS and 2SLS results concur. A Hausman test that indicates that 2SLS results are more reliable. So, 2SLS results are reported. The analysis uses White period estimates as a coefficient covariance method to make sure standard errors are robust to serial correlation (Arellano, 1987; White, 1980).[16]

The study compares both systems' average sample observation with the average outlet-owner computed from each system's population along the dimensions age, gender, years in business, and prior self-employment. Therefore, it uses previously collected data, and to obtain further information on the populations, officials in the chains were contacted. No evidence of nonresponse biases emerged.

[16] The two most important controls from Models 0-3 are also included in Model 4 (system dummy and year of entry).

5. Results

Table 1 displays the coefficient estimates of the OLS and 2SLS Models. Table 2 presents the variables' statistics and correlations. H1a is supported, social capital transfer enhances performance (Models 1, 2). For sales performance, H1b is supported as well, social capital transfer particularly enhances franchisee performance if customers serve as an important source of information (Model 1). H2 is not supported: although franchisee performance is path-dependent, meaning that higher first year sales correspond to higher later sales (here, in $t = 3$), social capital transfer and interaction effects at start-up do not lead to higher performance in later years (Model 4). In fact, growth rates for franchisees who realise social capital transfer are lower than for other franchisees who do not have that sort of starting advantage (Model 3). Thus, those franchisees who could not transfer social capital will catch up with those who could in later years; after three years, sales performance is about to even out among the two groups. To illustrate this result, in the first year, franchisees who transfer less social capital than the average franchisee have a mean sales disadvantage of 4% compared with those whose transfer is average or more. After three years, they catch up, reaching 99% of the other group's sales performance. Although 4% seems only a small difference, retail profit margins are traditionally very low in Germany. Often, margins are less than 4% (Deloitte, 2009). Thus, social capital transfer can strongly influences the franchisee's ability to generate a positive margin.

Besides, there is a substantial correlation between sales in the first (third) year and a variable indicating whether a franchisee owns multiple outlets today (0.28, $p < 0.01$ (0.44, $p < 0.001$)). So, initially better performing franchisees tend to have more outlets later.

	Model 0		Model 1		Model 2		Model 3		Model 4	
Dependent Variable	Sales Performance$_{t=1}$		Sales Performance$_{t=1}$		Perceived Performance		Growth		Sales Performance$_{t=3}$	
Method	OLS		OLS		OLS		OLS		2SLS	
C	-82.775**	(26.708)	-16.828	(17.104)	-100.278	(61.064)	-14.351	(8.757)	-43.416**	(13.166)
Social Capital Transfer			0.155***	(0.032)	0.259**	(0.088)	-0.036**	(0.013)	0.012	(0.045)
Information			0.156***	(0.029)	0.389***	(0.092)	-0.062***	(0.013)	-0.051	(0.042)
Social Capital Transfer x Information			0.038*	(0.016)	0.048	(0.006)	-0.018*	(0.008)	-0.016	(0.015)
Sales Performance$_{t=1}$									0.486†	(0.252)
Age	0.002	(0.005)	0.002	(0.003)	-0.014	(0.012)	-0.003	(0.002)		
Gender	0.103	(0.085)	0.008	(0.059)	0.167	(0.189)	-0.036	(0.027)		
Education	-0.016	(0.012)	-0.007	(0.007)	-0.042	(0.026)	0.002	(0.004)		
Self-Employment	-0.182**	(0.069)	-0.039	(0.046)	0.016	(0.159)	0.044†	(0.023)		
Leadership	0.251***	(0.070)	-0.035	(0.051)	-0.012	(0.172)	0.017	(0.025)		
Industry Experience	0.304***	(0.070)	0.110*	(0.042)	0.081	(0.164)	-0.021	(0.024)		
Background	0.021	(0.021)	0.007	(0.014)	-0.051	(0.046)	-0.008	(0.007)		
Competition	-0.001	(0.016)	-0.000	(0.010)	-0.006	(0.036)	-0.000	(0.005)		
GDP	-0.051	(0.070)	-0.066	(0.048)	0.082	(0.160)	0.022	(0.023)		
Year (System Entry)	0.047***	(0.013)	0.014†	(0.009)	0.053†	(0.030)	0.007†	(0.005)	0.022**	(0.007)
Outlet Size	0.149*	(0.065)	0.086*	(0.039)	0.142	(0.145)	-0.018	(0.021)		
System	0.555***	(0.142)	0.688***	(0.094)	0.999**	(0.321)	-0.090†	(0.046)	0.212	(0.194)
F	7.312***		27.613***		10.428***		10.296***		24.402***	
R^2	0.379		0.746		0.526		0.523		0.580	
Adj. R^2	0.327		0.719		0.476		0.472		0.563	

N = 157. Beta coefficients reported. Standard errors in parentheses.
Significance levels (two-tailed): *** p < 0.001; ** p < 0.01; * p < 0.05; † p < 0.1

Table 1: Results

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) Sales Performance$_{t=1}$	12.75	0.50																	
(2) Sales Performance$_{t=3}$	13.03	0.59	0.69***																
(3) Growth	0.17	0.17	-0.79***	-0.12															
(4) Perceived Performance	4.07	1.22	0.67***	0.59***	-0.43***														
(5) Social Capital Transfer	2.75	1.40	0.68***	0.42***	-0.60***	0.64***													
(6) Information	4.29	1.30	0.64***	0.33***	-0.61***	0.63***	0.78***												
(7) Age	44.15	6.85	-0.07	-0.07	-0.04	-0.17*	-0.16†	-0.16†											
(8) Gender			0.13	-0.01	-0.18†	0.15	0.11	0.14	0.05										
(9) Education	15.52	3.13	-0.18*	-0.02	0.06	-0.16*	-0.06	-0.05	0.09	0.16†									
(10) Self-Employment			-0.12	0.12	0.21*	-0.15†	-0.35***	-0.39***	0.21*	-0.15	-0.02								
(11) Leadership			0.24**	0.10	-0.24**	0.23**	0.31***	0.40***	0.05	-0.14	0.05	-0.02							
(12) Industry Experience			0.30***	0.07	-0.23**	0.26**	0.34***	0.20*	-0.03	-0.30	0.02	0.10	0.20*						
(13) Background	2.17	1.66	0.12	0.09	-0.10	-0.02	-0.70	-0.05	-0.01	0.08	0.00	0.19*	-0.07	-0.06					
(14) Competition	3.71	2.26	0.10	0.12	-0.04	0.05	-0.00	0.01	-0.00	-0.10	-0.08	0.14	0.06	0.13	0.22*				
(15) GDP	0.56	0.50	0.05	0.05	-0.02	0.14†	0.06	0.10	-0.07	-0.09	-0.08	-0.02	-0.12	0.20*	0.05	0.23**			
(16) Year (System Entry)	2000.48	3.22	0.09	0.06	-0.06	0.26**	0.41***	0.38***	-0.26**	0.18*	-0.04	-0.33***	0.00	0.02	-0.11	-0.04	0.20*		
(17) Outlet Size	1.42	0.66	0.19*	0.12	-0.11	0.09	-0.12	-0.11	0.14	0.07	0.04	0.31***	-0.07	0.06	0.26**	0.05	0.07	-0.30***	
(18) System			0.24**	0.14†	-0.02	0.01	-0.31***	-0.29***	0.14†	0.00	-0.08	0.44***	-0.04	0.07	0.29***	0.30***	-0.06	-0.60***	0.47***

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

Table 2: Descriptive Statistics

6. Limitations and Discussion

6.1 Research Limitations

There are some limitations to the study that also provide avenues for future research. First, because real time measures are unavailable, the analysis relies on self-reported survey data. To guard against the issues related to such data, the study checks for common method bias, verifies self-reported data with previously collected data and system data, and uses previously validated scales when possible. Further research could examine social capital transfer from the customer's perspective. Another limitation is survivor bias that is a common restriction to economic research.

6.2 Discussion

Based on the premise that entrepreneurs differ in their potential for wealth creation and that chains benefit if franchisors are more able to select potentially better performing franchisees from the pool of applicants, this research addresses the question of what makes a good franchisee. As the performance effects of many entrepreneurial characteristics, like demographic or personality characteristics, are context-dependent, the study focuses on entrepreneurs' social capital with customers. The literature explains that social capital with customers is most central to profit generation, thus will affect performance across multiple contexts. The thinking is that entrepreneurs can use customer relationships that they have established in another occupation, prior to system entry, as an asset for starting as a franchisee. Transferring customers from a previous occupation into the franchise arrangement provides advantages like "certain" sales and referrals.

The study tests the impact of social capital transfer using panel data from 175 franchise outlets. The franchise context is particularly useful for testing this impact as (nearly) "all other things are equal", meaning that the conditions under which a system's entrepreneurs start are much more homogeneous – regarding the business concept, product portfolio, initial investments, franchisor support etc. – than those for independent entrepreneurs. The empirical results show that social capital transfer enhances initial performance and thus offers a starting advantage.

Social capital transfer increases sales particularly if customers serve as a source of information for the entrepreneur and for other consumers. First, the entrepreneur learns to better adjust to customers' expectations, and second, spreading word-of-mouth about the entrepreneur's good service brings in new customers. Yet, benefits of social capital transfer seize over time: franchisees who perform better at start-up still tend to perform (a little) better than others later on, but social capital transfer and interaction effects at start-up themselves do not lead to higher performance in later years. Growth rates for franchisees who realise social capital transfer are lower than for other franchisees who do not have that sort of starting advantage. At the end of the third year, 75% of first year performance differences among customer-transferring and non-transferring franchisees have evened out. Thus, social capital transfer offers a strong short-term, but not a strong lasting, advantage. Following these results, although entrepreneurs realise gains in the beginning, bandwagon effects of comparably high initial demand are rather small.

The fact that performance evens out over time may be attributed to outlet capacity or customer lifecycle arguments. First, most likely, there is a maximum capacity to serve customers for every outlet, for instance, because of technical reasons or the franchisor's territorial strategy. The degree of initial capacity used is higher for customer-transferring franchisees, while the others have to acquire customers over time. Successively, the others catch up, until they reach a similarly strong capacity utilisation. Second, customer relationships exhibit lifecycle features, so transferred customers will not patronize an outlet for ever. Over time, they will stop, for example, because they come to prefer another seller or stop buying the product category. The literature on customer switching behaviour yields numerous reasons for churn behaviour (Keaveney, 1995; Reichheld, 1996), like service failure, pricing, competition, inconvenience (like waiting times), even in cases where customers are basically satisfied.

If customers stop patronizing, they are likely to also stop making referrals to other consumers. So, transferred customers become less important as a source of information over time; there are no referral "cascades" that make customer transfer a strong lasting advantage. In addition, the value of customer information for franchisees may decline because know-how accumulation shows decreasing returns to scale (Tikoo, 2002). Successively, the franchisee learns about the

system's product portfolio and the new customers, so additional input is less valuable later on than at start-up. Successful franchisees' motivation to acquire and adjust to information may further decrease over time – as Shepherd and DeTienne (2005, p. 104) explain, "prior knowledge leads to the identification of more opportunities [...], but over time and with tenure in a particular firm some individuals may allow themselves to become entrenched in mental ruts".

This study provides a diagnostic framework for entrepreneurs and franchisors to evaluate performance prospects based on social capital with customers. The study results have implications for both. First, entrepreneurs must create and exploit opportunities for building customer capital, and understand customer relationships as learning opportunities. Individuals who plan to join a system can intensify customer-binding activities before system entry to enhance career perspectives.

A premise in much of the network literature is that the higher the number of external relationships, the more benefits the firm can realise (Gulati, Nohria & Zaheer, 2000). Some studies examine if there is an upper limit to this argument, and emphasise the importance of focusing on a limited number of high-value relationships because of transaction costs and managerial effort required for maintaining and utilizing relationships (Lettl, Herstatt & Gemuenden, 2006; Yli-Renko & Janakiraman, 2008). As the relationship marketing literature points out, small sellers will find it challenging to engage in relationships with all customers and thus, must selectively allocate their attention across external activities (including spending time with customers) and internal activities (Cooper, Ramachandran & Schoorman, 1997; De Clerq & Rangarajan, 2008). Here, there is not an upper limit regarding franchisees' customer relationships: the more, the merrier. Yet, possibly, inverted effects do not occur since obtaining information does not necessitate extensive managerial efforts or, again, due to capacity arguments – as franchisors exert territorial control, outlets never come to interact with "infinite" numbers of customers, but serve a certain number and if more customers come, another outlet will open proximately.

Good news for franchisees who *cannot* transfer customers is that at last, they will catch up with those who can. Good news for those who *can* transfer customers is that because initially suc-

cessful franchisees tend to have more outlets later, good initial performance still pays off in later years, if not in the initial outlet, by being allowed to open more outlets over time.

Second, franchisors must consider that they do not only choose the franchisee, but they may also choose an integral part of their new customer base when accepting a franchisee into the system. As customer-transferring franchisees provide higher sales and thus higher profits to the system centre for several years after start-up, franchisee screening and selection should be responsive to franchisee's abilities to transfer customer capital. Customer-transferring franchisees may further cause less costs for initial support. Possibly, it pays off to provide them with a broader initial product portfolio than the average new franchisee, or to let their outlets test innovative products, because they may receive more valuable feedback from customers and may be more able to promote product diffusion in the market than less successful system members. Because of higher revenues, these franchisees can also pay back entry fees faster, so offering better financial conditions to attract them into the particular system could be an option. As Burt (1992, p. 6) 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". Gibb and Davies (1990, p. 16) argue that "it is perhaps an unrealistic expectation that it will be possible definitely to pick winners or indeed to produce a comprehensive theory that leads to this. But arguably it is better to make further strides towards better understanding of the factors that influence the growth process". Additionally, results indicate that consumers do not necessarily choose the brand before patronizing a specific outlet as widely believed (Dant (2008) points this issue out as an important research question), but loyalties can rather be based on the entrepreneur, *who makes consumers choose the brand*.

Proposing that economic explanations for entrepreneurial success are incomplete and undersocialized, this study contributes to the field by showing that social capital transfer is an important mechanism that affects entrepreneurial success. So, there is general support for the premise of this research.

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II. THE IMPACT OF COMMUNICATIVE EFFICIENCY ON FRANCHISEE PERFORMANCE

1. Abstract

The objective of this study is to examine how franchise network members can organize networking activities efficiently. Conceptualising the franchise organisation as a *social network arrangement*, this chapter argues that *efficient resource transmission among franchisees* is essential in the quest for competitive advantage and economic rents, and is the key to higher individual (and in aggregation, collective) performance. Thus, efficient exchange reinforces the superiority of the network form of organisation to alternative organisational designs. The study suggests that interfranchisee communication is the strategic means for efficient exchange. Hypotheses are tested on a sample of 121 fashion retail franchisees.

2. Introduction

"Never give a party if you will be the most interesting person there"
Mickey Friedman, Novelist

Research in strategic management emphasises the functionality of networks for managing resource dependencies and fostering learning and knowledge exchange (Podolny & Page, 1998). With respect to these activities, networks can provide efficiency advantages that markets or hierarchies do not possess. Yet, realising these advantages depends on interaction between network members. Thus, network partners play a significant role in shaping the resource-based competitive advantage of the firm (Afuah, 2000; Lavie, 2006; Lee, Lee & Pennings, 2001; Stuart, 2000). This idea applies also in the franchising context (Darr & Kurtzberg, 2000).

Franchising is an organisational arrangement midway between a price-determined market exchange and vertically integrated firm activities. The network organisation secures resource availability for its members, which is essential in the quest for competitive advantage and economic rents (Baum, Calabrese & Silverman, 2000; Combs & Ketchen, 1999; Crook, Ketchen, Combs, & Todd, 2008; Koka, Madhavan & Prescott, 2006). Resources are made available first, by contracts that establish franchisor-franchisee exchange. Second, by building interfranchisee relationships, franchisees can form *social networks* in the system. In social networks, personal relationships can offer privileged access to resources like *knowledge, information and best practices,* that help individuals to become more productive (Contractor, Wasserman & Faust, 2006; Uzzi, 1997; Zaheer & Bell, 2005). As Granovetter has shown in seminal papers (1973; 1985), such intermixing of economic and non-economic activities brings about that "non-economic activity affects the costs and the available techniques for economic activity" (Granovetter, 2005, p. 35).

For resource acquisition, the system's franchisees must communicate with each other. Koza and Dant (2007, p. 281f.) argue, "Information should be viewed as an investment that one channel member makes in another […], and communication provides the means of transfer of knowledge between channel member firms. Therefore, communication should be thought of in a strategic sense, […] members […] strive to put in place integrating mechanisms that enable effec-

tive interaction, hence allowing the greatest chance for each to succeed […]. Communication is a strategic integrating mechanism".

The performance impact of interfranchisee communication raises the question how franchise network members can organise communicative activity efficiently. To examine this question, from both a franchisor and a franchisee perspective, this study proposes the concept of "Communicative Efficiency". The concept refers to franchisee *opportunities* and *efforts* to use networking efficiently – that is, to match the acquisition of network resources and benefits of these resources with networking investments in the most rewarding way.[17] The study suggests that communicative efficiency is based on two aspects. The first aspect is network structure: franchisee network positioning determines communication *opportunities*. Thus, by building an adequate network structure, the franchisor can promote the development of franchisees' "connective capital". "Connective capital" is the stock of human capital that an individual can access through connections to others, that is developed with the purpose of tapping into the knowledge of co-workers via communication links (Ichniowski & Shaw, 2003; Ichniowski, Shaw & Gant, 2003). In addition, the quality of an organisation depends on the quality of the individuals that make it up. Hence, the second aspect is communication *efforts* of franchisees. This research examines how the franchisor can manage these two aspects to empower network functioning and how franchisees can build their networks to realise performance gains.

These issues are underexplored since although franchisees are essential ingredients in successful franchise chains and franchising is so important in today's economy, few studies examine determinants of *franchisee performance* (Dant, 2008; Michael & Combs, 2008). Also, few studies analyse aspects of *efficiency* in franchising (Kubitschek, 2001). Further, research on planning and management of networks has widely treated the "human factor" of organisational design implicitly (Inkpen, 1996; Jarillo, 1988; Tallman, Jenkins, Henry & Pinch, 2004; Tsai, 2001),

[17] For this study, the idea of "efficient exchange" refers to the fact that *networking* is organized efficiently, i.e. networking benefits and investments are matched most rewardingly; the implication is not that costs of resource acquisition are definitely lower in the network mode than in other organisational designs. Yet, it is suggested that efficient networking increases the likelihood that the network mode can provide the lowest costs and represent the superior design.

although the superiority of networks to other organisational designs depends on individuals who convert organisational potential into reality.

The next section outlines communication benefits for franchisees as social network members, and links efficiency to network structure. Then, hypotheses on performance effects of positioning characteristics that promote or hinder efficient communication are developed (section 4). Section 5 describes data and methods, section 6 reports results. Section 7 concludes.

3. Theoretical Background

So far, social networks largely represent a sociological concept. Yet, Granovetter (1985, p. 482) has pointed out early that the "intermixing of [economic and non-economic] activities" is the social "embeddedness of economic behavior", which hints at the interpenetration of the two spheres of economic and non-economic action. Granovetter's "embeddedness" refers to the process by which social relations shape economic action in ways that some mainstream economic schemes overlook. The economist Robert Gibbons (2005) gives 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. So, social network theory can advance economic approaches. This paper enriches economic reasoning with a social network perspective to drive the understanding of performance implications of communication structures in franchise networks. The study is motivated by Dant's (2008, p. 93) research that notes, "Authors are beginning to examine research questions from a phenomenological perspective rather than within the confines of single theoretical frameworks". Combining economic and network perspectives precedes the ability to observe the effects tested here ("insights follow method"). As Brown and Dant (2008, p. 6) point out, "Strong contributions to the retailing literature [...] stem from the new insights provided by those [different] methods".

Social networks form when individuals engage in transitive connections that integrate exchange processes in a personal context. Social network logic implies that cooperation is not only based on mutual advantage, but also on reciprocity (Gouldner, 1960). That is, social networks are particularly relevant when neither price signals nor monitoring sufficiently ensure the implementation of certain activities, like of resource transfer.[18] In franchising, social networks can provide resources that complement the franchisor's "blueprint". They can direct attention to franchisee-developed best practices, transmit information on local markets and on network partners' or franchisor qualities, offer "strategic knowledge" on business opportunities, or "knowledge of knowledge", i.e. knowledge where specific expertise can be found. Thereby, embeddedness in

[18] For this study, a social network is defined as a durable form of connective capital that is created and maintained by social history and ongoing collective action, that is underpinned by a strategic orientation, a sense of common interest, and the expectation of gains (similar, Olsen, 1965).

personal relationships serves as a coping response to individual resource scarcity, which is essential in the quest for competitive advantage and economic rents (Baum et al., 2000; Goerzen, 2007; Gulati, Nohria & Zaheer, 2000). However, Windsperger (2004) notes that the acquisition of knowledge resources is challenging: acquisition costs escalate the more knowledge is embodied in individuals and needs extensive personal contacts for transmission. Lawson and Lorenz (1999) argue that franchisees must interact to make knowledge go through moments where it is articulated and recombined. Nonaka and Takeuchi (1995) highlight that acquisition requires time-consuming interaction and regular face-to-face contacts. De Berranger and Meldrum (2000) observe that personal interaction fosters exchange much better than electronic communication.

Research has investigated the use of interfirm communication for effective interaction (Tikoo, 2002). Mohr, Fisher and Nevin (1996) point out that communication is the most important element to successful interfirm exchange. They suggest that "collaborative communication", viewed as intensive, relationship-building communication and cooperative attitudes, creates an atmosphere of performance-enhancing mutual support. Mohr and Nevin (1990) argue that collaborative communication matches the increased needs for information sharing in more closely linked relationships. Mohr and Sohi (1995) further note that research tends to focus on positive effects of communication, whereas detrimental flows remain an important research issue. In franchising, communication has been examined largely with respect to the franchisor-franchisee relationship only (Kidwell, Nygaard & Silkoset, 2007).

Mohr and Nevin (1990) suggest that the impact of communication on outcomes is a function of the conditions under which it is used. Following this idea, this study proposes the concept of "*Communicative Efficiency*". Communicative efficiency is understood as matching resource acquisition with network investments in the most rewarding way. Communication is rewarding as long as networking costs do not exceed benefits received. Naturally, entertaining social relations does not come at zero cost. For franchisee performance, networking *and* managing outlet duties matter. So, there is a trade-off between time allocation to outlet management and networking. Following the idea of diminishing returns, over a certain time period and with the

"right" network partners, networking provides benefits as the franchisee acquires essential new input. Yet, benefits cease rapidly when acquired resources become redundant. Beyond a threshold, networking is inefficient, and concentrating on outlet duties would be more rewarding.[19] Thus, when franchisees fail to organise communicative activities efficiently, overinvestment in network activities can transform a potentially productive asset into a constraint and a liability (Adler & Kwon, 2002).

The first aspect on which efficiency is based is *network structure*. The idea is that franchisees' *opportunities* to use networking efficiently depend on their individual network positions. Burt (1992, p. 5) notes that "people and organizations are not the source of action so much as they are the vehicles for structurally induced action". Hence, opportunities induced by network structure matter. In this vein, social network literature emphasises that a unit's network position has a fundamental influence on productivity. Many tasks cannot be accomplished without serious cooperation from others; they are too complex and subtle to be done "by the book" and require the exercise of "tacit knowledge" that is appropriable only through interaction with knowledgeable others (Granovetter, 2005). For example, a network position that offers many communication opportunities, or that offers access particularly to well-connected others, can promote efficient resource acquisition by providing a variety of easily accessible information sources. Resource exchange may also be stronger in dense networks where peer pressure enforces cooperative exchange.

Realising the advantages of a network structure that offers efficient communication opportunities depends on network members. As the franchisor cannot contract on interfranchisee exchange, making adequate efforts to convert organisational potential into reality rests with the franchisees. Hence, the role of the very actors composing the network is essential to understanding performance outcomes (network terminology refers to this issue as "structure-player-duality"). Thus, the second aspect on which efficiency is based is communication *efforts* made

[19] Costs of networking, i.e. of building and using connective capital, are opportunity costs of time when putting other work aside and investments like logistics costs of contacting others. Benefits received depend on the requesting franchisee's previous knowledge level and on knowledge and efforts of the respondent franchisee. For example, if the respondent franchisee does not cooperate, the requesting franchisee's communicative activities are inefficient as costs exceed benefits.

by franchisees. *Efforts* can be shaped directly by franchisees, and indirectly by the franchisor's actions. As a precondition that efforts take effect, the franchisor must create network positions that offer opportunities for efficient communication. To analyse what network positions have best effects on performance, the examination is based on the following general hypotheses:

$Franchisee\_performance_i = f\ (network\_position_i)$, where *i* stands for a franchisee.

Figure 4 summarizes the concept, section 4 offers specific hypotheses that follow the general hypothesis.

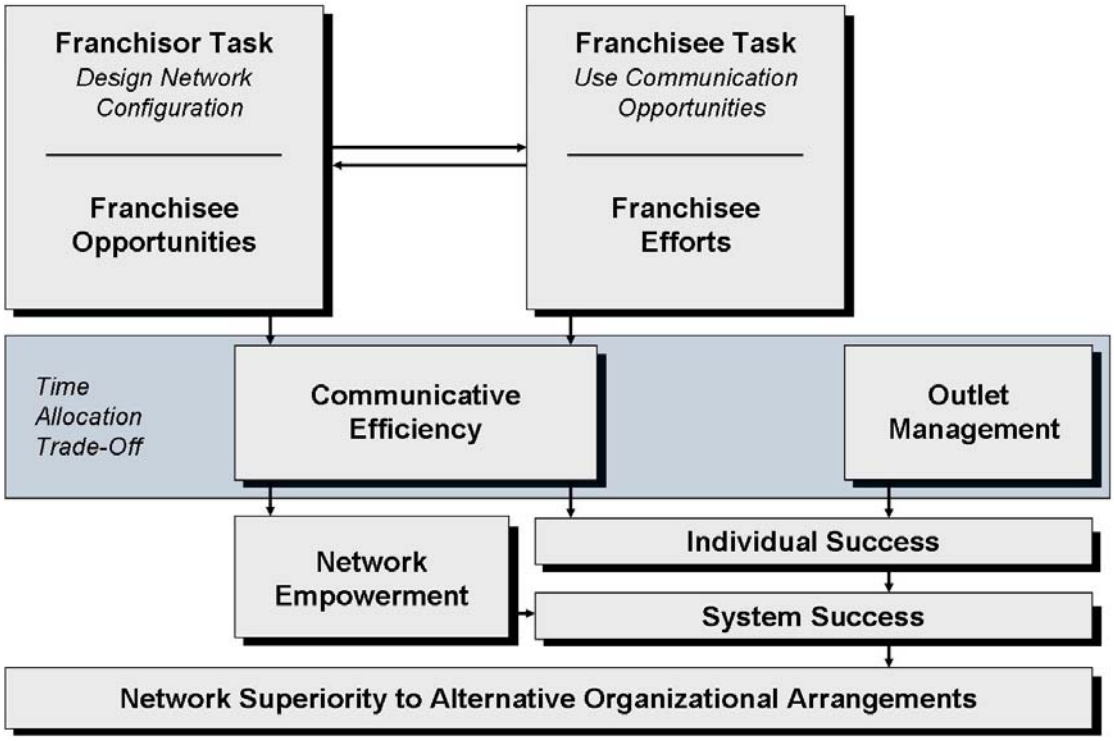

Figure 4: The Concept of Communicative Efficiency

4. Hypotheses

Regional Embeddedness. Some retailers are more successful when outlets are clustered (Kelly, Freeman & Emlen, 1993). Clustering promotes the development of franchisees' connective capital, since it facilitates face-to-face-interaction and exchange and promotes trust-building. Trust reduces transaction costs of cooperation, which makes communication more efficient. Electronic communication cannot foster exchange as much as face-to-face interaction (De Berranger & Meldrum, 2000). Since knowledge resources are also context-specific, franchisees that are located proximately are possibly the most relevant sources of input. As having many personal contacts further improves information processing capacity (Hansen, 1999), particularly *many proximate* communication opportunities can be useful to enhance performance.

Moreover, most people tend to free-ride if they are able to get away with it (Fehr & Schmidt, 1999). Free-riding refers to undersupplying quality by withholding effort to decrease individual costs at the expense of other system members. Yet, repeated interaction restrains such opportunism as franchisees perceive an increased level of visibility of their actions (Fama, 1980; Kidwell et al., 2007). Opportunism then becomes costly due to reputational effects. Although Axelrod (1984) focuses on the evolution of cooperation based on rational self-interest, researchers in the sociology of collective action emphasise affective bonds that develop during interaction: interaction promotes a common spirit, a norm of "fair dealing", and unwritten mutual expectations among network members, which minimise free-riding (Kidwell & Bennett, 1993). When opportunism is limited, franchisees can benefit from customer retention and interunit customer transfer. As free-riding has negative effects on the opportunistic franchisee's performance as well, every franchisee profits from reduced free-riding (Kidwell et al., 2007).

Clustered franchisees increase the system's regional market presence and regional advertising budget, which helps to make the system's offering attractive to consumers. Demand increases can result from higher consumer propensity to spend on the product kind (form demand), and from higher competitiveness relative to other systems (brand demand). Ghosh and Craig (1991) argue that despite enhanced local competition, higher form and brand demand can enhance net

sales. Joint success may then reinforce motivation to cooperate. Further, clustered franchisees can efficiently identify and articulate common interests towards the franchisor.

Costs of overcoming distance, like transport and communication costs, imply a spatial limit over which all of these benefits accrue (Gordon & McCann, 2000). Here, this radius is termed a "regional cluster". The idea is that a network position that provides many interaction opportunities in the regional cluster offers better chances to realise the benefits outlined.

> *H1a: Many communication opportunities in a franchisee's regional cluster positively influence this franchisee's performance.*

Yet, relationships in business networks are characterized by cooperation as well as competition. Evidence on whether positive or negative effects of proximity prevail is contradictory. Some studies show that higher intersystem competitiveness offsets individual losses of increased competition; others highlight the cannibalisation of sales ("encroachment") when new outlets are located close to existing ones (Kalnins, 2004). Kaufmann and Rangan (1990) argue that each existing franchisee will either lose sales after the introduction of a new outlet, or, at best, retain sales at the previous level. Moreover, prior to complete market development, franchisees often draw customers from beyond their "usual" trading areas. Franchisees' future revenue expectations are based on these customers (Farrell, 1984). Then, also the *perception* that cannibalisation occurs can cause demotivation and conflicts that hamper exchange. If resource exchange is reduced to safeguard one's market position, interfranchisee communication is less efficient. Further, networking turns out costly in terms of time and capital needed for communicating with many others. Beyond a threshold, networking costs outweigh benefits. Then, communication will be inefficient and performance decreases.

> *H1b: Many communication opportunities in a franchisee's regional cluster negatively influence this franchisee's performance.*

Supraregional Embeddedness. Since franchisees in the supraregional area have similar *and* different market experience, they can provide complementary input. Then, they offer opportunities for efficient communication. Franchisees using supraregional opportunities further avoid intel-

lectual lock-in in regional structures. The latter process arises if over-reliance is placed on regional knowledge, which slows down innovation and the detection of changing needs. Also, high supraregional market coverage and joint marketing efforts can increase form and brand demand. These effects can enhance motivation to cooperate, and performance.

H2a: Many communication opportunities in a franchisee's supraregional cluster positively influence this franchisee's performance.

Yet, consumers decide on merchandise locations on the basis of time and effort necessary to accomplish buying tasks. Ghosh and Craig (1991) argue that similar to the reservation price concept, there is a reservation distance which consumers maximally travel. Besides, customers switch more readily between brands they evaluate as similar since people behave similarly towards things they perceive as similar. As offerings in a system are alike, customers may not exhibit loyalties towards an outlet they used to patronize once a new outlet is located more conveniently. Thus, many supraregional franchisees can intensify cannibalisation. When many buying options are available to consumers, drawing patronage from beyond the usual trading area is less probable. So franchisees may reduce cooperation to safeguard their individual market positions.

Using communication opportunities in a supraregional network is also costly due to longer travel distances for personal interaction. Relationships ("ties") are weaker when network investments are spread over many relationships. Then, motivation to share is lower and incentives for opportunism are stronger. Information received may even be less relevant as franchisees operate in different market environments. These effects can decrease efficiency of communication.

H2b: Many communication opportunities in a franchisee's supraregional cluster negatively influence this franchisee's performance.

2StepTies. In a multiunit organisation, a unit can access knowledge via a network of interunit links (Hansen, 1999). In network logic, franchisees to whom a focal franchisee has no direct contact, but who have contacts to any of the focal franchisee's direct contacts (thus they can be

approached via this contact chain) are part of the franchisee's connective capital (in network terminology, these more distant franchisees are "second-order contacts"). As in different circumstances, different resources may be required, "knowledge of knowledge" promotes competitive advantage: a franchisee who has many contacts who can help identify and access knowledge of many others, is in a good position for efficient acquisition. Here, "opportunities multiply as they are seized" applies in the context of communication.

H3: Many second-order communication opportunities of a franchisee positively influence this franchisee's performance.

Relevance. Franchisees in a central network position can perform better, because they have access to ample and diverse knowledge. "Central" franchisees are those who are highly relevant for the information flow through the network. These actors access resources from unique parts of their network, can hear about impending threats and opportunities more quickly than others, and can better find out about the quality of exchange partners (Zaheer & Bell, 2005). High relevance thus provides a vision of options otherwise unseen and offers an essential advantage in detecting and developing rewarding opportunities. Central actors are in a privileged position for both resource acquisition and transmission: they can both make informed decisions, and play a broker role by strategically transferring or holding back information. Thereby, they benefit from information arbitrage (Burt, 2004). They further enjoy scope economies of sharing knowledge developed by others (Tsai, 2001). Also, when others depend on a central actor's input, they may invest disproportionately into the relationship, which decreases the central actor's networking costs.

H4: High relevance of a franchisee in the regional cluster positively influences this franchisee's performance.

Interaction. Knowledge generation does not proceed in isolation, but when different ideas and practices unite and are discussed. When many contacts of a focal franchisee communicate with each other, exchange may benefit from different perspectives. In such dense structures, source credibility increases: innovative ideas are given the credibility they need to be regarded valuable

and productively used by others (Uzzi & Spiro, 2005). Additionally, Ahuja (2000) argues that dense structures reduce the possibility that network members misinterpret the other network members' actions, which decreases the likelihood of mutually destructive competitive practices.

H5a: A high level of interaction between a franchisee's contacts positively influences this franchisee's performance.

Yet, acquired input is valuable only if it extends the franchisee's previous knowledge level. Information needs to be reflected, evaluated and constantly brought up to date. If a network lacks new input and retreats to ideas which have been circulating for a longer term, input becomes redundant ("collective blindness"; Nahapiet & Ghoshal, 1998). In dense structures, actors tend to confirm each others' views as all have similar input at their disposal ("echo-room problem", Burt, 2005). A network position that implies such a homogeneous information base bears the risk of losing touch with market developments. Redundant, inefficient communication then prevents franchisees from realising and acting on challenges in the market. As Adler and Kwon (2002, p. 26) observe, "In life we cannot expect to derive any value from social ties to actors who lack the ability to help us".

H5b: A high level of interaction between a franchisee's contacts negatively influences this franchisee's performance.

Hubquality. Most likely, franchisees do not possess input of identical value to performance. Possibly, contacts to franchisees who interact with other well-connected ones yield more, and more diverse, information. In network terminology, the quality of a franchisee's contacts is reflected in the franchisee's own quality as an "information hub".

H6a: A franchisee's high hubquality positively influences this franchisee's performance.

Yet, people who become targets of more interaction requests than they can handle have a hard time responding under assumptions of bounded rationality. Due to this time-allocation exercise, the potentially most useful actors have a queue for their attention, which reduces their overall usefulness as a source (Nasrallah, Levitt & Glynn, 2003). Thus, it can be more efficient to seek communication with less popular individuals to minimise the chances of being overlooked.

H6b: A franchisee's low hubquality positively influences this franchisee's performance.

5. Sample, Variables, and Methods

5.1 Sample

The sample comprises 121 franchisees of two chains in fashion retail. Retail is the largest German industry in franchising (in 2008 sales, 36%). The efficiency of retail stores is a constant challenge for every retailer's competitiveness, as the performance of every chain enterprise depends on the performance of its parts (Barros & Alves, 2003). Uzzi (1996) states that the need of keeping up with trends is nowhere more paramount for competitive advantage than in fashion retail, where constant innovation has created a multi-billion dollar industry. Particularly in this industry, efficient exchange on the latest industry developments is crucial to success (Uzzi, 1996). Thus, this study focuses on the fashion retail industry. As there are industry-specific effects on performance (Short, Ketchen, Palmer & Hult, 2007), the analysis concentrates on only one industry to control for that fact.

The population of fashion retail franchise outlets in Germany is around 2100. In Germany, franchise systems in general are small – the mean number of franchisees per systems is 60 (Perlitz, 2007).[20] The sample systems are two of the largest German systems in fashion retail. The first (second) system's sampling frame is 92 (130) franchisees. The sampling frame covers over 10% of the fashion franchise population. Thus, following Cochran (1977), the study results should be representative for the sector.

Self-administered postal questionnaires with a letter assuring franchisees of anonymity and a university address for responses were distributed among all the system franchisees in December 2006. The formulation of the questionnaire items emerged from a qualitative-explorative pre-study with franchisors, consultants, and franchisee focus groups. Responses arrived in the first three months of 2007. In three rounds of follow-up calls, non-respondents were contacted for telephone interviews. The response rate is 47% (60%). The study further uses data from a larger project on franchisor quality by the International Centre for Franchising and Cooperation. This

[20] Griffin and Hauser (1993) argue that survey results do not vary much once a relatively homogeneous sample of 20-30 units is given as in fact, 90% of all the information obtainable from a larger, relatively homogeneous population can be found in such a sample.

data enables to track system development and conduct more stringent tests on sample representativeness (Chrisman, Chua & Steier, 2002; Chrisman & McMullan, 2000). Due to missing data, the regression analysis is based on 100 franchisees.

5.2 Dependent Variables

Objective Performance. Typical measures of retail success are sales and profits. An ideal measure for market-based performance would include profitability data. Yet, researchers commonly cannot obtain profitability data, but sales information is often available as a performance metric (Singh & Mitchell, 2005). Sales volume is only a short-term measure of a store's competitive strength. However, long-term implications suggest a strong linkage of sales and profitability (Buzzell & Gale, 1987). Using sales as regressand is consistent with previous research on collaborative relationships (Collins & Clark, 2003; Lee et al., 2001; Park & Luo, 2001; Sarkar, Echambadi & Harrison, 2001; Singh & Mitchell, 2005; Stuart, 2000). The idea is that franchisees can directly convert input obtained from others into sales. To measure (previous year) sales, respondents filled in blanks, as done in prior studies (Zahra, 1996a, 1996b; Zahra & Bogner, 2000; Zahra, Neubaum & El-Hagrassey, 2002). Brush and Vanderwerf (1992) and Chandler and Hanks (1993) establish high accuracy and reliability of such entrepreneur reported performance data.

Subjective Performance. Research suggests that capturing the multidimensionality of firm performance requires objective and subjective measures to achieve triangulation (Baron and Tang, 2009; Brush & Vanderwerf, 1992; Chandler & Hanks, 1993; Stam & Elfring, 2008; Zahra et al., 2002). Although manager personality and aspiration levels could affect performance evaluations, subjective measures have shown strong reliability and validity (Dess & Robinson, 1984; Stam & Elfring, 2008). So, both kinds of measures are used here. To quantify subjective success, four items measure the extent of "satisfaction with performance". The 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, 44).[21] The results of a principal component factor analysis show that the four items load highly on one factor (all loadings > 0.886). A scale is built by averaging the sum of the scores on the four items, using equal weights. Cronbach's alpha is 0.891. The inspection of item-to-total and inter-item correlations provides further support for scale reliability. Convergent scale validity is verified via the correlation between the summated scale and a single item assessing franchisees' overall satisfaction with performance (wording: "How satisfied are you overall with your performance?" 1 – "very satisfied", 7 – "very dissatisfied"). The correlation is substantial (table 4). The analysis further uses this single item as an additional measure for subjective performance to check result robustness.

5.3 Independent and Control Variables

Regional Embeddedness. For assessing regional embeddedness, interviews with the systems' franchisees on their interaction structures were conducted. Franchisees described their relationships to other network partners, the frequency of exchange, and the distance to others in which substantial personal exchange took place. Franchisees indicated that other system franchisees in a maximum range of 40 to 50km were those with whom they engaged in substantial exchange on business issues. So this research uses 45km (ca. 28m) as a cut-off distance for interaction effects. This distance matches Kalnins' (2004) distance measure for interaction effects. In this cut-off distance, each franchisee's (in network terminology, each "vertex's") "degree" is measured, i.e. the number of communication opportunities. The variable ranges from 0 to 5. The analysis further uses items from Uzzi's (1997), Schlüter's (2001) and Stein's (1996) interview-based research on features and functions of exchange to check result robustness as regards the proposed link between interaction and performance (table 5).

Supraregional Embeddedness. To span a larger area, supraregional embeddedness measures franchisee degrees in double the radius, i.e. 90km (ca. 56m). The variable ranges from 0 to 7.

[21] The wording of the items is, "Within another activity and with the same level of effort I could realise an income which is…" (1-7; lower-higher); "Compared to the average development of sales in my industry I would rate my last period's sales as being…" (1-7; higher-lower); "Compared to my expectations my last period's income was…" (1-7; higher-lower); "Compared to my last period's sales objectives my last period's sales were…" (1-7; higher-lower).

2StepTies. Expressed as a percentage of all system franchisees, the franchisees ("alters") in two links of a focal franchisee ("ego") are counted. In network logic, ego can approach alters to whom ego does not have a direct contact, but who have a direct contact to one (or more) of ego's direct contacts, to obtain input. These franchisees form the "second-order-network" (De Nooy, Mrvar & Batagelj, 2005).

Relevance. Another measure from social network analysis assesses ego's relevance in the regional network: the "number of weak components" (De Nooy et al., 2005). The measure shows how many separated (networks of) vertices occur without the connections provided by ego. So, it describes the resulting network structure when ego is removed from the network. The measure shows ego's centrality, i.e. the potential to benefit from information arbitrage (Burt, 1992).

Interaction. Following Uzzi and Spiro (2005), Holland and Leinhardt (1971) and Feld (1981), another network measure quantifies the connectedness of vertices in ego's regional network: the "clustering coefficient". The coefficient measures density in ego's regional network. Density is given by the relationships ("ties") that exist in the ego-network expressed as a proportion of the maximum possible number of ties. The measure indicates the redundancy of available input.

Hubquality. Hub weight is a proxy for the quality of obtainable input. Using the network analysis program Pajek 1.24, weights are computed in an iterative algorithm process that analyses system-wide contact chains of franchisees (De Nooy et al., 2005).

Control Variables. Controls are in line with previous research (Baron & Tang, 2009; Cooper, Gimeno-Gascon & Woo, 1994; Jambulingam & Nevin, 1999; Low & Abrahamson, 1997; Newbert, Kirchhoff & Walsh, 2007). The study uses a system dummy (0 – large, 1 – small system), outlet size (measured by employee numbers; see Yli-Renko & Janakiraman, 2008; in categories of 1-3, 4-6, etc.), each franchisee's year of system entry, and the competitive situation (the number of non-system competitors in the regional area).

5.4 Methods

For objective performance and for the subjective performance scale, the analysis uses OLS regressions. Initial investigation reveals that the *objective* performance variable is not normally

distributed. Following Chrisman et al. (2002) and Kennedy (1979), the study takes the natural logarithms of sales. Following Shane, Shankar and Aravindakshan (2006), nonlog variables are used for robustness checks: regression results do not show substantive differences from the regression with log variables. From a modelling perspective, the single-item subjective performance variable is an inherently ordered multinomial-choice variable. To capture the discrete order, an Ordered Probit Model is used (Greene, 2003; McKelvey & Zavoina, 1975). The model is estimated by maximum likelihood and takes the following form:

$$Y_i = \beta' x_i + u_i \text{ with } (i = 1, 2, \ldots, n), \tag{1}$$

where Y represents the underlying response variable, x is set of exogenous variables, u_i is the residual. An observation belongs to the jth category if

$$\alpha_{j-1} < Y \leq \alpha_j \text{ with } (j = 1, 2, \ldots, m). \tag{2}$$

Assuming that the latent variable is normally distributed, the probability of belonging to a certain category j is

$$Prob(Y = j|x_i) = \Phi(\alpha_j - \beta' x_i) - \Phi(\alpha_{j-1} - \beta' x_i), \tag{3}$$

where Φ stands for the cumulative standard normal distribution. Using a dichotomous variable Z_{ij}, which takes a value of 1 if Y_i falls in the jth category and a value of 0 otherwise, the likelihood function can be defined as:

$$L = \prod_{i=1}^{n} \prod_{j=1}^{m} \left[\Phi(\alpha_j - \beta' x_i) - \Phi(\alpha_{j-1} - \beta' x_i)\right]^{Z_{ij}}. \tag{4}$$

Maximizing the latter equation yields the model's parameters that help to determine the probability that an actor displays a certain overall performance satisfaction level (Maddala, 1983).

To trace nonresponse bias, the study first uses the "lastwave" method and examines whether results are driven by differences between respondents and nonrespondents. The analysis compares early and late responders (Armstrong & Overton, 1977). It further compares the average sample observation in both systems with the average outlet-owner computed from the population of each system along the dimensions age, years in business, and prior self-employment.

Therefore, it uses previously collected data, and to obtain further information on the populations, officials in the chains were contacted. As promoted by the high response rates, no evidence of nonresponse biases emerged.

6. Results

Table 3 shows the results of the OLS and Ordered Choice Models. Table 4 exhibits descriptive statistics. Table 5 contains responses to items on network interaction. Hypothesis 1a is supported: regional communication opportunities increase performance. Hypothesis 2b correctly suggests a negative impact of many franchisees in the supraregional cluster. Hypothesis 3 argues that a large second-order-network promotes performance, which is not supported; possibly, as the positive and negative effects of regional and supraregional opportunities are combined in this variable. Hypothesis 4a correctly proposes that a franchisee's high relevance for resource-flow in the network enhances performance. Hypothesis 5 suggests that interaction among regional contacts influences performance. There is no evidence, which may be explained by the fact that the variation in connectivity is not very high in the sample. Hypothesis 6a is supported, being connected to particularly well-connected other ones, i.e. high hubquality, enhances performance.[22]

Results are stable when applying different dependent variables as well as different methods (OLS and Probit). For the OLS regressions, Variance Inflation Factors (VIFs), correlations, White-, Newey-West-, and Kolmogorov-Smirnov-Tests are used to control for absence of multicollinearity, for homoscedasticity and normal distribution of noise. VIFs are all below the tolerance limit of ten (Hair, Anderson, Tatham & Black, 1998). As the correlation between regional opportunities and the other independent variables is high (although VIFs do not indicate multicollinearity), each model is estimated once with and once without the regional variable. Results for the hypotheses stay the same. The correlation table backs the OLS and Probit results. The Probit Models show a satisfactory goodness-of-fit as regards the Pseudo-R^2 values (McFadden, 1974). Inspection of the Probit classification tables establishes that over 50% of the models' quality rank predictions are correct. To further test result robustness, parametric t-tests and non-parametric rank-tests are used to compare sample means for each category for the independent variables. For H1, H2, H4 and H6, robustness checks affirm the proposed relations. As

[22] One would expect that transfer of ideas between outlets of the same franchisee was more frequent than between different franchisees' outlets. So, the study also controls for multiunit-ownership (and for GDP of the area), but without observing significant results.

there are groups (where the dependent variable has a value of 1 or 6) with few observations, adjacent groups are combined and the model is re-estimated. The significance of coefficients is identical to the results presented here; 75% of the predictions are correct, R^2 increases to 42.75%. Still, the first model is reported because this model is based on the original data.

For additional validation, the results are checked in interviews with the franchisors and several system franchisees. They support the findings. Interviewees believed that communication opportunities granted to franchisees directly affected social and economic behaviour, that opportunities for rewarding interaction varied among franchisees, that valuable exchange occurred in the limited spatial radius of regional areas and that the input obtained could indeed enhance sales performance. In pre-studies to another project, three other retail franchisors reported 50km (31m) as the appropriate radius in which they believed their franchisees could interact efficiently.

Turning to franchisee's *efforts* to use the communication opportunities provided, it must be noted that the analysis cannot be based on real communication data for all franchisees of both systems over time. In theory, such real data could provide "exact" results on the relation between communication opportunities and performance. Yet, for producing exact results, data would need to include the specific content of all conversations among all franchisees, the usefulness of the information received by a franchisee for the particular business situation at hand (also compared with the franchisee's previous knowledge level), individual absorptive capacities as regards valuing, assimilating and applying obtained input, as well as individual capabilities to explicate knowledge. These aspects seem prone to measurement error. As an indicator of franchisees' efforts to use communication opportunities provided by network structure, the analysis thus relies on franchisees' evaluations of network interaction. Based on franchisees' evaluations, the study checks whether franchisees in fact use (at least to a certain extent) the opportunities offered. For instance, if franchisees perceive the availability of others for assistance as low, interaction and reciprocity are likely to be low as well, and vice versa (first item, table 3). Here, regional communication opportunities correlate highly with availability (-0.4; $p < 0.01$; "availability" is reverse-coded, so the more opportunities, the better the availability; the

same result holds for 2StepTies and availability). These results indicate that interaction with proximate franchisees is strong in the system, which backs the franchisees' statements that the relevant distance for substantial exchange is the regional radius. As items like "availability of other franchisees' assistance" (first item), "discussing business matters with others" (third item), and "meeting others privately" (fifth item) also correlate strongly with sales performance (-0.5; -0.4; -0.5; $p < 0.01$; all items are reverse-coded), business-oriented franchisees apparently seize the communication opportunities offered. The next section concludes.

	Model 0	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Dependent Variable	Subjective Performance (Scale)	Sales Performance		Subjective Performance (Scale)		Overall Satisfaction (Item)	
Method	OLS	OLS		OLS		Ordered Probit	
C	51.304* (25.344)	9.713** (3.389)	10.065** (3.438)	49.050* (20.849)	47.154* (21.047)		
Regional Embeddedness		0.064† (0.032)		-0.343† (0.199)		-0.448† (0.245)	
Supraregional Embeddedness		-0.058*** (0.010)	-0.055*** (0.010)	0.010 (0.059)	-0.011 (0.059)	0.180** (0.070)	0.156* (0.068)
2StepTies		-0.002 (0.010)	-0.007 (0.009)	0.073 (0.059)	0.102† (0.059)	0.030 (0.070)	0.063 (0.064)
Relevance		0.124** (0.046)	0.198*** (0.026)	-0.610* (0.280)	-1.010*** (0.159)	-0.971* (0.418)	-1.479*** (0283)
Interaction		-0.001 (0.001)	0.000 (0.000)	0.004 (0.003)	0.001 (0.002)	0.060 (0.004)	0.001 (0.003)
Hubquality		0.240* (0.106)	0.281† (0.106)	-1.210† (0.653)	-1.431* (0.648)	-2.233** (0.748)	-2.369** (0.751)
System	-0.612* (0.257)	0.073† (0.038)	0.064† (0.039)	-1.275*** (0.235)	-1.229*** (0.236)	-1.595*** (0.415)	-1.507*** (0.409)
Outlet Size	-0.204† (0.109)	0.010 (0.015)	0.012 (0.015)	-0.092 (0.089)	-0.100 (0.090)	-0.130 (0.101)	-0.143 (0.103)
Year (System Entry)	-0.024† (0.013)	0.002 (0.002)	0.002 (0.002)	-0.022* (0.011)	-0.021* (0.011)	-0.010 (0.010)	-0.009 (0.010)
Competition	0.010 (0.019)	-0.002 (0.003)	-0.003 (0.003)	0.019 (0.015)	0.021 (0.015)	0.041* (0.017)	0.044** (0.017)
F/LR statistic	6.799***	9.772***	10.106***	10.230***	10.800***	79.207***	76.522***
R^2	0.223	0.523	0.503	0.535	0.519		
Adj. R^2	0.190	0.470	0.453	0.483	0.471	0.266	0.257

N = 100. Beta coefficients reported. Standard errors in parentheses. Significance levels (two-tailed): *** p < 0.001; ** p < 0.01; * p < 0.05; † p < 0.1.
Note that the "Subjective Performance" and "Overall Satisfaction" variables are reverse-coded (1 – "very satisfied", 7 – "very dissatisfied").

Table 3: Results

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Sales Performance	13.93	0.19												
(2) Subjective Performance	3.36	1.27	-0.51***											
(3) Overall Satisfaction	2.88	1.23	-0.56***	0.81***										
(4) Regional Embeddedness	1.32	1.21	0.36***	-0.30**	-0.26**									
(5) Supraregional Embeddedness	3.22	1.86	-0.17†	-0.15	0.06	0.51***								
(6) 2StepTies	1.93	2.27	0.19†	-0.26**	-0.35***	0.28**	0.42***							
(7) Relevance	0.83	0.71	0.44***	-0.39***	-0.38***	0.82***	0.48***	0.42***						
(8) Interaction	0.31	0.45	0.08	0.02	0.03	0.64***	0.29**	0.13	0.29**					
(9) Hubquality	0.09	0.19	0.23*	-0.21*	-0.27**	0.31**	0.33**	0.60***	0.25*	0.27**				
(10) System			0.09	-0.39***	-0.40***	-0.43***	-0.26*	0.06	-0.31**	-0.32**	-0.14			
(11) Outlet Size	2.58	1.12	0.19†	-0.35***	-0.33**	-0.09	-0.05	0.09	-0.00	-0.19†	0.09	0.39***		
(12) Year (System Entry)	1992.34	9.02	0.16	-0.30**	-0.21*	-0.09	-0.03	0.12	-0.07	-0.03	0.19†	0.26**	0.28**	
(13) Competition	7.61	6.17	0.01	0.12	0.18†	0.18†	0.06	0.02	0.22*	0.09	0.04	-0.30**	0.02	0.01

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

Table 4: Descriptive Statistics

Questionnaire Item	Agreement	
	1. System	2. System
I can turn to other franchisees for assistance whenever I have a problem.	80%	80%
I know many other system franchisees on a personal basis.	60%	70%
I regularly discuss business matters with other system franchisees.	65%	70%
I am very satisfied with my relationships to the other network members.	95%	80%
Apart from franchisor-organised meetings, I meet other system franchisees also privately.	55%	55%
When problems with the franchisor arise, franchisees stick together.	55%	55%
The franchisees use every possibility to exert influence on the franchisor via councils and committees.	70%	70%
None of the system franchisees acts primarily to his/her own advantage.	45%	50%
In general, all system franchisees fulfil their duties.	75%	70%
As a system member, I am a lone wolf. vs. *As a system member, I am part of a community.*	55% "community"	60% "community"

Items measured on a 7-point scale: 1-7 "strongly agree", 7 – "strongly disagree". The three affirmative answers represent "agreement".

Table 5: Features and Functions of Exchange

7. Limitations and Discussion

7.1 Research Limitations

This research examines the impact of opportunities for efficient communication on franchisee performance. Real time efforts that franchisees undergo to use these opportunities over time cannot be measured. To test whether franchisees use the opportunities offered, the study uses interview information and franchisee-reported proxy data. Future research could strive to collect real time data. Another methodological problem is survivor bias that is common to performance studies. Further, network characteristics are dynamic, which alters a position's attractiveness over time.

7.2 Discussion

Conceptualising a franchise system as a social network, this research argues that *efficient resource transmission among franchisees* increases franchisee performance, and that interfranchisee communication is the means for exchange. For analysing the path to efficient exchange, the concept of "Communicative Efficiency" is proposed that refers to franchisee *opportunities* and *efforts* to match the acquisition of network resources with networking investments most rewardingly. Each franchisee's position in the network structure offers certain communication opportunities. Having these opportunities is the precondition for communication efforts to take effect. So, this study examines performance effects of network positions to find out how to design network structure best.

The analysis establishes that many communication opportunities in a franchisee's regional cluster enhance this franchisee's performance. Proximity enables personal interaction and trust-building, which promotes efficient acquisition of network resources. Here, strategic effects of connective capital can outweigh demand effects, as communication benefits offered by proximate franchisees outweigh eventual patronage losses to these franchisees. Moreover, a position that makes a franchisee central to resource transfer in the network promotes performance. A central position allows to make informed decisions, and to benefit from information arbitrage by strategically transferring or holding back information. In addition, communication opportunities

with *well-connected* others are more rewarding, as these franchisees have more, or more diverse, resources they can share.

Yet, many franchisees in the supraregional area decrease performance. The puzzle of countervailing effects of regional and supraregional embeddedness can be interpreted as follows: a *regional* cluster that centres on a larger community is a point of attraction that drags demand into the cluster (Ferber, 1958). Yet, population is not uniformly distributed in space. Total population increases with diminishing returns to scale from the cluster's centre, as densely populated regions are less likely to span a large (supraregional and above) rather than a small (regional) radius. Thus, *supraregional* clusters can hardly drag demand from the outside into the cluster; once franchisees are positioned on a supraregional scale around the regional cluster, they attract those customers that have travelled into the regional cluster before. To illustrate the idea, one can assume that customers are distributed on a straight line from 0 to 1. First, franchisees are located in the most densely populated areas of expectedly high demand that span a regional cluster radius. Franchisees occupy positions around the line's "middle" (0.3 to 0.7; 0.5 is the cluster's centre). They drag demand into the cluster. Clustering increases form and brand demand, which encourages motivation to jointly advance system success. Hence, positive effects of clustering prevail. Over time, new franchisees are positioned more remotely, so regional clusters develop into supraregional ones. The regional cluster loses its customers from the edges to these franchisees. That is, the reason for choosing a position in the "middle" becomes slowly obsolete as exogenously, demand-dragging into the regional cluster is weakened. Thus, negative competitive effects prevail. These combine with negative communicative effects as cultivating distant contacts is costly and as exchange is reduced in face of enforced competition. So endogenously, communication becomes less efficient. Then, demand effects outweigh strategic effects.

The results offer several implications. Concerning franchisor implications, common wisdom has it that some organisations, such as the military, are most effective when their parties adhere to strict guidelines for how they should communicate with each other. Other organisations tend to thrive better when individuals are free to choose when and with whom to communicate (Nasral-

lah et al., 2003). As reciprocal exchange requires personal, voluntary interaction, strict guidelines are useless in the franchising context. But even if efficient interaction is hard to enforce, it can be encouraged by building an adequate network structure. Following S.R. Covey (1991), an "empowered organisation" is one in which individuals have the knowledge, skill, desire, and *opportunity* to personally succeed in a way that leads to collective organisational success. So, for positioning strategies, providing opportunities for efficient communication can be an additional criterion that may help in location decisions beside demand and other operational variables.

While the franchisor designs network structure, communication efforts rest with franchisees ("structure-player-duality"). Incentivising cooperative behaviour can encourage efforts. Credit assignment like making knowledge sources visible can provide demonstration effects that lower psychological costs of sharing. Establishing a "managerial culture" that emphasises paying attention to other system members and offering fair rewards can result in positive peer pressure to perform. Franchisee screening and selection may pay more attention to applicants' cooperative orientations. As Burt (1992, p. 13) 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".

On the franchisee level, franchisees may prefer positions that offer adequate opportunities (at least, judging at the time of system entry). Further, they can increase efforts to cultivate inter-franchisee exchange. Apart from individual cooperative dispositions, cooperation is conditioned by the social context: since each franchisee's actions solicit responses by network partners, who then receive reactions in return, behaviour is balanced by the network's self-regulating system. As individuals tend to invest in connective capital when many others also participate (Ichniowski, Shaw & Gant, 2003), franchisees can reduce peer pressure by sharing more, and exert pressure on others to contribute more to system success.

The study results demonstrate that efficient exchange enhances outcomes at the unit level, which together form the evolutionary path of the system. Since communicative efficiency

makes linked units more astute collectively than they are individually, also in the franchising context, the whole can be greater than the sum of the component parts.

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III. INNER STRENGTH AGAINST COMPETITIVE FORCES – SUCCESSFUL SITE SELECTION FOR FRANCHISE NETWORK EXPANSION

1. Abstract

For every franchise system, making the leap from the unknown to the commonplace requires a strategic plan for growth. The *exogenous* market perspective holds that evaluating market conditions is central to defining promising outlet locations since there are direct economic effects on performance arising specifically from location. The *endogenous* firm perspective (the resource-based view) and the social network approach together provide an *inner strength perspective* on interconnected firms; this perspective holds that access to internal and external resources offered at a certain spot determines site attractiveness, rather than location-specific market factors. This chapter combines both literature strands and, using a sample of 201 German franchisees, tests hypotheses (1) that explore which perspective dominates location decisions in practice, and (2) that seek to clarify the relevance of the decisive criteria for outlet performance. Results show that location decisions rely on both perspectives, yet, franchisee performance depends rather more on inner strength factors. The analysis further indicates that expansion is better served by following a geographically dispersed cluster-approach, than by growing steadily from a baseline site.

2. 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 Research

For every franchise system, a major step in the leap from the unknown to the commonplace is developing a strategic plan for growth. That growth requires the management of the franchise chain to adopt a location strategy, which will ideally maintain and extend the chain's competitive strength. Kaufmann (2007, p. 86) argues, "There can be no doubt that store-location decisions are of critical importance […] Site selection expertise within a retail firm is a significant 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*.

To begin with the *market perspective*, location theory anecdotally suggests that there are three key determinants of firm performance: "location, location, and location" (Jones & Simmons, 1987; Park & Khan, 2006). Classic and neo-classic location theory identifies the evaluation of market conditions as the most relevant factor in determining attractive spots, because of the direct economic effects on performance (i.e. demand effects in Hotelling's model (1929)) attributed to location (Christensen & Drejer, 2005; Ingene & Yu, 1982; James, Walker & Etzel, 1975; Lee & McCracken, 1982; Powers, 1997; Simons, 1992). From this perspective, market knowledge at the system centre is essential to guide 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 those resources and capabilities contained within the firm. That is, the RBV envisions firms as independent entities, which does not cover exchange patterns in a network of entrepreneurs whose intra-network relationships function as privileged channels delivering resources, conveying knowledge, information, or best

practice. Consequently, the RBV provides only a partial account of firm performance, given 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 & Madhavan, 2001; Gulati, 1999; McEvily & Marcus, 2005).

To account for external resources transmitted by self-organisation 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 this study calls an *inner strength perspective* on interconnected firms, which holds that firms can combine internal and external resources to achieve competitive advantage (Gulati, Nohria & Zaheer, 2000). This inner strength perspective holds that it is the resource access offered by network embeddedness at a certain spot that determines the attraction of a location, rather than location-specific market factors. This implies that when planning expansion, central planning competency may not be superior to network self-organisation.

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 & Laporte, 2005; González-Benito, 2002; Sakashita, 2000; Wood & Tasker, 2008). In practice, many systems rely on intuition guided by experience and common sense, instead of sophisticated modelling (Hernandez & Bennison, 2000). Here, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch & Byrom, 2004, p. 225). Clarke, Mackaness and Ball (2003) note that despite its importance, researchers ignore the essential role of pragmatic judgement (often organised along the lines of experience-based checklist factors) that is largely underplayed in the academic literature on outlet forecasting.

When expansion decisions should result in the choice of profitable locations, how does location decision-making balance the market perspective with the inner strength approach *in practice*: does market-based location theory, or the inner strength perspective, dominate pragmatic deci-

sions? In other words, do exogenous location factors or endogenous network characteristics have more effect on judgements, and which criteria are more useful for forecasting outlet performance? How can franchisors organise decision-making to enhance outlet success – is central planning or encouraging network self-organisation the better route?

To examine these questions and extend the literature on successful expansion strategies in franchising, this research combines the literature strands on traditional location factors and the inner strength perspective. Using concepts from social network analysis, it tests several hypotheses on two German franchise chains. First, this study explores how location decisions are made in practice, i.e. which theoretical perspective prevails, and second, it sheds light on the relevance or otherwise of the criteria applied for location decisions to outlet performance. The paper has managerial implications, in terms of showing how best to organise expansion to achieve beneficial performance outcomes.

The paper is organised as follows: next, expansion-related literature on location planning that assumes direct economic effects is reviewed, and inner strength benefits for franchisees as social network members are specified. These benefits are then linked to network structure. In section 3, hypotheses on market and network characteristics that affect franchisee performance are developed. Section 4 describes data and methods, section 5 covers the results, and section 6 reports conclusions.

3. Theoretical Background

Management literature emphasises that franchising facilitates rapid growth (Castrogiovanni & Justis, 2002; Dnes, 1991; Huang, Phau & Chen, 2007; Preble & Hoffman, 2006; Watson, 2008). Rapid growth is desirable for franchisors as it yields high outlet share, which generates high market share, and high market share stands to yield high profit. 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 competitors entering the market.

A key challenge for expanding franchise 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 & Ketchen, 2003; Dant, Paswan & Kaufmann, 1996; Kaufmann & Dant, 1996). Although research has often addressed retail store location strategies, the problem of positioning franchise outlets receives little attention (Kolli & 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 & Laporte, 2005; González-Benito, 2002; Sakashita, 2000; Wood & Tasker, 2008). Although the majority of the literature portrays the site selection process as a complex data manipulation and modelling challenge, it is in fact a blend of "art and science" (ReVelle & Eiselt, 2005; Wood & Tasker, 2008, p. 142). 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 reveals that there are many who rely on intuition, guided by experience and *common sense*, instead of sophisticated modelling

(Hernández & Bennison, 2000).[23] So, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch & Byrom, 2004, p. 225). While recognising the benefits that highly quantitative, technological and data-rich methods can bring to decision-support, the fact that models by definition remain simplifications of reality, renders subjective experience and judgement still essential to successful site selection (Rogers, 1992). This may particularly apply to small and medium sized retailers that lack sufficient management resources for extensive data modelling. Following Wood and Tasker (2008, p. 152), data modelling processes do not provide the sole solution to forecasting challenges anyway: "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*". 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?

Location decisions require the balancing of the costs and benefits of a location in the present and the future. Based on the *market perspective*, location theory suggests that there are differences in location quality.[24] Some spots have a greater potential to be profitable than others. Traditional retail location models stress the profit impacts of structural determinants that lie beyond individual firm control, particularly, of demographic and socioeconomic characteristics of the local or regional area, of traffic infrastructure, competition, and costs (Ghosh & McLafferty, 1982; Ingene & Yu, 1982; Khan, 1999; Lee & McCracken, 1982; Park & Khan, 2006; Peterson, 2003; Simons, 1992).

Turning to the *firm perspective*, strategic management research has long used the RBV to explain differences in firm performance (Barney, 2001; Peteraf, 1993). Rooted in the early contri-

[23] Some regard the late 1980s as the golden age of store location analysis, characterized by the abandonment of intuitive approaches to location decision-making. Yet in practice, the application of sophisticated models has always been limited (Birkin, Clarke & Clarke, 2002).

[24] See Huff's (1964) early contribution; Craig, Ghosh & McLafferty, 1984; Ghosh & McLafferty, 1987; Jones & Simmons, 1990; Kelly, Freeman & Emlen, 1993; Christensen & Drejer, 2005; Park & Khan, 2005.

bution of Penrose (1959), the RBV adopts an inward-looking view, conceptualising firms as heterogeneous entities. These entities are envisioned as bundles of idiosyncratic resources that improve competitive advantage by enabling the generation of 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, the embeddedness of firms in networks of relationships has 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 internal resource endowments and network resources for competitive advantage. In this vein, this research uses the social network approach as part of the inner strength perspective.

So far, social networks largely represent a sociological concept. But Granovetter (1985, p. 482) has pointed out early that the "mixing of [economic and non-economic] activities" is the "social embeddedness of economic behavior", 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 his seminal papers (1973; 1985), it is in the mixing of economic and non-economic activities that "non-economic activity affects the costs and the available techniques for economic activity" (Granovetter, 2005, p. 35). The economist Robert Gibbons (2005) provided 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. In making a new contribution to the field of franchising research, social network theory can advance economic insights. This study seeks to enrich economic reasoning with a network perspective to analyse the 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. Entrepreneurs 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).[25] 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 of tapping into the knowledge of coworkers via communication links (Ichniowski, Shaw & Gant, 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 organisational boundaries.

Yet often, knowledge is *sticky* – relying on personal contacts to transfer it (Windsperger, 2004). Sharing knowledge then requires time-consuming personal interaction (Nonaka & Takeuchi, 1995). Regular face-to-face contacts are more easily arranged in proximity. Also, trust as a basis for exchange tends to develop between proximate agents (Bachmann & Lane, 1996; Williamson, 1999). Thus, access to knowledge resources can be an essential driver of the choice of proximate sites.[26]

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 ways, for example, by the number of relationships (in network terminology, *ties*) a franchisee (a *vertex*) can entertain, the strength of ties (time, capital, or emotional investments in a relationship), or the membership of, or exclusion from, subnetwork structures (e.g. regional clusters). For instance, maintaining

[25] Examples of franchisees' knowledge assets are local market know-how on marketing, human resources, quality control, or innovation capabilities that cannot easily be transferred and acquired by the franchisor (Windsperger, 2003; 2004).

[26] In a globalized world, where capital and knowledge travel at high speed, one 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 the vicinity, 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. Entrepreneurs came to see social relationships […] as a crucial aspect of their business. […] informal conversation was often of more value than more conventional but less timely forums such as industrial journals" (Enright, 2000; Saxenian, 1996, p. 33).

many ties can provide better access to key competencies through the large number or variety of information sources it brings. 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 the right 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.

This study analyses, first, which criteria following the market and inner strength perspectives dominate pragmatic location decisions. Second, the analysis tests if the determinants of site decisions are relevant to performance, too. In the next section, specific hypotheses on market and inner strength criteria that may determine site attractiveness and affect performance are developed.

4. Hypotheses

4.1 Market Perspective Criteria

Conventional wisdom holds that there are three prerequisites for retail success; "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, Tatham & Hair, 1976; Ghosh & McLafferty, 1982; Khan, 1999). On the premise that population density closely parallels retail sales, and provides an indicator of outsiders' propensity to shop in an area, data on the area's total population helps to establish a "size of market effect" (Schmidt & Oldfield, 1999). Location models also include measures of how convenient it is for customers to access outlets, since distance strongly influences the probability of patronage (Lord, 1993; Rudd, Vigen & Davis, 1983). *Accessibility* can refer to the means of transport available, to the proximity of places of interest like work, homes, or leisure facilities, to outlet visibility, or to the time necessary to master driving distances in the trading area (Ghosh & McLafferty, 1982). In addition, low levels of competition from (non-system) 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 seem attractive for the positioning of franchise outlets. Then, clusters become large, as such areas lure franchisees in with the promise of high economic performance.

> *H1: Potentially profitable market conditions positively impact a) cluster size, and b) franchisee performance.*

4.2 Inner Strength Perspective Criteria

Network Strength: Franchisor Support. Evidence shows that most people have a tendency to free-ride if they are able to get away with it. In terms of franchise networks, this refers to franchisees deriving benefits, such as reduced individual costs, from the franchise operation that are disproportionate to the contribution they make to its sustainability. Monitoring is a key strategy in restricting free-riding (Brickley & Dark, 1987; Lafontaine & Slate, 2001; Lal, 1990; McIn-

tyre, Gilbert & Young, 2006; Michael, 1999), yet monitoring by the franchisor becomes more troublesome as networks expand and franchisees become broadly dispersed. However, franchisees in the same vicinity can monitor each other (Fama, 1980), and given the plethora of ways in which franchisees can withhold effort to the detriment of their network, such franchisee monitoring can be key. Even without express monitoring, exposure to repeated interaction displays similar effects on free-riding tendencies as do heightened levels of monitoring. Firstly, franchisees who frequently interact realise their actions are visible; secondly, interaction with others promotes a common spirit; and thirdly, a norm of fair dealing can emerge when normative conformity evolves due to a set of unwritten mutual expectations (Kidwell, Nygaard & Silkoset, 2007). While Axelrod (1984) focuses on the evolution of cooperation based on rational self-interest, researchers in the sociology of collective action emphasise 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 & Bennett, 1993). When free-riding, which almost inevitably decreases customer retention rates across the chain, is curtailed, franchisee performance can benefit from positive externalities, like inter-unit customer transfer. Research shows that free-riding also has adverse effects on the opportunistic franchisee's performance (Kidwell et al., 2007). Thus, all network members benefit from reducing free-riding. Therefore, it is in the interests of a franchisor to place distant outlets in close proximity to one another, as it helps to align the efforts of distant franchisees, promotes peer monitoring and provides an opportunity for interaction. Then, long distances from the franchisor imply large clusters.

Franchisor-supplied resources are further subject to scale economies. Costs of supervision or transporting supplies can be divided across multiple units if they 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.

> *H2a: Long distances from the franchisor positively impact a) cluster size, and b) franchisee performance.*

A contrasting hypothesis suggests that more risk-averse franchisors may 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 that limits outlet performance. So, franchisors may not approve of opening distant outlets or only do so rarely (perhaps if applicants have exceptional entrepreneurial abilities), then few franchisees will be encouraged to work remote outlets, so large clusters are probably near the head office.

H2b: Long distances from the franchisor negatively impact 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 establish trusting relationships and to realise 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 demand for the system's product portfolio. Increases in demand can 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. from the system's heightened competitiveness relative to other systems (Kaufman and Rangan (1990) term the latter effect "relative preference for the brand"). Ghosh and Craig (1991) argue that these demand increases lead to net sales increases despite higher intrasystem competition. Finding sufficient numbers of franchisees willing to set up near pre-existing franchisees can thus be easier, and expansion may be faster than when franchisors seek to develop remote areas. Possibly the effects described above are limited to a certain geographical radius. Here, the area in which such effects may occur is called a *supraregional cluster*.

H3a: A high degree of embeddedness in the supraregional cluster positively impacts a) cluster size and b) franchisee performance.

Yet, 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 is the maximum consumers are willing to travel (Ghosh & Craig, 1991). As franchisee offerings are alike, customers may not exhibit outlet loyalties once a more conveniently located new outlet exists. Thus, too many franchisees in the supraregional area can intensify cannibalisation. Then, individual sales may decrease because demand spreads over more outlets (Du Toit, 2003). 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.

> *H3b: A high degree of 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 if franchisees operate in different market environments, it may be that the most important sources of knowledge are actually located close by. Here, this radius is termed a *regional cluster*. In the regional cluster, proximity promotes frequent face-to-face-interaction and trust-building – said to be a prerequisite of cooperative exchange (Bachmann & Lane, 1996; Williamson, 1999). Cooperation in trusting relationships has lower transaction costs in terms of financial and time investments. Embeddedness in regional networks can further effectively limit free-riding. Here, engaging in opportunistic acts becomes costly due to reputational effects, when losing the 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 lobby for their common interests to the franchisor. Occupying a network position that offers high embeddedness in the regional structure thus facilitates realising network benefits.[27]

H4a: A high degree of embeddedness in the regional cluster positively impacts franchisee performance.

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

H4b: A high degree of 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.

H5: Criteria that positively impact location decisions of franchise outlets also influence franchisee performance positively.

[27] Since the number of ties a franchisee can entertain in the regional cluster directly depends on the number of franchisees present in the cluster, this network characteristic cannot be used to explain cluster size. Therefore, the analysis focuses on performance effects.

5. Sample, Variables, and Methods

5.1 Sample

The hypotheses are tested using cross-sectional data collected from franchisees from two German franchise chains. In Germany, retail is still the largest industry using franchising (in sales 2008, 36%), but services are increasingly becoming stronger (33%). This study covers one system from each sector. The first system 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). The second system specializes in travel services. Following previous research, the importance and complexity of vertical and horizontal cooperative relations is a dominant characteristic of the travel services industry (Fyall & Garrod, 2005; Tinsley & Lynch, 2007). These chains are selected as they have a long-standing relationship with the university, which facilitates information access. Like many small and medium sized franchises, the chains follow rules of thumb when deciding on locations. Interviews with system officials, press releases and the chains' websites, show that both systems acknowledge the importance of "premium" locations, but those are described vaguely in terms like "first-rate" sites with "access to a broad, solvent customer base". Self-administered postal questionnaires, a cover letter assuring franchisees of anonymity and a university address for responses, were distributed to the apparel business franchisees (system 1) in 2006 and to the travel business franchisees (system 2) in late 2007. The specific formulation of the Likert-type questionnaire items emerged from a qualitative-explorative pre-study involving franchisors, consultants, and franchisee focus groups. A total of 201 responses arrived between 2007 and early 2008, giving response rates of 47% from the system 1 franchisees and 33% from the system 2 group. Due to missing data, subsequent performance regressions are based on the responses of 174 franchisees. The performance sample comprises 74% from the travel franchise and 26% from the apparel business.

5.2 Dependent Variables

Cluster Size. The thinking is that location criteria affect cluster size: if the location criteria cause an area to be seen as attractive, franchisees connect that with high levels of economic return so set up in the area, in due course causing large clusters to form.

A major problem for 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). This study locates each franchisee at the centre of a series of concentric circles of different radii. Following Kelly et al. (1993), then, franchisee performance is measured against the number of franchisees within the diameter of each circle, and the radius with the highest strongly significant coefficient is chosen as an appropriate cluster size. The cut-off distance is 45 kilometres (about 28 miles). This distance corresponds to Kalnins' (2004) distance measure for interaction effects. In addition, interviews with the systems' franchisees were conducted. Franchisees indicated that they had substantial contact on business issues with other system franchisees up to 40 or 50km away. So, for every franchisee, the number of vertices present in the 45km cut-off distance is measured. CLUSTER SIZE ranges from 0 to 15.

Performance. Typical measures of retail success are sales and profits. Researchers commonly cannot obtain profitability data, but sales information often is available as a performance metric (Singh & Mitchell, 2005). Sales volume is only a short-term measure of a store's competitive strength. Yet, long-term implications suggest a strong link between sales and profitability (Buzzell & Gale, 1987).

By fostering mutual support, cooperation plays a central intervening role in the relation between organisational design and performance. Sales growth reflects the acquisition of new customers and increased purchases by existing customers. Both aspects are influenced by interfranchisee cooperation that helps meet customer demands. Thus, cooperation can enhance sales growth, as franchisees can directly convert input obtained from others into sales. Using sales growth as a

performance measure is consistent with research on collaborative relationships[28] (Collins & Clark, 2003; Lee, Lee & Pennings, 2001; Park & Luo, 2001; Sarkar, Echambadi & Harrison, 2001; Singh & Mitchell, 2005; Stuart, 2000). Consequently, this precise, location-specific performance indicator is selected that reflects outlet sustainability and growth.[29]

5.3 Independent and Control Variables

Regional Economic Conditions. Market potential is assessed 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 & Yu, 1982; James et al., 1975; Khan, 1999; Lee & McCracken, 1982; Park & Khan, 2006; Simons, 1992). The study uses data for those counties that are within each franchisee's regional cluster boundaries, as cluster-specific data is unavailable. Factor analysis allows for a reduction in dimensions as all variables load heavily on the factor REC.[30]

Accessibility. Ascribing general geographic attributes to accurate locations is difficult ("geographical fallacy"; Ingene, 1984). For each cluster, the time investment required to reach the nearest highway is measured. The variable TRAFFIC is a proxy for the convenience of infrastructure available, which widens trading areas. Data comes from mapchart.com, a fee-charging geo-information system.

[28] Some studies use sales growth in combination with data on market share, product innovation, or stock growth, none of which are useful in the case of the sample firms.

[29] For the first system, data on total sales of the previous business year and on franchisee satisfaction with their business performance could be obtained. This data is used as additional 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. A scale is built 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 as well as for total sales as for growth; there are no significant results for market conditions.

[30] 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. Over 50% of the sample franchisees joined their system in the last ten years; over time, market conditions may rather not vary dramatically.

Competition. The study uses the number of firms in the same industry in the area (from the national business directory) as an indicator of competitive intensity, COMP.

Costs. Costs of business activity in each franchisee's area are measured using an index of the respective area's business tax as a proxy.

Distance to the Franchisor. Following Brickley and Dark (1987) and Minkler (1990), geographic distance was calculated as the number of kilometres that lie in between a franchised outlet and the chain's system centre (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 (the study uses 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, Mrvar and Batagelj (2005), the study considers *directed ties* (i.e. degrees are doubled), as in each franchisee pair, there are two potential sources of contact initiation (the two franchisees).

Regional Embeddedness. The measure REM is how many ties a vertex can have in its regional cluster (the cluster size radius). In pre-studies, three other retail and services franchisors reported a similar radius, 50km, as appropriate interaction radius.

Controls. The study controls for the age of the franchisee-franchisor relationship, as franchisee experience may influence sales. The measure, AGE, is consistent with Dant and Nasr (1998). Franchisees indicated the year in which they opened their outlet. The analysis further controls for outlet size (Windsperger & Yurdakul, 2008), using the number of outlet employees as a proxy (SIZE). It further uses a dummy variable, SYSTEM, to control for differences between systems, with the travel franchise being coded as 0 and the apparel franchise as 1. Table 6 gives an overview of hypotheses and variables.

Hypotheses		Perspective	Variable
1	*Potentially profitable market conditions positively impact a) cluster size, and b) franchisee performance.*	Market	REC, TRAFFIC, COMP, COSTS
2a(b)	*Long distances from the franchisor positively (negatively) impact a) cluster size, and b) franchisee performance.*	"Inner Strength"	DISTSC
3a (b)	*A high degree of embeddedness in the supraregional cluster positively (negatively) impacts a) cluster size and b) franchisee performance.*		SEM
4a (b)	*A high degree of embeddedness in the regional cluster positively (negatively) impacts franchisee performance.*		REM
5	*Criteria that positively impact location decisions of franchise outlets also influence franchisee performance positively.*		
Controls: Age of Franchisor-Franchisee Relationship, Outlet Size, System Dummy			AGE, SIZE, SYSTEM

Table 6: Overview of Hypotheses

5.4 Methods

The chapter analyses, first, which criteria following the market and inner strength perspectives dominate pragmatic location decisions. The study employs a stepwise Ordinary Least Squares Regression (OLS) to examine the first general hypothesis:

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

The empirical analysis controls for absence of multicollinearity, for homoscedasticity and normal distribution of disturbance terms, using Variance Inflation Factors (VIFs) and correlations, White-, Newey-West- and Kolmogorov-Smirnov-Tests. VIFs are all lower than two. Second, the study tests if the determinants of site decisions are relevant to performance, too. The second general hypothesis is:

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

For analysing the performance hypothesis, it must be noted that interaction opportunities in the regional cluster directly depend on the regional cluster size. So, potential simultaneity issues arise, since the other independent variables that affect performance are expected to affect cluster size as well. Then, OLS could lead to inconsistent coefficient estimates. To correct for this issue, the analysis uses two-stage least squares regression (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*$_i$^*)*, where *regional_embeddedness*$_i$^ is the estimated value from the first stage regression.[31]

To trace nonresponse bias, early and late responders are compared (Armstrong and Overton, 1977) in each system. Late responders completed the questionnaire over three weeks after the first group. As suggested by the high response rates, Mann-Whitney-Tests do not show evidence for nonresponse bias. Also, the average sampled observation in each system with the average outlet-owner computed from the population of each chain is compared 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.

[31] The variable COSTS is used as an instrument in the first stage of the 2SLS regression to estimate regional embeddedness. This instrument fulfills the criteria of being both relevant and exogenous, as costs do influence location decisions – since tax affects franchisee profit –, but do not influence the performance measure (sales growth) directly.

6. Results

Table 7 displays OLS and 2SLS results for H1-H5. Table 8 exhibits descriptive statistics. Table 9 shows responses to items on franchisee network interaction.[32]

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. Highly intense competition and high costs negatively influence decisions and cluster sizes. So, H1 is supported. Long distances to the franchisor make distant franchisees locate proximately, so long distances lead 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 7). The idea is that embeddedness can offer privileged access to others' resources, like know-how and information. Yet, embeddedness in the supraregional cluster strongly decreases performance (H3b). Possibly, this effect occurs because dense structures of franchisees increase cannibalisation 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.[33]

To test if cooperative interaction as proposed by the network model is a feature of these systems, franchisees answered several items (table 9). For example, the availability of others for support provides a latent indicator for cooperative interaction: if perceived availability is low,

[32] The analysis uses costs as an instrument in the first stage of the 2SLS regression to estimate regional embeddedness. Costs are measured using a business tax index as a proxy. This instrument fulfills the criteria of being both relevant and exogenous, as costs do influence location decisions – since tax affects franchisee profit – but do not influence the performance measure (sales growth) directly.

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

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. Then, networking benefits can occur. [34]

Results are stable even when applying different methods (OLS, 2SLS) and components (factor solutions, single variables). 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, Anderson, Tatham & Black, 1998). The correlation table supports the OLS and 2SLS results. Results were checked in interviews with the franchisor and system franchisees. They support the findings. Interviewees believed that market characteristics strongly affect the attractiveness of a location, that the structure of ties among system members affects social and economic behaviour, and that input obtained through interaction enhances success.

[34] 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 (item 1) and knowing others personally (item 2) correlate strongly with performance (-0.402, $p < 0.03$; -0.367, $p < 0.02$; both items are reverse-coded).

	Model 0		Model 1		Model 2	
Dependent Variable	Cluster Size		Performance		Performance	
Method	OLS		OLS		2SLS	
C	-17.476	(27.189)	-144310.878	(2737753.501)	10475.039	(2772543.522)
REC	0.674*	(0.289)	2309.349	(12863.452)	-1313.412	(13748.007)
TRAFFIC	-0.182***	(0.039)	-9515.990**	(3540.803)	-7911.318*	(3820.258)
COMP	-0.026†	(0.014)	-246.711	(1062.424)	59.960	(1175.375)
COSTS	-0.830***	(0.156)				
DISTSC	0.002*	(0.001)	39.104	(75.838)	29.302	(80.200)
SEM	0.062***	(0.015)	-3162.720***	(748.902)	-3589.966***	(1071.443)
REM			9040.829***	(2445.014)	11898.649*	(5035.435)
AGE	0.012	(0.014)	109.703	(1368.552)	14.573	(1390.271)
SIZE	-0.125*	(0.073)	-2289.015	(4584.938)	-1583.475	(4826.526)
SYSTEM	-0.812*	(0.463)	219351.011***	(35642.940)	229484.070***	(36571.007)
N	191		174		174	
F	55.069***		13.228***		12.327***	
R^2	0.733		0.421		0.416	
Adj. R^2	0.720		0.389		0.384	

Beta coefficients reported. Standard errors in parentheses.
Significance levels (two-tailed): *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; † $p < 0.1$.

Table 7: Results

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) CLUSTER SIZE	3.503	3.362	1.000										
(2) PERFORMANCE	1148.352	178324.383	0.093	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	9.389	8.835	-0.193**	-0.235*	-0.088	0.194**	1.000						
(6) COSTS	1.632	1.391	-0.755***	0.052	-0.290***	0.503***	0.192*	1.000					
(7) DISTSC	306.965	175.058	-0.060	-0.001	-0.407***	0.034	-0.138†	0.043	1.000				
(8) SEM	21.682	18.548	0.702***	-0.300***	0.363***	-0.297***	0.038	-0.618**	-0.200**	1.000			
(9) REM	6.689	6.659	0.921***	0.007	0.326***	-0.497***	-0.177*	-0.809***	-0.053	0.663***	1.000		
(10) AGE	1996.859	6.542	0.148*	-0.067	0.001	-0.068	-0.008	-0.131†	0.028	0.136†	0.141†	1.000	
(11) SIZE	3.881	2.197	-0.003	-0.171*	0.070	0.073	0.049	-0.008	0.079	0.127†	0.014	-0.001	1.000
12. SYSTEM			-0.436***	0.517***	0.017	0.136†	-0.247***	0.471***	-0.144*	-0.464***	-0.416***	-0.165*	-0.182*

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

Table 8: Descriptive Statistics

Questionnaire Item	Agreement	
	1. System	2. System
I can turn to other franchisees for assistance whenever I have a problem.	80%	90%
I know many other system franchisees on a personal basis.	60%	40%
I regularly discuss business matters with other system franchisees.	65%	75%
I am very satisfied with my relationships with the other network members.	95%	95%
Apart from franchisor-organised meetings, I meet other system franchisees privately.	55%	90%
When problems with the franchisor arise, franchisees stick together.	55%	80%
The franchisees use every possibility to exert influence on the franchisor via councils and committees.	70%	70%
None of the system franchisees acts primarily to his/her own advantage.	45%	80%
In general, all system franchisees fulfil their duties.	75%	85%
As a system member, I am a lone wolf. vs. *As a system member, I am part of a community.*	55% (community)	75% (community)

Items measured on a 7-point scale: 1-7 “strongly agree”, 7 – “strongly disagree”. The three affirmative answers represent “agreement”.

Table 9: Network Interaction and Cooperation

7. Discussion

Based on the two theoretical streams of the market and the firm perspective, this study analyses which criteria drive decisions on franchisee location when a franchise chain expands. Further, this research sheds light on the relevance, or otherwise, for outlet performance of the decision criteria applied. 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 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). This *inner strength perspective* suggests that access to resources in a certain spot determines the attractiveness of a location rather than location-specific market factors.

The analysis establishes that in practice, location decisions are based on both perspectives: both exogenous market-based characteristics and endogenous inner strength criteria determine decisions.

Yet, market perspective criteria do not necessarily 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 these 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. At first, franchisees are located around the cluster's centre, that is, on the line's middle. 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.

Over time, new franchisees enter the system and take up more remote positions than their predecessors, and thus regional clusters develop into supraregional clusters. Then, a regional cluster loses its customers at the edges to these newer franchisees. That is, exogenously, demand-dragging into the regional cluster is weakened.[35] Thus, negative competitive effects occur. These are combined, endogenously, with negative cooperative effects because maintaining distant ties requires high networking investments and because 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.[36] Providing a shield against competitive forces, inner strength renders franchisees relatively independent of market conditions. While 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 locations can and should consider site attractiveness on the basis of the performance implications of network structure. That is, although prospective franchisees are aware of the advantages franchising has over independent ventures including 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 set up. Hence, an earlier orientation towards adopting a consistent franchisee identity is desirable for franchisees to enhance individual performance

[35] 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.

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

prospects (as well as 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 (Grünhagen, DiPietro, Stassen & Frazer, 2008; Hoffman & Preble, 1991; Holmberg & Morgan, 2004). On the franchisor level, results suggest that chances for successful expansion are enhanced when focusing 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 business growth, depends much more on developing quality relationships in the network than on knowledge of the economic characteristics of geographical markets held at the centre. Due to the relevance of inner strength, providing franchisees' with interaction opportunities is important. First, franchisee screening and selection must be responsive to cooperative orientations. As Burt (1992, p. 13) 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 intranetwork knowledge transfer (Hoffman & Preble, 1991) by incentivising cooperative behaviour. In practice, some franchisors have set up mentoring 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, Baucus and Baucus (1996, p. 69) conclude that "responsibility lies with franchisors to […] help franchisees […] work together".

Additionally, results (for H3 and H4) suggest that franchisors may want to follow a geographically dispersed cluster-approach to expansion, rather than 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 in the same geographical trade area. However, a third, more successful option can be expanding by placing new outlets more remotely. Chaudhuri, Ghosh and Spell (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, prior definitions of promising locations might benefit from a re-evaluation.

8. References

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IV. OPPOSITES ATTRACT – EFFECTS OF DIVERSE CULTURAL REFERENCES AND INDUSTRY NETWORK RESOURCES ON FILM PERFORMANCE

1. Abstract

This chapter analyses motion picture success factors in an intercultural context. Using a sample of 160 German top-ten movies of 1990-2005, hypotheses are tested concerning the relation of (1) movie team composition (team members' respective cultural background, industry tenure, social network resources, education, star status, age, and gender) and (2) film characteristics (sets, movie content) to a movie's domestic, export, and total performance. The idea is that capitalizing on diversity in both of these "input categories", i.e. in team and film characteristics, helps to provide familiarity to audiences in different markets. The analysis shows that offering cultural familiarity (team members of different cultural backgrounds, and international sets) is strongly rewarded abroad. Yet, domestic success depends on other diversity inputs. For domestic success, diversity in social network resources is essential. The rationale is that such diversity reduces the danger of "groupthink" and enhances creative potential available for movie creation. Managerial implications are provided for how to target international audiences more effectively.

2. Introduction

"We know that an announcement 'British Film' outside a movie theatre will chill the hardiest away from its door"
(Joseph Schenck, former President of United Artists;
cited in Low, Richards & Manvell, 2005, p. 298)

The sector that has recently shown tremendous growth rates worldwide and accordingly, has been termed "the new global growth industry" (Roodhouse, 2004), is the sector of cultural and creative industries. This sector comprises the economic activities in the creation, production, and distribution of goods and services that are cultural in nature, such as film, literature, music, theatre, or broadcasting. For film and television, researchers expect that by 2020, consumer demand will have tripled compared with the year 2000 (Baughn & Buchanan, 2001). While such growth holds promises for film producers, it also ups the economic stakes.

During this phase of expected industry growth, more profits can be gained when film projects are designed in such a way that they do not only meet demand in the domestic market, but that they can also compete internationally. Yet, focusing on the European market, as a matter of fact, Europeans do not watch many films by other Europeans. Instead, the European national movie industries attract domestic audiences, and Hollywood movies still prevail in terms of market share in most European countries. Although recently, German movies such as "The Lives of the Others" and "The Downfall" have reached admission peaks throughout Europe, German films do not show consistency in gaining more than marginal market shares in export markets.

Like in physical product markets, in cultural industries, a well-known brand is a sales multiplier (Ullrich, 2006). For instance, the book market regards some famous authors as "brands"; in the field of art exhibitions, the "Guggenheim Museum" has expanded to six branches worldwide by now, and when the New York "Museum of Modern Art" lent its impressionists to the "Berlin Museum" in 2007, the "MoMa" name was featured prominently (Suchsland, 2007). In the market for motion pictures, movies can appear more attractive to consumers if made by a well-known producer who, like a brand, stands for a certain style, a particular atmosphere or a well-known set of topics and attitudes. Films that carry a well-known producer's "brand name" have a head start in raising demand.

Against this background, this research addresses the following questions: how can producers design film projects successfully to create a "brand name" and better profit from industry growth? Are there ways to boost a movie's success prospects in export markets prior to movie release, at the stage of movie production? Are these ways feasible without jeopardizing domestic performance? The purpose of this study is to contribute to a more sophisticated understanding of motion picture success factors in an intercultural context. To profit from the growth potential of domestic and non-domestic markets, it is important to comprehend why films perform differently at home and abroad. However, movie producers can rarely build on systematic research when attempting to customize movies to different cultural settings (Hennig-Thurau, Walsh & Bode, 2004).

For analyzing the way to intercultural success, this research combines and expands two strands of research: the economic approach to motion picture performance, and the team diversity approach to team performance. The idea is that movies must provide some cultural familiarity and identification potential to their audiences, so that these understand what they are offered, while still being provided with sufficient novelty to enjoy it. The study is based on the premise that (1) the composition of the movie team – as the basis for contributing different cultural backgrounds, creativity and talent to movie creation, and as a highly visible movie ingredient – as well as (2) essential film characteristics, like set locations or storyline, must suit audiences not only in the home market, but also in culturally diverse export markets. Possibly, capitalizing on diversity in these two "input categories" helps to provide points of reference to diverse audiences. Then, a movie can succeed also elsewhere than in its domestic market.

The paper is organised as follows: the next section reviews literature on movie (export) performance and on team diversity. Then, hypotheses are developed on the effects of team composition and movie characteristics, with respect to a movie's domestic and export performance, as well as to total performance (section 4). Section 5 describes data and methods, section 6 reports the results. Section 7 concludes, offering managerial and research implications.

3. Theoretical Background

3.1 Cultural Industries and Determinants of Movie Exports

The cultural industries are a promising field for cultural, social and economic research for several reasons. First, they are a significant arena for the exchange of meanings. Their function as means of communication and their potential for manipulation continue to be keys to understanding modern societies. Second, they provide an exciting example for several contemporary socio-economic trends: for instance, many are at the forefront of the broad changes in the markets for information goods (Eisenberg, Gerlach & Handke, 2006). Third, they show tremendous growth rates worldwide, largely in the production of mass media content such as motion pictures. Accordingly, they have been termed "the new global growth industry" (Roodhouse, 2004). Policy-makers often expect them to be drivers of economic growth and employment – an appealing prospect in particular for de-industrialising urban areas in Western economies that sometimes already boast thriving cultural scenes (Eisenberg et al., 2006).

Throughout Europe, the star of the national motion picture industries has risen. In the 25 European countries, in 2006, European movies reached a market share of 31.2% of the 926m admissions registered. This figure has grown from a 22.9% share in 2000, and has been on the increase since the 1990s (German Federal Film Board (FFA) data). In the 1990s, film-makers like Luc Besson in France, or Sönke Wortmann in Germany, started moving towards popular genres and narratives previously considered the domain of Hollywood (Bergfelder, 2005). Yet, despite their popularity in their respective home markets, the export success of European countries' movies is limited. Focusing on the German motion picture industry, in 2006, German movies hit a market share of 25% in their home market and 4% in the other European markets (FFA data). Although recently, German movies such as "The Lives of the Others" have reached admission peaks throughout Europe, German films do not show consistency in gaining more than marginal market shares in export markets.

Studies on factors that determine movie export success concentrate nearly exclusively on U.S. movies. These studies set forth political, economic, sociological, and cultural reasons to explain

success (Elberse & Eliashberg, 2003; Lee & Bae, 2004; Litman, 2000; Seagrave, 1997).[37] Some studies address the assumption of a "cultural discount" factor that results from the cultural distance between the exporting and the importing country (Lee & Bae, 2004). As Hutzschenreuter and Voll (2008) point out, during international expansion, most difficulties for the internationalising firm are created by distance, and distance exists also in the cultural sense. The concept of "cultural distance" remains difficult to measure. "Cultural distance" can refer to any aspect in which cultures differ from each other (Hutzschenreuter & Voll, 2008) and is closely associated with the concept of "psychic distance". Psychic distance is defined in terms of differences in language, education level, economic development, political system, or religion that influence trade-flows between countries (Arora & Fosfuri, 2000; Boyacigiller, 1990; Dow & Karunaratna; 2006; Goerzen & Beamish, 2003; Johanson & Vahlne, 1977; Kogut & Singh, 1988; Shenkar, 2001). In the motion picture industry, the "cultural discount" factor stands for a movie's reduction in value in export markets; the reduction occurs since audiences prefer domestic entertainment because it shares their cultural values and native language (Lee & Bae, 2004; Oh, 2001). Craig, Greene and Douglas (2005) observe that U.S. films perform better in countries that are culturally close to the U.S. Marvasti and Canterbery (2005) establish that cultural variables like education, religion, and language in export markets influence U.S. movie exports. Yet, most analysis has been circumstantial, neglecting the baseline: the actual movie product.

Even for German movies' domestic success, studies are few and have produced conflicting results (Hennig-Thurau & Wruck, 2000; Jansen, 2002; Meiseberg, Ehrmann & Dormann, 2008),[38] which offers little support for identifying criteria that lead to export success.

[37] Political reasons can be governmental promotion of the movie industry's and national interests ("strategic trade"). Economic reasons can be inadequate foreign protectionist and subsidization policies; advantages of a large home market; the know-how to maximise the present value of profits across exhibition windows, which renders superior budget flexibility; or the "success breeds success" principle when domestic success signals quality to foreign audiences and serves as a telling basis for the allocation of distribution budgets. Sociological and cultural reasons can be the prevalence of the English language or general fascination with U.S. products.

[38] Some studies forward a notion of "movie quality" as a success factor, others stress the impact of stars in the cast, well-known directors, large budgets, and positive reviews. Other studies indicate that stars are insignificant, but that team structure, social networks, financing, and marketing influence success.

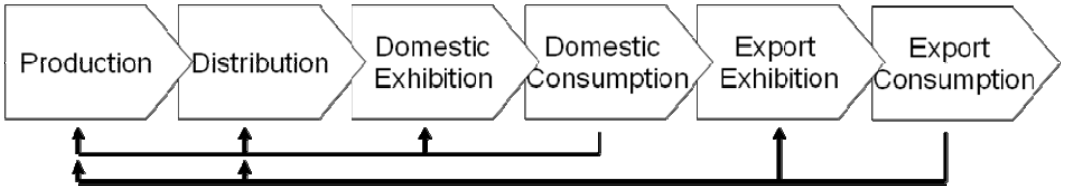

Figure 5: The Value Chain of Motion Pictures

For advancing a framework for international success in the cultural industry of motion picture entertainment (see figure 5), it must first be noted that cultural goods are nonmaterial goods, directed at a public of consumers for whom they generally serve an aesthetic or expressive, rather than a clearly utilitarian function (Hirsch, 1972). Movies are content products: each film's content is unique, an original creation that differs in important aspects from all other films (Lee & Bae, 2004). As the composite of numerous factors like storyline, directing, acting, music, and colour, movies are a creation of the cultural context in which they are developed. "Cultural context" refers to the values, customs, mores, and institutions of the environment in which individuals operate,[39] and films inevitably reflect the producers' vision, the writer's view, and convey the actors' interpretation of the script (Craig et al., 2005). Each factor can have a favourable or unfavourable influence on the movie's success in export markets. In this context, the strength of Hollywood movies in Europe has been explained by the closed textuality of European countries' films. Unlike comparatively polysemous, "open" U.S. films, European films require a culturally more competent viewer (Bergfelder, 2005). This characteristic limits movie access to foreign audiences. Thus, the cultural familiarity a particular movie offers to foreign audiences is a central determinant of its export success: little familiarity results in low export returns.

Accordingly, the expected returns of movie exports can be modelled in a gravity-iceberg model.[40] Gravity models assume significant transport costs for overcoming spatial distance. Although movie *transport* costs are negligible, costs from *cultural distance* occur: psychologi-

[39] As a "blueprint" for ways to (inter)act, culture determines the perception and interpretation of phenomena, metaphors, icons, and goods. Cultural references in films, for U.S. lifestyle e.g., may include traits and habits (a concern with cleanliness, a fast-paced lifestyle, etc.), role models, casual clothes, sports like baseball, or fast food (Craig et al., 2005).

[40] Movie characteristics share gravity model assumptions like imperfect competition due to economies of scale in production or distribution; for a related model, see Marvasti & Canterbery, 2005.

cal costs that audiences associate with consuming a film from a different cultural context are distance costs that affect export success increasingly negative the larger the distance.

Following Samuelson's (1954) iceberg model, X_{ijn} is the value country *i* receives from exporting movie *n* to country *j*. This value "melts down" from x_{ijn} (the movie's "real" value) because there are costs of cultural distance between *i* and *j*. The meltdown metaphor illustrates the inverse relation between cultural distance D_{ij} and export success. The meltdown is a weighted average of the effect of all distance variables that influence movie *n*'s success in the *j*th country:

$$X_{ijn} = \sum_{m=1}^{M} e^{-t_{ijmn}} D_{ijmn} x_{ijn} \tag{1}$$

with *M* independent cultural distance variables and t_{ijmn} as the weight of the *m*th variable in the *j*th importing country.[41] Due to the nature of meltdown variables, the assumption is that

$$\sum\nolimits_m e^{-t_{ijmn}} D_{ijmn} < 1 \ . \tag{2}$$

In Bergstrand's (1989) gravity equation and Krugman's (1995) location model, exports are positively related to the purchasing power of countries, but inversely related to distance. Introducing the iceberg effect, the gravity-iceberg export model becomes

$$X_{ijn} = \left[k\left(Y_i Y_j / D_{ijn}^{b}\right)\right] \quad \left[\sum_{m=1}^{M} e^{-t_{ijmn}} D_{ijmn} x_{ijn}\right] \tag{3}$$

where X_{ijn} are country *i*'s movie receipts from country *j* for movie *n*, Y_i, Y_j is the per capita income in each country, D_{ijn} is the general distance (language, politics, religion etc.) between *i* and *j* that consumers anticipate to observe in movie *n*. *b* is an exponent of about one. *k* is a coefficient of the term in brackets. Then, export value depends on market sizes and cultural distance. The market wealth effect is multiplicative. In this model, exports are inversely related to distance, depending on the size of *b*. Cultural effects are also multiplicative. Conform with the literature, equation (3) is transformed:

$$\ln X_{ijn} = \ln a_{ijn} + k \ln G_{ijn} + \sum_{m=1}^{M} - t_{ijmn} D_{ijmn} + \xi_{ijn} \ , \tag{4}$$

[41] Cultural variables *M* may include aspects like movie character traits and appearance, socially expected behaviour, the movie's topic, style, use of symbolism, or sets, that provide familiar cultural references to some audiences and yet, may fail to meet the expectations of others.

with $\ln G_{ijn} = [(\ln Y_i + \ln Y_j) - b \ln D_{ijn}]$. a_{ijn} is a constant replacing x_{ijn} in equations (1) and (3). The last term is an error term with a statistically determined distribution. Country i's total value of motion picture exports is given by

$$\sum_{j=1}^{J} \sum_{n=1}^{N} X_{ijn} \quad . \tag{5}$$

To promote export success, *producers can influence only one term in the model*: the cultural distance D_{ijmn} that audiences may expect to surface in movie n. From the producer's perspective, all other terms are constants. Thus, the study analyses how producers can handle the M cultural variables – by choosing team members and film characteristics in a way that keeps psychological costs down – to enhance success.

The idea is that the first "input category" for reducing psychological costs is cultural diversity in the movie team. Cultural diversity in the team brings various backgrounds and skills to the table, enhances creative input for movie creation, and it also provides a recognition factor to different audiences (i.e. foreign actors may increase interest in the movie in their respective home markets).[42] The second input category is diversity in movie characteristics, such as storyline and set locations. For instance, if the movie is shot at different international sets, it may be easier to market the movie outside Germany, too. If designed in consideration of these two "input categories", a movie can better bridge cultural differences and keep down individual psychological costs associated with foreign movie consumption. Then, producers may create more successful projects, build "brand name" value and better profit from industry growth. The role of team composition in making an attractive movie is outlined in more detail in the next section.

3.2 Performance Implications of Team Diversity

The management and academic press increasingly emphasise the importance of team diversity for team performance. Individual heterogeneity "refers to all types of relatively stable individual characteristics that might be salient in understanding behaviour in the specific context at hand"

[42] The mechanism is one where foreign team members have superior knowledge about their home market that they contribute to movie creation, which should lead to improved performance in those markets. More general, offering diverse movie elements can provide a larger variety of recognition factors and thus be more attractive for export market audiences than "typically German" movie input only.

(Boone & Witteloostuijn, 2007, p. 259). Approaches to categorizing diversity are made as two-factor approaches along the lines of deep-level underlying attributes and surface-level attributes. Deep-level attributes can be organisational and team tenure, functional background, educational background, attitudes, values and preferences, behavioural and social background, or personality. Surface-level attributes are more readily detectable, such as age, race, or gender. Both kinds of attributes can influence communication, collaboration, cohesiveness, affection, attribution, relationship and task conflict, norms, certainty, and cognition (for a review, see Horwitz & Horwitz, 2007; Stewart, 2006; Williams & O'Reilly, 1998). Thereby, they can have an effect on team performance.

The effects of diversity are categorized along three perspectives: the similarity-attraction paradigm (Tziner, 1985), the self- and social categorisation from social psychology, and the information processing perspective from management. The first perspective states that similarity on attitudes and values facilitates interpersonal attraction in dyadic relationships (Byrne, 1997). The second suggests that following a cognitive process of hierarchical categorisation, individuals have team membership preferences even without previous interaction with team members. The third offers that individuals have access to others with different backgrounds, networks, information, and skills that are sources of diverse perspectives, knowledge, and information (Hambrick, Cho & Chen, 1996; Joshi, 2006; Parkhe, Wasserman & Ralston, 2006). The first two approaches are relevant to team processes during movie creation and to moviegoers' identification with team members (e.g. with the actors or the characters they play). The third perspective focuses the creative input available in diverse teams that can be used for movie creation.

Benefits of team diversity are categorized along the integration-and-learning perspective, the access-and-legitimacy perspective, and the discrimination-and-fairness perspective. The first suggests that skills and experiences that individuals develop as members of (cultural) identity groups are valuable resources for succeeding in the team's task. The second holds that markets are diverse themselves and that teams must match that diversity to gain access. The third claims that as an end in itself, diversity is a moral imperative that ensures fair treatment of all society members (Ely & Thomas, 2001). The first perspective explains the importance of diversity for

creative team processes in movie creation. The second establishes the importance of providing familiarity to different audiences.

Several contingency variables moderate how strongly diversity influences performance, e.g. team type, task complexity, task interdependence, team size, interaction frequency and duration (Horwitz, 2005; Stewart, 2006). As regards the "team type", movie teams can be classified as project teams. Project-type tasks are highly complex, interdependent tasks (Horwitz & Horwitz, 2007). Here, diversity is particularly relevant, as the motion picture industry faces rapid obsolence of products and is driven by the search for novelty; so a movie team must pull together diverse expertise and creative ideas to formulate adequate strategies to face these challenges. Input circulating in the team will be less redundant, thus possibly more valuable, if individuals come from diverse backgrounds.

Summarizing these findings, diverse teams have higher potential for making an attractive movie. Diversity enhances creativity and innovation, which are principle reasons why cultural industries attract audience (Jones, Anand & Alvarez, 2005). Following attributes described in the literature, team member attributes relevant to movie creation can be nationalities (as a proxy for cultural backgrounds), industry tenure, social network resources, education, status (stars vs. unknown members), and demographic variables. In the film industry, the team (particularly, the actors' cast) is a highly visible product component. Thus, apart from influencing team processes, diversity also influences consumers' perceptions of the final product.

The analysis assumes that deep-level diversity determines creative potential and is most relevant to movie production. Yet, the deep-level attribute of diversity in culture is also relevant to movie consumption, because it offers familiarity for export markets. The surface-level attributes will influence consumption by providing identification potential to diverse audiences. The general hypothesis is:

> $Performance_{np} = f\,(Deep\_Level\_Diversity_{n}, Surface\_Level\_Diversity_{n}, Film\_Characteristics\_Diversity_{n})$, where *n* stands for a movie and *p* for market boundaries (domestic, export, total).

As Guimerà, Uzzi, Spiro and Nunes Amaral (2005, p. 697) point out, "the right balance of diversity on a team is elusive. Although diversity may potentially spur creativity, it typically pro-

motes conflict and miscommunication […]. It also runs counter to the security most individuals experience in working and sharing ideas with past collaborators". Therefore, in different circumstances, effects of diversity may vary. Accordingly, specific hypotheses that consider both positive and negative effects of diversity are developed in the next section.

4. Hypotheses

4.1 Team Level: Deep-Level Diversity

Culture. Based on the proposition that different cultures provide different distributions of skills, knowledge, views, norms, values, and socio-cultural heritage, and that the correlation of skills of two individuals from the same country is likely to be larger than the correlation between two individuals from different countries, research finds evidence for diversity benefits in terms of ideas generated and of solution quality (Watson, Kumar & Michaelsen, 1993). Lazear (1999) argues that gains arise when skills and knowledge sets are disjoint, i.e. culture-specific, when these sets are relevant to one another on the team, and when they can be learned by other team members at low cost.

Diverse cultural backgrounds enlarge the potential for incorporating different cultural markers or styles, i.e. specific ways to dramatize and visualize stories: "Hollywood movies move; European movies linger; Asian ones sit and contemplate" (Miller et al., 2001, p. 98). Cultural markers can be expressed through shared meaning, communication style, dialects or languages (Larkey, 1996). Having superior knowledge of their respective home market, foreign team members can help to increase the attractiveness of the movie for their home market. Then, blending culturally diverse individuals can increase box-office success in export markets. Yet, domestic success may decrease when the domestic audience's familiarity with the film is reduced. One effect may prevail for overall performance.

> *H1: Cultural diversity in the movie team*
> *a) negatively influences the movie's domestic success,*
> *b) positively influences the movie's export success, and*
> *c) influences its total box-office performance.*

Industry Tenure. The distinction between newcomers and old-timers is particularly relevant in temporary structures with intended short life spans, where teams continually cycle and recycle. Newcomers tend to enhance exploration, innovation, and the chances of finding new creative solutions to tasks. Old-timers tend to increase exploitation, inertial behaviour, and resistance to

new solutions (March, 1991). Tenure heterogeneity thus improves the chances that teams reasonably challenge past practices and avoid status quo commitment. The balance between exploitation and exploration is essential in cultural industries, where "consumers need familiarity to understand what they are offered, but they need novelty to enjoy it" (Lampel, Shamsie & Lant, 2006, p. 292). To satisfy the "novelty" part, innovation is crucial because movies have short life cycles and non-repeated consumption patterns. The range of skills, perspectives, and sets of contacts offered by tenure diversity heightens the probability that a team finds an adequate exploration-exploitation balance. Also, mixed teams may be more appealing to consumers, since experienced members offer a recognition factor, and fresh faces provide novelty.

H2: Tenure diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.

Social Network Ties. In project-based industries, social structure in terms of network relationships can promote creativity and innovation (Guimerà et al., 2005). Creativity is not only part of individual talent and experience, but results from a social system whose members amplify or stifle one another's creativity. Creativity aids problem-solving, innovation and aesthetics in a movie and is spurred when different ideas unite or creative material in one domain inspires fresh ideas in another (Guimerà, Uzzi, Spiro & Nunes Amaral, 2004). Team members that entertain many social ties outside the team have better chances to obtain new creative input and know-how ("ties" may be friendships, collaboration or common membership (Newman, 2001b)). That is, the social capital available to a movie team, based on contacts to other teams in the industry, helps to avoid the pitfall of "groupthink" and to make the movie more attractive.

In this context, Joshi (2006, p. 583) notes that when "examining the outcomes of team diversity, researchers have typically focused on the internal functioning of teams […]. This approach limits our understanding of the complex nature of a team's interactions and does not allow a full appreciation of the processes by which diversity can influence team functioning. Diversity in a team allows for access to a diverse array of external networks" that are sources of diverse perspectives, knowledge, and information that can improve team performance (Parkhe et al., 2006). In a similar vein, Oh, Labianca and Chung (2006) establish that the two concepts of teams and

social capital have rarely been paired together, with the result that a simultaneous understanding of intragroup and intergroup relationships, and of team effectiveness, has remained beyond reach (Parkhe et al., 2006).

One particular form of organisation that has received great attention for its ability to provide social capital and thereby, influence creativity and performance, is the "small world network" (Uzzi & Spiro, 2005). The term denotes a network structure that features two usually opposing elements: first, the network is highly locally clustered, i.e. the network consists of groups of actors and within each group, most or all actors are connected. Second, it has a short "path length", i.e. a small mean geodesic distance of all pairs of actors between which a path exists (Watts, 1999a; 1999b). "Path" means that actors are linked either directly or via a chain of contacts of other network actors.[43] The more a network exhibits characteristics of a small world, the more actors are directly linked or connected by persons who know each other through past collaborations or who have third parties in common. Uzzi and Spiro (2005) argue that the small world conditions enable creative material in separate clusters to circulate to other clusters and to gain the kind of credibility unfamiliar material needs to be regarded valuable and productively used by another cluster. In this vein, Nobel laureate Linus Pauling, who attributes his creative success not to his immense brainpower or "luck", but to diverse contacts, observes: "The best way to have a good idea is to have a lot of ideas" (cited in Uzzi & Dunlap, 2005, p. 2).

Research has determined fields which are subject to small world networks and found scientific collaborations, production teams in business firms, and the Hollywood actor labour market (Uzzi & Spiro, 2005). Examining scientific co-authoring, Newman (2001a) draws the conclusion that small worlds account for how quickly ideas fly through disciplines. He reformulates the small world theory for bipartite networks. "Bipartite" means that there are two different sets of actors, such as movies and movie actors (Albert & Barabasi, 2002; Watts, 2004). Bipartite networks are distinctive in that all network actors are part of at least one fully linked cluster, also called "fully linked clique" (Uzzi & Spiro, 2005). As figure 6 (following Uzzi & Spiro, 2005) illustrates, the network is made up of these cliques that are connected to each other by

[43] This idea has been illustrated by Milgram's (1967) famous theory of "six degrees of separation".

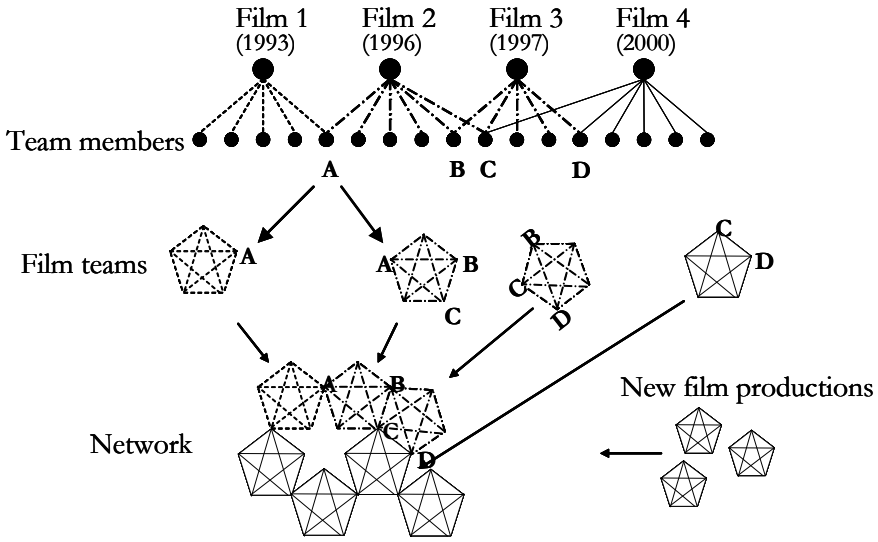

Figure 6: Schematic Representation of an Actor-Movie Network

actors of multiple team memberships (Meiseberg & Ehrmann, 2008). The motion picture industry qualifies as an example par excellence of such a small world featuring a bipartite network structure (Marchiori & Latora, 2000; Newman, 2000).

However, advantages of social structure may hold only up to a threshold of connectivity, after which they turn negative as ideas in the network become homogenized. Then, cohesiveness leads to sharing common rather than novel ideas (Uzzi & Spiro, 2005). High levels of interconnectedness bring about that individuals behave like a group rather than like a set of individuals (Guimerà et al., 2004). When there are many connections between a member's contacts, creative input may be less valuable as others have similar input at their disposal. Hence, blending well-connected team members with less connected ones (that provide original input) can increase creative potential. In this case, movie creation can profit from diverse knowledge and ideas from creative personnel that are not in turn directly influenced by one another. Thus, diversity in social structure, i.e. in connectivity, helps differentiate the movie from its competitors.

> *H3: Connectivity diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*

Educational Background. Heterogeneity in educational backgrounds fosters a broad range of cognitive skills, abilities and perspectives to be applied to problem-solving (Horwitz, 2005).

Bantel and Jackson (1989) find that educational diversity positively influences innovativeness. Carpenter and Fredrickson (2001) report that international experience and diverse educational backgrounds are positively related to a firm's global strategic posture. Yet, wide differences in education can increase task-related debates and turnover. However, reviewing previous research, Mannix and Neale (2005) find that differences in education are more often positively related to performance.

H4: Diversity in educational backgrounds in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.

4.2 Team Level: Surface-Level Diversity

Status. As early as in 1938, MGM producer Hunt Stromberg described that the big problem in filmmaking was holding the balance between "formula", meaning giving the public what it wants, and "showmanship", meaning offering something novel, something truly different (Bordwell, Staiger & Thompson, 1985). Actors with a considerable fan community ("stars") satisfy the "formula" part as they serve a certain set of audience expectations based on previous experiences. They provide familiarity that can be used by movie promoters and audiences to assess a movie's attractiveness prior to consumption. Thus, stars add a quasi-search quality to movies. They also help to book the movie on more opening screens. Initial screen coverage is important as over the first weeks, demand for a movie becomes obvious and follow-up contracts for screens are adjusted. Initial coverage forms the basis for bandwagon effects: subsequent growth in demand depends on the demand level already attained. Apart from contributing creative talent and professional performance to movie creation, stars may also promote their works professionally, and they attract media attention. Yet, as according to Stromberg's quote, audiences appreciate well-known and new faces, status diversity can enhance performance.

H5: Status diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.

Age. Age-diverse teams can be more appealing for consumers as they offer identification potential to a broad range of individuals. For team processes, age diversity may have a negative im-

pact on members' perceptions of their opportunity to contribute ideas and decrease creative potential articulated (Zenger & Lawrence, 1989). Yet, age-diverse members provide different perspectives and experiences that improve decision quality. Therefore, positive effects of age diversity may prevail.

H6: Age diversity in the movie team positively influences the movie's
a) domestic success, b) export success, and c) total box-office performance.

Gender. Mixed teams can offer identification potential for different individuals. For team processes, mixed teams have been found to perform first, better than single-sex teams and second, perform worse due to intrateam conflict. Rogelberg and Rumery (1996) observe that teams with a lone female outperform all-male teams, suggesting that gender diversity adds to quality. Horwitz (2005) points out that there is a consensus on the potential of gender diversity in teamwork, as diverse teams more likely generate a diverse set of approaches to problems.

H7: Gender diversity in the movie team positively influences the movie's
a) domestic success, b) export success, and c) total box-office performance.

4.3 Movie Characteristics Diversity

Sets. In the time of silent intertitles, it was common to replace characters' names or locations with names or places the target audience was deemed more familiar with. Today, culturally specific references are frequently exchanged in translation for more or less similar examples from the target context (Bergfelder, 2005). Thus, familiarity provided by set diversity (shooting a movie in different countries) can enhance export performance. Yet, it may decrease domestic performance when offering less familiarity for the domestic audience.

H8: Set diversity
a) negatively influences the movie's domestic success,
b) positively influences the movie's export success, and
c) influences its total box-office performance.

Cross-Cultural Meaning of Movie Content. Comedy is a genre that tends to be embedded in a particular culture, since the concept of humour and preferences for its forms like sarcasm, irony,

slapstick, ridicule, and situational humour, vary between cultures (Zandpour, Chang & Catalano, 1992). The appreciation of a particular national type, e.g. British humour, is not universal. Palmer (1995) argues that humour is based on a situation of incongruity that often implies a disregard of customs or social rules. Thus, humour requires a situational knowledge of the appropriate, socially expected behaviour. Thereby, it is culturally local. Thus, the meaning of comedy genre films may be strongly bound to the domestic culture.

H9: Comedy genre
a) positively influences the movie's domestic success,
b) negatively influences the movie's export success, and
c) influences its total box-office performance.

5. Sample, Variables, and Methods

5.1 Sample

The data contains 160 films that were released in the closed interval 1990-2005. 1990 is chosen as the starting point for the analysis since the reunification of Germany represents a structural breach in the data. For each year, the top-ten German films, as regards admissions in German cinemas, are selected from the FFA database. The sample is pared down as seven films with abnormally high admissions (higher than the mean plus four times the standard deviation) are excluded. The movies produced in the period of 1990-1992 form the initial network for the connectivity variable. Hypotheses are tested using 123 films released in 1993-2005.

5.2 Dependent Variables

Box-office success (in terms of a movie's admissions) is used as objective performance measure.[44] The variables are labelled DOMESTIC_SUCCESS for German admissions (data from the FFA), EXPORT_SUCCESS for admissions in European export markets (data from the Lumière database), and TOTAL_SUCCESS for domestic and export market admissions combined.

5.3 Independent and Control Variables

Culture. For the independent variables, the analysis concentrates on the movie's "inner team" to provide a meaningful representation of the cast. It takes the producer, the director, the camera person and the three leading actors into account. Nationality is used as a proxy for cultural identity (data from the Filmportal database and the Internet Movie Database (IMDb)). Calculating the Teachman index of diversity in nationalities generates the variable CULTURE.

Tenure. Tenure is measured as the number of years that a team member has been active in the industry since her first hit movie. Concentrating on the German box-office – as a common basis to assess experience, since most team members are Germans – a "hit" is defined as a film with at least 400,000 admissions. This number implies a threshold value that only the top 20% of

[44] Today, the box-office success accounts for a minority of film revenues only, but it is highly correlated with revenues from other media, as it establishes the film's value for subsequent distribution windows and for licensing, merchandising, and entertainment products (Craig et al., 2005).

German films released in 1990-2005 reached. As the Teachman formula best measures categorical data, and for consistency in using the same formula, TENURE data is organised in experience categories (zero to three, four to six, seven to nine, 10-12, and 13-15 years).

Connectivity. A network consists of a graph and additional information on its vertices (here, network actors and movies) or lines (ties). An undirected line is an "edge" (an unordered pair). A simple undirected graph consisting of edges is used for the analysis. In the industry's bipartite structure, movies on the one hand and team members – here, the director, the producer, the camera person and the three leading movie actors – on the other hand, are two sets of vertices. An edge is drawn if a person has participated in a particular film, constituting a vertex pair (i.e. movie A and person B). In network logic, vertices can only be related to vertices in the other set. This structure is also called a "two-mode" network. To construct the connectivity variable, the analysis identifies the number of top-ten German movies a team member has contributed to, using the Pajek 1.24 program. Pajek is useful for analysing and visualizing large networks. In doing so, the assumption is that contacts to members of successful productions are particularly valuable sources of know-how and information. Since the number of previous team memberships centres on zero to four, with few individuals having 15 or more previous memberships, categorizing the data seems inappropriate. The coefficient of variation is used to define the variable CONNECTIVITY.

Educational Background. The measure indicates whether the team members have received a film-related education. Data is collected from Filmportal, IMDb, and team members' personal homepages. The Teachman index variable is EDUCATION.

Status. The analysis takes the three leading movie actors and, in line with Jansen (2002), categorizes those that have been long-time well-known, are "celebrities", or have starred in a film with at least 400,000 admissions, as successful. Counting the number of previously successful movie actors, the Teachman index variable STATUS is computed.

Age. Age data for members is organised in categories (≤10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, and 71-80). Data is collected from Filmportal and IMDb. The Teachman index variable is AGE.

Gender. Diversity in GENDER is measured using the Teachman index.

Set Diversity. Set diversity is measured using the number of countries where a movie was shot. Since movie sets average at three, with a standard deviation of 17, a logarithm is used for locations. Data is taken from Filmportal, IMDb, and press releases. The variable is SET.

Cross-Cultural Meaning of Movie Content. A binary variable indicates if a film belongs to the comedy genre. Data for the variable CONTENT comes from FFA, Filmportal, and IMDb.

Control Variables. There are three controls: movie awards, critics' reviews, and movie budget. First, with respect to movie awards, awarded films are easier to market and often get a second or third run in movie theatres. Information on the number of movie awards received (the study focuses on the German and the Bavarian Movie Award as very important awards) is collected from www.kino.de and IMDb. The variable is AWARDS.[45] Second, as regards critics' reviews, in Germany, the Filmbewertungsstelle Wiesbaden (FBW) acts as an important critic: they can award the "recommended" or the "highly recommended" certificate to signal valuable movie content. The binary variable REVIEWS displays whether a sample movie holds the (better) "highly recommended"-certificate (FBW data). Third, concerning budget, high-budget films can afford well-known and talented personnel and expensive sets and digital manipulations. Budget data is not publicly available for the sample movies. Probably, human resources are the biggest

[45] As the number of movies and of team members that have received international awards (Cannes, Venice) is marginal, international awards are not included in the analysis. Besides, the study further controls for age ratings (age restrictions on movie admission), release seasons, release months, for important other events like European soccer tournaments and Olympics that might draw attention away from cinemas; for the number of released German movies, for German movie exports, for American import movies, in several time frames (as proxies for competition), all of which are not significant. It further controls for the size of the production company and for the initial distributor, the movie duration in minutes and, for home success only, for GDP, population, number of screens and of multiplexes, and movie ticket prices (no results). It also controls for genres. Family films enhance domestic success, drama genre limits domestic success (no export effects).

cost block in budgets: *budget = f (personnel)*. Using Filmportal data, the number of people employed during movie production is counted. The sum BUDGET is a budget proxy.[46]

5.4 Methods

Team Composition. When data is categorical or the utility of values is irrelevant, Teachman (1980) recommends an entropy-based diversity index to measure heterogeneity. This measure is defined as:

$$H = -\sum_{i=1}^{S} P_i(\ln P_i)$$

where H is the quantitative heterogeneity measure of the system, P_i is the probability of finding the system in state i, and S is the number of categories of a dimension on a team. The greater the distribution across different categories, the higher the diversity score.[47] For interval data, Allison (1978) suggests that the coefficient of variation (the standard deviation divided by the mean) provides the most direct and scale invariant measure of dispersion. This coefficient is used to measure connectivity diversity, as due to its distribution, categorizing data seems inappropriate.

Regression Model. The analysis is based on a stepwise Ordinary Least Squares Regression (OLS) and controls 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 for Models 1-3. So, the premise of constant variance of the disturbance terms has to be rejected. Heteroscedasticity-consistent error estimates are employed using Newey-West consistent covariances. Furthermore, for log-transformed admissions, two-stage least squares regression (2SLS) is used to consider the possibility that domestic box-office success may have a signalling function in terms of movie attractiveness, and thus determines movie performance for export markets.

[46] Budget data can be obtained for a third of the sample. The correlation between budget data and the budget proxy is as high as 0.32 ($p < 0.03$), which validates the proxy. Unfortunately, budgets cannot be split up into production and marketing budgets, as data is unavailable.

[47] For one foreign team member and five Germans, the score is 0.45; if there are two foreigners, the score is 0.64. Teams are usually made up of Germans only, or of Germans and one to three foreign members.

6. Results

Table 10 shows OLS results. As regards the deep-level diversity attributes, team diversity in culture enhances export performance. Yet, it does not affect domestic performance, and its effect on total performance is positive. Thus, providing audiences with a culturally diverse cast will increase export and total success, without jeopardizing domestic success (H1). Tenure diversity (H2) and connectivity diversity (H3) increase domestic and total performance without decreasing export performance. Diversity in educational backgrounds marginally influences domestic performance, but does not seem too relevant to box-office success (H4). For the surface-level attributes, status diversity negatively influences export and total success, but does not affect domestic success (H5). Age diversity enhances domestic and total performance (H6). Gender diversity negatively affects domestic and total performance (H7). Set diversity enhances export success and total performance (H8). Along with the positive impact of cultural diversity in the team, the latter result strongly supports the proposition that movies that incorporate different features better meet the demands of diverse audiences. The strongest influence of the independent variables on export success comes from diversity in sets (standardised coefficient of 0.31), status (0.24), and culture (0.11). Movie content is insignificant (H9).[48]

The control AWARDS is positively significant across markets. The importance of REVIEWS on a domestic (and total) scale, but not for exports, may be explained by the fact that the FBW is less known abroad, thus its certificate has little signalling effect. The budget proxy may be insignificant if it is not close enough to real budgets. Possibly, audiences expect lavish sets and special effects to be of U.S. origin anyway, so expensive inputs are not rewarded in proportion

[48] Some foreign audiences value cast members from their own country more strongly than others do (e.g. a *French* actor significantly enhances movie success in *France*). This effect occurs for France (21% of the sample's export admissions in Europe) and Poland (8%). It does not occur for Britain (6%), Italy (13%), or Spain (15%); however, the latter markets still favour international casts over all-German productions. U.S. team members enhance success in all these export markets. Effects on a single-market-basis are not analysed in detail as the sample size – as well as the number of overall exported movies for which complete data would be available – is rather limited. Of foreign team members, the largest groups come from the U.S. (17%), Britain (14%), Poland (11%), and France (5%).

to what is spent.[49] Table 11 shows descriptive statistics, table 12 presents the results and indicates the directions of the variables' impacts on success.

[49] Domestic box-office success may have a signaling function in terms of movie attractiveness for export markets. Then, domestic success would be an explanatory variable for export success. Potential simultaneity issues would be involved since the other independent variables that affect export performance are expected to affect home box-office success as well, so OLS would lead to inconsistent coefficient estimates. To correct for this issue, 2SLS is applied, where domestic box-office success is estimated based on the other independent variables. The estimated values for domestic success are then used in the second stage of the regression (Heinrich, 1998; Lang, Switzer & Swartz, 2009; Maddala, 2001; following the 2SLS order condition, the control variable "FBW-certificates" is dropped from the export equation). The first stage is: $Domestic\_Performance_n = g\ (Deep\_Level\_Diversity_n, Surface\_Level\_Diversity_n, Film\_Characteristics\_Diversity_n)$, where *n* stands for a movie; the second stage is $Export\_Performance_n = h\ (Domestic\_Performance_n\hat{}, Deep\_Level\_Diversity_n, Surface\_Level\_Diversity_n, Film\_Characteristics\_Diversity_n)$, where $Domestic\_Performance_n\hat{}$ is the estimated value from the first regression. Results show that domestic success does not have a significant impact on export success. 2SLS results are identical as regards signs and significance levels for cultural diversity in the team and in sets as in Model 2, and status diversity again has a negative impact (5%-level) on export success. Thus, the study results are robust.

	Model 0 Coefficient Std. Coeff. (Std. Error)	Model 1 Coefficient Std. Coeff. (Std. Error)	Model 2 Coefficient Std. Coeff. (Std. Error)	Model 3 Coefficient Std. Coeff. (Std. Error)
Dependent Variable	Domestic Success	Domestic Success	Export Success	Total Success
C	869923.29 (131344.89)	342939.50 (225375.52)	-600733.32* (352482.30)	53006.91 (216750.58)
Culture		15486.95 0.00 (255523.40)	714311.11* 0.11* (286256.95)	537161.41† 0.12† (303839.41)
Tenure		347115.96† 0.14† (182587.77)	355373.14 0.07 (367840.30)	828088.61** 0.23** (273460.25)
Connectivity		516350.10* 0.22* (203843.39)	587995.27 0.12 (608148.59)	649557.09* 0.18* (251650.35)
Education		-306343.18† -0.11† (183538.62)	448893.01 0.08 (377935.81)	-250533.66 -0.06 (260595.40)
Status		-125368.55 -0.05 (187300.86)	-1285045.79** -0.24** (484642.04)	-821302.17** -0.21** (242950.96)
Age		365235.23† 0.14† (211087.96)	226150.42 0.04 (338369.66)	655367.54** 0.16** (224384.60)
Gender		-567477.52* -0.19* (257911.97)	-120616.78 -0.02 (459388.70)	-660560.92* -0.14* (305211.75)
Set		-228308.99 -0.14 (143842.99)	1046872.39* 0.31* (478846.01)	373439.42† 0.15† (198376.30)
Content		237897.15 0.15 (176524.87)	-3921.99 -0.01 (263582.64)	47874.81 0.02 (176852.80)
Awards	218801.59* 0.25* (97685.59)	189208.65* 0.22* (95267.83)	612397.82† 0.33† (310846.37)	424385.85** 0.32** (134654.63)
Reviews	378645.05* 0.22* (161781.98)	353959.43* 0.21* (140350.55)	85639.65 0.02 (264703.15)	324667.60† 0.12† (181688.21)
Budget	6371.44 0.05 (13385.45)	8744.13 0.07 (12433.88)	-31355.50 -0.11 (39078.96)	-26956.78 -0.13 (19309.18)
F	7.67***	3.81***	6.20***	10.60***
R^2	0.162	0.294	0.0.404	0.536
Adj. R^2	0.141	0.217	0.339	0.489

N = 123. Significance levels (two-tailed): *** if p < 0.001; ** if p < 0.01; * if p < 0.05; † p < 0.1.

Table 10: Results

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Domestic Success	1204559	823117	1.00													
(2) Export Success	534592	1740634	0.02	1.00												
(3) Total Success	1739151	2563751	0.60***	0.69***	1.00											
(4) Culture	0.28	0.27	0.00	0.27**	0.23**	1.00										
(5) Tenure	0.51	0.34	0.29**	0.30***	0.47***	0.01	1.00									
(6) Connectivity	0.63	0.35	0.27**	0.17†	0.27**	-0.11	0.42***	1.00								
(7) Education	0.30	0.32	-0.01	0.11	0.03	0.06	0.16†	0.22*	1.00							
(8) Status	0.29	0.32	0.05	-0.18*	-0.15†	-0.14	0.17†	0.29**	0.18*	1.00						
(9) Age	0.94	0.31	0.24**	0.25**	0.36***	0.18*	0.32***	0.18*	0.32***	0.02	1.00					
(10) Gender	0.38	0.27	-0.15†	-0.13	-0.22*	-0.02	-0.04	0.17†	0.06	0.25**	0.02	1.00				
(11) Set	0.34	0.51	0.06	0.44***	0.40***	0.30**	0.33***	0.09	0.01	-0.06	0.18*	-0.22*	1.00			
(12) Content			0.03	-0.24**	-0.28**	-0.15	-0.16†	-0.01	0.22*	0.21*	-0.05	0.22*	-0.29***	1.00		
(13) Awards	0.62	0.94	0.34***	0.43***	0.49***	-0.15†	0.28**	0.13	0.06	0.10	0.28**	-0.04	0.24**	-0.24**	1.00	
(14) Reviews			0.32***	0.16†	0.30***	0.05	0.19*	0.11	-0.06	0.14	0.08	-0.09	0.17*	-0.24**	0.33***	1.00
(15) Budget	9.76	6.08	0.16†	0.11	0.10	0.17†	0.06	0.01	0.09	0.02	0.20*	-0.11	0.31***	-0.06	0.26**	0.22*

Significance levels (two-tailed): † if $p < 0.10$; * if $p < 0.05$; ** if $p < 0.01$; *** if $p < 0.001$.

Table 11: Descriptive Statistics

Category	Subcategory	Hypothesis	Domestic Success	Export Success	Total Success
Team Characteristics					
Deep-Level Diversity	Culture	*H1: Cultural diversity in the movie team a) negatively influences the movie's domestic success, b) positively influences the movie's export success, and c) influences its total box-office performance.*		+	+
	Tenure	*H2: Tenure diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*	+		+
	Connectivity	*H3: Connectivity diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*	+		+
	Educational Background	*H4: Diversity in educational backgrounds in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*	—		
Surface-Level Diversity	Status	*H5: Status diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*		—	—
	Age	*H6: Age diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*	+		+
	Gender	*H7: Gender diversity in the movie team positively influences the movie's a) domestic success, b) export success, and c) total box-office performance.*	—		—
Film Characteristics					
Set Diversity		*H8: Set diversity a) negatively influences the movie's domestic success, b) positively influences the movie's export success, and c) influences its total box-office performance.*		+	+
Cross-Cultural Meaning of Movie Content		*H9: Comedy genre a) positively influences the movie's domestic success, b) negatively influences the movie's export success, and c) influences its total box-office performance.*			
Controls					
Movie Awards			Significant in Models 0-3		
Critics' Reviews			Significant in Models 0, 1, 3		
Budget					
Signs indicate the direction of a significant influence of an independent variable on a dependent variable.					

Table 12: Overview of Hypotheses and Results

7. Limitations and Discussion

7.1 Research Limitations

There are some limitations to this research. First, the analysis cannot separate effects of diversity on the production level (on team processes) and the consumption level (on audiences' perceptions of the team). An educated guess can be taken as to where each kind of diversity exerts the stronger influence. Second, external result validity requires a randomly chosen sample. Here, the sample is chosen according to the movies' box-office performance, because the analysis focuses on successful productions. Moreover, the study only considers "survivor" movies that were actually released, as there is no data on movies that died in production. Survivor bias is a common restriction to performance studies.

7.2 Discussion

The purpose of this paper is to explore differences in the factors that determine the success of German motion pictures at home and abroad. The analysis builds on a gravity-iceberg model based on the premise that from the producer's point of view, there is *only one variable* in the model that can be directly influenced to promote film success: the cultural distance between the movie and its audiences, which is determined by the composition of the film team and the selection of certain movie characteristics.

Producers promote success prospects when (1) the composition of the movie team – as the basis for contributing different cultural backgrounds, creativity and talent to movie creation, and as a highly visible movie ingredient – as well as (2) essential film characteristics, like set locations or storyline, suit audiences not only in the home market, but also in culturally diverse export markets. The thinking is that capitalizing on diversity in these two "input categories" helps to provide points of reference to diverse audiences. The study assumes that particularly, cultural diversity (diversity in culture in the team, and in movie characteristics) enhance export success.

Specific hypotheses are tested and widely supported. Diversity in the deep-level attribute of the team members' respective cultural backgrounds enhances export success, as does the film char-

acteristics variable of set diversity. Both variables have positive effects also on a movie's total success, and they do not decrease domestic performance, which highlights the value of diverse cultural input for movie performance.

Export performance is not affected by the three other deep-level team variables of tenure, education, and connectivity diversity. Tenure und connectivity diversity enhance domestic and total success. The idea is that deep-level diversity influences team processes: diversity in *tenure* implies more constructive conflict about creative tasks in movie production, because team members benefit from different experiences in the industry over time. Yet, intra-team conflict can still result in the adoption of "conservative" solutions: if an agreement on creative, unorthodox solutions cannot be reached, it may be that tasks are rather done the "safe way". Such conservative solutions may appear "typically German" to consumers abroad, which could explain the absence of a positive effect of tenure diversity on export performance. It may further be that the understanding of what an attractive creative solution looks like varies between countries (an example is "Run Lola Run" that was innovative in a way appreciated much in Germany, but not abroad). Then, for export success, spurring creativity in an arty way is an inferior strategy to reducing cultural distance by providing diverse cultural references. *Connectivity* diversity reduces the danger of "groupthink": the movie can profit from diverse creative ideas. Again, creative input from the German film industry may appear "typically German", so there is no positive effect on export success. Individuals that have been active in the industry for a long time tend to have a large network. Thus, the effects of tenure and connectivity diversity complement each other in enhancing domestic and total, but not export, success.

As regards the surface-level attributes, status diversity in the team decreases export and total success, but does not affect domestic performance. For export markets, well-known actors are important to signal movie quality (in the sample, the correlation between the number of stars in the cast and export success is 0.389 ($p < 0.04$)). Thus, stars can reduce psychological costs of foreign movie consumption. Although the idea that the star system does not seem to be relevant in Europe has been supported for domestic film performance (Delmestri, Montanari & Usai, 2005; Meiseberg et al., 2008), it does not necessarily apply across borders. Then, producers had

better choose actors as a "formula" ingredient, as audiences do not reward "showmanship" experiments here.

The two other surface-level diversity variables, age and gender, influence domestic and total success. Surface-level attributes offer identification potential with the cast and the film characters. *Age* diversity provides identification potential to a broad range of individuals. Also, many films starring several generations are family entertainment, which as a genre is usually popular. Possibly, the positive effect does not hold for export markets as cultural distance is more difficult to overcome in family films than in other genres (action movies e.g.), so that foreign markets rather prefer their domestic family entertainment. Moreover, the effect of *gender* diversity is negative, which may come from the fact that gender-diverse movies often belong to the drama genre. Drama genre may have a low appeal for entertainment-seeking audiences.

The second film characteristics' variable, movie content, is insignificant across markets. Failure to export comedy may then rather be caused by a lack of production values, marketing, or adequate exhibition windows than by the genre's cultural specificity. Summarizing these findings, the study's results support the cultural industries' wisdom that producers can push market success when they blend familiar and novel elements.

Managerial Implications. Parkhe et al. (2006) point out that surprisingly little attention has been paid to the cross-national, cross-cultural aspects of network forms of organisation. Accordingly, there is little research that helps to customize movies, as cultural goods that are created within network structures, to a cross-cultural setting. This study offers some implications concerning network design in terms of team formation, and cross-cultural performance. The study results show that producers can target international audiences more effectively by giving heed to diversity of movie features in a cultural context. A cast of network members of different nationalities provides cultural familiarity to different audiences and increases international performance. Such a cast also increases diversity in tenure and in industry network resources, which enhances creative material available for movie creation and has positive effects on domestic success. It establishes further that for export success, apart from adequate selection of team members, cul-

tural references can be provided by choosing non-domestic set locations. Further, well-known actors in the cast make movies appear more attractive abroad.

By organising projects accordingly, producers can handle the trade-off between homogeneity and heterogeneity, and integrate domestic and export orientation. Successful projects then support producers in creating an international "brand name". As Swaminathan (2001) points out, "pioneering brands" tend to have long-term advantages when consumers have imperfect information about product quality, as they do for movies.

An initial difficulty for producers is raising funds. Raising finance for motion picture projects is not for the faint-hearted: for every success story there are many failures, and the strategies and structures of financing arrangements are as numerous as the films that are made (Squires, 2005). Rajan and Zingales (2001, p. 208) argue that technological, regulatory, and institutional changes in recent years have caused a "financial revolution" that "has subjected internal decisions to greater scrutiny, while making outside decisions easier. Unless there is a strong complementarity between assets in place and growth opportunities from a technological point of view, there is no reason why new opportunities should be undertaken […] by the existing company". Accordingly, the producer's reputation becomes an important asset for attracting outside financiers. Squires (2005) explains that producers with a good brand name and strong project elements (lead cast, director) increase their chances of negotiating successfully and that they can sometimes even pre-sell distribution rights before production commences. These producers profit from increased budgetary flexibility during project realisation, which further promotes the quality and attractiveness of the final product.

Research Implications. The advent of global markets, the rise of Europe-based centres of audiovisual production, new electronic distribution technologies, and an increase in the amount of cinematic material available to consumers making inroads on blockbuster audiences, require producers to face paradigm shifts and meet (culturally) diverse moviegoers' demands (Scott, 2004). Future research could explore ways for building a "producer brand name" in the context of different strategies that are intended to cope with industry changes, in order to help create a „safer bet".

8. References

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V. SUPERSTAR EFFECTS IN DELUXE GASTRONOMY – THE IMPACT OF PERFORMANCE QUALITY AND CONSUMER NETWORKS ON VALUE CREATION

1. Abstract

This chapter analyses whether Superstar effects (disproportionate income effects) exist in the German deep-pocket market for quality gastronomy. Following two central theories on star effects, the analysis tests the impacts of differences in (1) the quality of chefs' performances, and (2) the chefs' media presence, on chefs' financial rewards. Thereby, the study investigates whether offering high performance quality or providing a "hot topic" for discussion in consumer networks is better for obtaining disproportionate incomes. In doing so, this research addresses an economic issue of general interest: does it pay more to develop your skills in your core business to perfection, or to invest in self-marketing? The study does not find Superstar effects corresponding to the two theories. Yet, perfecting skills and investing in self-marketing have similarly positive moderate income effects, but self-marketing seems the less risky, less stressful way to enhance income.

2. Introduction

"In the future everyone will be world-famous for 15 minutes"
Andy Warhol (1928-1987)

We live in a world centred on stardom and hits. A surprisingly large number of markets are developing, or have already developed, into so-called "winner-take-all" markets, where "Rewards tend to be concentrated in the hands of a few top performers, with small differences in talent or effort giving rise to enormous differences in incomes" (Frank & Cook, 1995, p. 24).

Research provides evidence that these star effects occur in mass markets. In mass markets, often, a large number of people are willing to pay a premium to consume the services of those few individuals whom they perceive as the "best" performers. Here, Rosen (1981) was first to explain a strong connection between a person's talent and income. In contrast to mass markets, deep-pocket markets remain underresearched. A "deep-pocket" market is characterized by the fact that a relatively small number of consumers are willing to pay a large premium to consume the services of the few "best" performers. Then, in deep-pocket markets too, Superstars may command high rents.

The objectives of this paper are first, to analyse whether Superstar effects exist in deep-pocket markets. This study examines the market for gastronomy, and here, the segment of the best German restaurants. The "stars" can be the restaurant chefs. International Superstars in the restaurant sector are "house-hold name" chefs like Paul Bocuse or Jamie Oliver. German stars may be Dieter Müller, Harald Wohlfahrt, or Sven Elverfeld. Second, this study analyses what factors determine the stars' rents.

Building on Rosen's (1981) and Adler's (1985) central theories on star effects, two potential sources of Superstardom in deluxe cuisine are explored. First, this research tests if quality differences between chefs' performances, as measured by restaurant guides' ratings – "Guide Michelin" stars and "Gault Millau" points – have a direct impact on financial rewards. A direct income effect of superior performance could be called "direct Superstar effect", based on the effects explained by Rosen (1981): the better and the more innovative your cuisine, the higher the customers' willingness to pay, and the more financially rewarding is cooking for the chef

(Frick (2008) finds evidence for this idea). The French chef Paul Bocuse could be a role model for direct stardom. His name is associated with the (innovative) Nouvelle Cuisine that is less opulent and calorific than traditional Haute-Cuisine and emphasises the importance of preserving the characteristic taste of fresh ingredients.

Further, the impact of media presence on chefs' financial rewards is addressed. Why would star effects in the restaurant sector be based on media presence? Adler (1985, p. 212) gives a demand-related explanation: "The phenomenon of stardom exists where consumption requires knowledge". The acquisition of knowledge by a consumer involves discussion with others within the consumer's social networks. Here, a discussion is easier if all participants share common prior knowledge. "If there are stars, that is, artists that everybody is familiar with, a consumer would be better off patronizing these stars even if their art is not superior to that of others" (Adler, 1985, p. 212). Consequently, chefs who use the media to attract attention to their cooking and to promote discussion in consumer networks about their activities rather become stars than others who are less present in the media. An impact of TV appearance can be called "classical Superstar effect". The British chef Jamie Oliver could be a model for classical stardom. His career gained momentum through two highly successful seasons of "The Naked Chef", a TV program filmed in 1998/1999. The popular series brought Oliver international recognition as a star chef, and more television programs and book deals followed.

This study examines if Superstar effects exist in the deep-pocket market of German quality restaurants and what factors determine the chefs' rents. In doing so, it deals with an economic issue of general interest: does it pay better to develop your skills in your core business to perfection, or is it more rewarding to maintain your current level of skills and invest in self-marketing?

The paper is organised as follows: in the next section, the deep-pocket market of quality gastronomy is described. Then, Rosen's (1981) and Adler's (1985) theories that explain the phenomenon of Superstars are outlined (section 3). Based on the two theories, hypotheses on income effects of factors that can lead to stardom in deluxe cuisine are developed (section 4). Section 5 presents data and methods, section 6 report the results. Section 7 offers some conclusions.

3. Theoretical Background

3.1 The Market for Deluxe Gastronomy

The share of quality gastronomy in the entire field of gastronomy is less than 0.5% in volume. Yet, from a qualitative viewpoint, deluxe restaurants play a key role as they define trends, shape expectations and set quality standards for the entire gastronomy sector. The chefs operate in a market that is driven by creativity, individuality, and the striving for perfection (Surlemont & Johnson, 2005).

A central characteristic of quality gastronomy is that its services fall into the experience good category. The perceived consumption risk is high because deluxe restaurants charge high prices and the taste buds of many customers may not be sufficiently developed to notice small differences in meal quality. Thus, firms in the market must signal their quality to potential customers (Akerlof, 1970; Deuchert, Adjamah & Pauly, 2005). Restaurants can use information on prices and locations ("In-Restaurants") or promotions (e.g. reduced-price offers). Yet, using high prices as a quality signal is problematic. First, increasing prices is virtually impossible without losing customers. Second, Becker (1991) shows that a good has a higher value for consumers when there is excess demand for that good. He argues that restaurant eating, watching a play, or attending a concert e.g., are all social activities in which people consume a service together and partly in public. The pleasure from a good can then be greater when many people want to consume it, perhaps because a person does not wish to be out of step with what is popular or because confidence in the quality of the performance is greater when a restaurant, theatre, or concert is more popular. Then, skimming excess demand by increasing prices may lead to serious drops in demand. Further, promotions may be counterproductive to image-building and discredit the restaurant's reputation as a deluxe location.[50]

Following selection system theory, consumers often select experience goods after considering the opinion of experts. Gemser, Leenders and Wijnberg (2008) argue that due to the high credi-

[50] Excess demand shows when restaurants have guest lists and reservations must be made early, as with the (resigned) star chef Joël Robuchon (Paris) who maintained a two-month waiting list (Snyder & Cotter, 1998). "Quality" and "deluxe" gastronomy are used interchangeably to refer to those restaurants that are included in quality restaurant guides.

bility of the assessment, expert-selected awards are the most effective way of increasing the market success of non-main-stream products (like independent films or fine arts). This idea may also apply to deluxe cuisine: for consumers, restaurant guides like "Guide Michelin" or "Gault Millau", widely respected institutions in the market for Haute-Cuisine among chefs, restaurateurs, culinary experts, and the dining public, reduce information asymmetries (Balazs, 2002; Johnson, Surlemont, Nikod & Revaz, 2005). For a chef, a guide's good rating, like an award, is an acknowledgement of his superior skills and efforts. As the economics of awards literature points out (Frey, 2005; Frey & Neckermann, 2008), people do not only strive for higher incomes than others have, but also for gaining social distinction or peer group acceptance. For some chefs, social distinction may be reached by achieving an excellent rating, even if there is no increased income associated with it. A rating demotion can have tragic consequences, as the example of the French three-star chef Bernard Loiseau shows: the media suggests the reasons that drove Loiseau to suicide in 2003, were his demotion by two points in the Gault Millau and rumours that he would lose one of his three Michelin stars (Mariani, 2003).

Restaurant guides like the Guide Michelin are secretive by nature. It is difficult for chefs to determine what the guides expect in return for an excellent rating: Michelin categorically refuses to divulge its criteria. The stated purpose of such secrecy is to promote diversity in the market. If criteria were published, a framework would be defined and a standard created. Then, chefs will try to comply with that standard to be promoted. Surlemont and Johnson (2005) quote a chef who points out that making the criteria public could lead to a "McDonaldization" of Haute-Cuisine restaurants.

The guides' top priority is minimising beta errors, i.e. giving high ratings to restaurants that are just average (Surlemont & Johnson, 2005). This goal implies rigorous rating. Before a restaurant gets a (better) rating, it is tested by several inspectors who also assess the stability of cuisine quality over a certain period. For a chef, this "qualification period" procedure involves high risks in terms of investment in the restaurant: high-quality input like exquisite ingredients, excellent personnel, and prime ambience are costly, and higher revenues are hard to realise prior to the rating promotion. Minimising beta errors further maximises alpha errors: some restaurants

are not promoted even though they deserve it (Surlemont & Johnson, 2005). These aspects carry the danger of operating at higher costs (due to investment in high-quality input) without realising higher revenues. Chefs could make more informed investment decisions if they knew how earning substantially higher rents in quality gastronomy could be achieved. Thus, the study analyses what factors determine individual stardom and stars' rents in this market. The next section outlines conditions for stars to occur and links stardom to revenues.

3.2 Theory of Superstar Effects

The phenomenon of so-called "Superstars" with extremely high incomes has been in the public eye since World War II. Building on the insights of Marshall (1947), Rosen's (1981, p. 845) seminal work defines the Superstar effect as follows: "relatively small numbers of people earn enormous amounts of money and dominate the activities in which they engage". Empirical research investigates and finds evidence for Superstar effects in different industries (Torgler, Antic & Dulleck, 2008).[51]

Rosen (1981) suggests that two conditions must be fulfilled for Superstar effects to occur: imperfect substitution and joint consumption. Imperfect substitution means that lesser talent is a poor substitute for greater talent. Most people will not be satisfied with a less talented artist's performance if they can patronize a more talented artist instead, even at a somewhat higher price (Frey, 1998). In addition, individuals prefer one outstanding performance to a larger number of poor performances (Schulze, 2003). The less a substitution is possible, the higher are the obtainable incomes for the relatively talented individuals (Rosen, 1981). Superstar effects further require a market concentration on a few sellers with the highest talents. Concentration is possible when rendering the service is a form of joint consumption, i.e. the costs of production do not rise in proportion to the size of a seller's market (Rosen, 1981). Then, talented persons can command both very large markets and very large incomes.

Adler (1985; 2006) offers a complementary approach to Superstar effects based on consumers' learning processes. Building on the findings of Stigler and Becker (1977), Adler (1985, p. 208f.)

[51] Chung and Cox (1994), Hamlen (1994) and Sochay (1994), and Lucifora and Simmons (2003) provide evidence for Superstar effects in the music industry, the film industry, and in professional soccer.

assumes that the more a person knows about the seller, the larger is the utility derived from the consumption of that seller's service, "the more you know the more you enjoy". An individual can accumulate knowledge about a seller by consuming the goods offered and by discussing the seller's services with other consumers. Here, superstars emerge because art consumption (fine dining, watching a play, attending a concert e.g.) is not an isolated activity, but is socially shared (Adler, 1985). Much of the pleasure from consuming art consists in the possibility of discussing it with people, especially with friends and acquaintances. For the purpose of discussion, consumers entertain face-to-face relationships or self-organise into virtual networks to create social ties and exchange units of discourse (Dwyer, 2006). Through serving the individual need for communication, both kinds of consumer networks, real and virtual ones, have a strong impact on who becomes a star.

As a person cannot be equally informed about all artists in a specific field of interest, the person will choose a limited number of preferred artists whose services they wish to avail of and discuss with others. If a person chooses the most popular artists, she minimises her search costs for finding discussion partners. Thus, once a certain amount of people shares knowledge about an artist, the discussion is likely to focus on this person, which fuels the process of star creation. Then, consumers can acquire additional information about an increasingly popular artist at low cost, as such an artist is likely to have more and more media presence (Meiseberg, Ehrmann & Dormann, 2008). In consequence, a concentration of demand on a few artists develops, who become Superstars. These stars absorb part of consumers' "savings" in search costs by demanding higher prices for their services. If other sellers offer services of similar quality, that are not cheaper by more than the savings in search costs, consumers are better off patronizing the most popular seller (Adler, 1985). In a continuous process, a few stars emerge who can demand much higher prices than their competitors and who dominate the market. For Superstars, demand concentration is reflected in differences in income and fame which far exceed any differences in talent and performance (Frey, 2008).

Thus, Adler's (1985) Superstar effect can be understood as an internalisation of search costs that emerges where consumption requires knowledge. While Rosen's (1981) approach explains how

small differences in talent can lead to large differences in income, Adler's (1985) model also allows the emergence of stars who do not possess greater talent than their competitors, due to externalities of popularity (Adler, 1985). The study addresses the question of whether Superstars exist in German quality gastronomy and what factors determine the stars' rents.

4. Hypotheses

4.1 Superstar Effects by Differences in Talent

For Superstar effects according to Rosen (1981), consumers must be able to observe talent differences. A chef's "talent" is the ability to create a dining experience of a certain quality. By rating restaurant quality, guides offer information on the chef's talent. As Frey (2005, p. 4) argues, "prizes that rank books, plays, films and even persons may serve to lower search costs making it easier to know what to watch and read". Thus, ratings enable consumers to view differences in talent.

Superstar effects build on imperfect substitution. For deluxe cuisine, common wisdom may say that consuming many mediocre meals is not as good as consuming one excellent meal. Further, joint consumption must be possible, meaning that the activity is reproducible endlessly at a certain fixed cost, or that production costs do not rise in proportion to the size of the seller's market. The chef's service comprises the creative composition of meals (selection of ingredients, composition of meal courses, the definition of the way the meal should be prepared, the instruction of the staff, etc.) and actual meal preparation. Meal composition is subject to scale economies as it is done once and can be endlessly reproduced. Meal preparation may be subject to decreasing marginal costs, when a high-performing chef can make more perfect meals and more of them in a given time and can reduce waste of ingredients. In addition, the staff may develop its learning, so that fewer people are needed to fulfil the tasks. Thus, production costs do not rise in proportion to the chef's market size.

Then, with higher talent, a chef's revenues can increase disproportionately[52] (to analyse the deep-pocket market of deluxe cuisine, the focus is on revenues rather than on market concentration). Revenues depend on meal prices.[53] In line with Frick (2004), the idea is that following a

[52] "Disproportionate" means the income distribution is skewed towards more talented people; small talent differences are magnified in larger earnings differences (Rosen, 1981). This study does not suggest a specific curve progression. The point is that income does not increase linearly with talent, but convex: income differences (far) exceed talent differences.

[53] Increasing the number of meals sold can also enhance revenues. Yet, using restaurant sizes, Cotter and Snyder (1998) find that 75% of their sample restaurants that were promoted do not enlarge capacities. There is no connection between rating and size in this sample either; a possible reason being that chefs prefer to benefit from excess demand.

positive evaluation, sellers (here: chefs) may increase prices. Several empirical studies find evidence for a connection between (high) ratings and (substantially larger) prices (Frick, 2008; Snyder & Cotter, 1998).

H1: With an increase in the guides' cuisine ratings,
the restaurant's price level increases disproportionately.

Guides do not divulge their rating criteria. In an effort to reduce the danger that potential "quality standards" are unfulfilled, chefs may even over-fulfil some requirements since avoiding a demotion is essential: Snyder and Cotter (1998) explain that losing a one-star status makes a striking difference, and that losing a three-star status is disastrous. Michelin describes three-star restaurants as "worth a special journey". When a restaurant gains a third star, it usually loses many of its regional customers (due to price increases), but attracts a larger (inter)national clientele. When it loses the third star, the (inter)national clientele no longer comes, and the local clientele does not return (Snyder & Cotter, 1998). For an excellent rating, apart from the chef's talent, investments in real estate, high-quality staff, first-rate ingredients and an extensive and expensive wine list are necessary (Johnson et al., 2005). That is, customers also pay for "non-food" parts of the experience that support the chef's superior talent. Scully (1995, p. 64) notes that "Players interact with one another in team sports. The degree of interaction among player skills determines the nature of the production function". In Haute-Cuisine, the quality of the ingredients, the performances of the staff, and the décor of the restaurant, are elements contributing to the "team" output. Then, a chef and his meals are (more or less) "only as good as the weakest link". To convert superior talent into superior quality meals, exquisite ingredients, the best staff, and a stunning ambience are necessary.

H2: With an increase in the number of different wines,
the restaurant's price level increases disproportionately.

H3: With an increase in staff costs,
the restaurant's price level increases disproportionately.

H4: With an increase in the guides' ambience ratings,
the restaurant's price level increases disproportionately.

4.2 Superstar Effects by Differences in Media Presence

Superstar effects according to Adler (1985) can occur when there are differences in the chefs' popularity, when consumer utility of consuming a meal increases with knowledge of the chef (that is necessary for discussing the chef with others), and when finding information on popular chefs incurs low search costs for consumers. Then, stars can absorb parts of consumers' savings in search costs and earn disproportionate rents. A chef's popularity can be measured by his media presence (like TV appearances). Accordingly, the German star chef Alexander Herrmann points out that since he has been present in popular TV cooking shows, his career has accelerated immensely and his restaurant attracts customers from 500km (311m) away.

H5: Restaurants with a TV-present chef have a disproportionately higher price level.

5. Sample, Variables, and Methods

The sample, based on Germany's 204 star-rated Guide Michelin restaurants and the 229 restaurants with at least 16 Gault Millau points (guides' 2007 versions), consists of 288 restaurants. Data for 32 restaurants was incomplete, so the analysis focuses on 256 restaurants. The dependent variable PRICE reflects the Guide Michelin maximum price for a meal (whole menu), as the minimum price information is skewed: some restaurants have special offers at lunchtime.

In line with Frick (2008), the cuisine rating is used to measure a chef's talent. The ratings of Guide Michelin (one to three "star(s)") and Gault Millau (ten to 20 "GM points") differ slightly. Both guides may exert the same influence on consumers (and chefs), as they have sold equally well according to their Amazon sales rankings at the time of the analysis. Thus, they have equal weight in a combined rating CURATE. This rating groups the chefs into categories from one to four (see figure 7).

category 4	- three stars and/or - GM evaluation of at least 19
category 3	- two stars and/or - GM evaluation of 18
category 2	- one star and GM evaluation of 16 or 17 or - no stars and GM evaluation of 17 or - one star and not discussed by GM
category 1	- one star and GM evaluation of less than 16 or - no stars and GM evaluation of 16

Figure 7: Cuisine Ratings

Data on the number of different wines offered, WINE, can be obtained for 197 restaurants. To assess staff costs, the number of employees who attend to guests or support meal preparation is used. To compare restaurants of different sizes, the number of employees per seat is employed, STAFF (data for WINE and STAFF from www.restaurant-hitlisten.de). Décor ratings (one to five, where five is best) of both guides are combined into one measure, AMB. The dummy TVP measures if a chef is regularly present on German TV cooking shows (data from the homepages of shows and chefs). The analysis includes several control variables. A restaurant's price level may be influenced by an adjoining hotel, HOTEL (Guide Michelin data); by strong competition,

COMP, i.e. many other quality restaurants (13 or more Gault Millau points) in a certain radius (10km, 6m); or by high population density in a restaurant's county offering many potential customers (inhabitants per square kilometre, DENSITY). As conformable with the results of Ekelund and Watson (1991), restaurant demand is strongly responsive to income and employment, the study also considers the gross domestic product per resident in a restaurant's county, GDP (DENSITY and GDP data from the federal Statistical Office).

A stepwise Ordinary Least Squares Regression (OLS) is used to model the effects of the independent variables and the controls on the dependent variable. The analysis controls for absence of multicollinearity, for homoscedasticity and normal distribution of disturbance terms, using Variance Inflation Factors (VIFs) and correlations, White-, Newey-West- and Kolmogorov-Smirnov-Tests.

6. Results

Table 13 shows OLS results, while table 14 presents descriptive statistics. Model 1 displays the influence of the controls on PRICE (table 13; adjusted R^2 of 12.9%). When introducing the regressors, the adjusted R^2 increases to 50.5% (53.7%) in Model 2 (3). WINE is used in Model 3 only, as including WINE reduces the sample size to 188. For results of H1, and H3-H6, the focus is on the larger sample.

Results establish that an increase in the cuisine rating positively influences prices (H1). Yet, prices do not seem to increase disproportionately. To analyse this issue in more detail, another regression is estimated that uses dummies for the different cuisine categories. Here, results correspond in signs and significance levels to those in Model 2, dummies are positively significant (1%-level), and their coefficients do not increase disproportionately. Further, a log-linear model is used. Again, results correspond to those in Model 2, but the adjusted R^2 decreases to 42.5%. Thus, results indicate that the relation between prices and cuisine ratings, or chefs' revenues, is not disproportionate.

The variables' coefficients for H2 (WINE), H3 (STAFF), and H4 (AMB) are (highly) positively significant. Thus, there is support for the idea that converting superior talent into superior quality requires substantial investments in talent-supporting input like ingredients, staff, and ambience. Given that supporting input has little value of its own for consumers who wish to consume a certain chef's meals in the first place, but rather helps in realising this chef's superior talent, supporting input does not lead to disproportionate income effects either.[54] Thus, there are no Superstar effects due to talent.

[54] There are no disproportionate effects when using the same procedures as for cuisine rating, either. The study also controls for regional disposable income (insignificant). Results do not change for average prices. The analysis further considers whether high ratings lead to TV presence. Then, TVP would not be independent. Yet, there is no evidence: the sample comprises the entire population of star chefs; of these chefs, 43% got stars before being present on TV, 43% were present on TV first. For the others, both events occurred in the same year. Also, many TV-present chefs in Germany do not have any star at all. Neither a logistic regression (CURATE (X), TVP (Y)), nor a mediation model show any explanatory value. A reduced form model (without TVP) produces identical results for H1-H4. Multicollinearity is not an issue either, as there is no correlation between CURATE and TVP and VIFs are far below the tolerance limit of ten (Hair, Anderson, Tatham & Black, 1998).

Further, TVP is positively significant (1%-level). TV-present chefs can charge about €13.27 more per meal. Hence, TV presence leads to income increases, but to moderate ones – they are rather equal to winning an additional star (worth €15.04). That means, results do not show Adler's (1985) star effects, either. The next section outlines limitations and prompts discussion.

	Model 1 Coefficient Std. Coeff. (Std. Error)	Model 2 Coefficient Std. Coeff. (Std. Error)	Model 3 Coefficient Std. Coeff. (Std. Error)
C	72.594*** (4.669)	32.172*** (5.129)	32.728*** (6.060)
CURATE		15.038*** 0.478*** (1.562)	14.742*** 0.487*** (1.790)
WINE			0.009*** 0.154*** (0.003)
STAFF		23.130** 0.115** (10.114)	10.019 0.052 (11.086)
AMB		6.053*** 0.208*** (1.487)	6.124*** 0.194*** (1.877)
TVP		13.272*** 0.126*** (4.736)	10.641* 0.093* (5.837)
HOTEL	17.810*** 0.349*** (3.139)	7.852*** 0.158*** (2.602)	7.706** 0.147** (3.070)
COMP	3.774** 0.172** (1.838)	1.104 0.052 (1.422)	0.667 0.031 (1.593)
DENSITY	0.003 0.150 (0.002)	0.001 0.076 (0.001)	0.002 0.119 (0.001)
GDP	0.000 0.003 (0.000)	-0.000 -0.008 (0.000)	0.000 0.003 (0.000)
N	266	256	188
F	10.770***	33.583***	25.128***
R^2	0.142	0.521	0.560
Adj. R^2	0.129	0.505	0.537

Dependent Variable: PRICE. Significance levels (two-tailed): *** p < 0.01; ** p < 0.05; * p < 0.1.

Table 13: Results

Variable	Min	Max	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) PRICE	28.000	165.000	92.992	24.863	1.000								
(2) CURATE	1	4	1.778	0.765	0.639***	1.000							
(3) WINE	120	4300	509.025	409.302	0.363***	0.321***	1.000						
(4) STAFF	0.100	1.167	0.334	0.119	0.423***	0.405**	0.235***	1.000					
(5) AMB	1	5	2.974	0.746	0.598***	0.408***	0.365***	0.376***	1.000				
(6) TVP	0	1			0.154**	0.045	0.007	0.037	0.052	1.000			
(7) HOTEL	0	1			0.249***	0.133**	0.124	0.247***	0.437***	-0.075	1.000		
(8) COMP	0	3	1.622	1.120	0.185***	0.129**	0.158**	0.043	0.120**	0.048	-0.291***	1.000	
(9) DENSITY	51.777	4040.344	1095.800	1216.923	0.153**	0.092	0.087	0.072	0.077	0.131**	-0.351***	0.711***	1.000
(10) GDP	13467.000	75341.000	3113.559	13896.736	0.091	0.086	0.085	-0.007	0.049	0.020	-0.294***	0.554***	0.630***

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

Table 14: Descriptive Statistics

7. Limitations and Discussion

7.1 Research Limitations

The study has several restrictions. Talent cannot be quantified precisely. Cuisine rating is the best proxy available. It may also be that the most talented chefs do not always get the best ratings; they may choose, for example, to avoid investment risks. Data on restaurant profits or on chefs' wealth is not available. Meal prices as an income proxy may allow at least a relative comparison of earnings.

7.2 Discussion

This research analyses if Superstar effects exist in German quality gastronomy, and what factors determine the stars' rents. Following Rosen (1981), the study tests if quality differences in the chefs' performances influence financial rewards ("direct Superstar effect"). Following Adler (1985), it tests the income effect of chefs' media presence ("classical Superstar effect"). In analysing these sources of stardom, this research deals with an economic issue of general interest: does it pay more to develop your skills in your core business to perfection, or to maintain your current level of skills and invest in self-marketing?

Results show that higher performance quality increases chefs' revenues, but not disproportionately so. Therefore, there is no "direct Superstar effect". High ratings require substantial investments in exquisite ingredients, staff and ambience, which may imply negative marginal profits for additional quality. This idea is reflected in the "agony of the stars" problem (Mariani, 2003) that manifests itself in the recent bankruptcies of European three-star restaurants (see Pierre Gagnaire e.g.). Guy Savoy, another three-star chef explains the simple calculation (Burros, 1993, p. 2): "A bistro returns 10 times more on the investment than a restaurant like [Guy Savoy's]". Put differently: economies of scale can be realised much more easily in a bistro than in a three-star restaurant. In this context, the economics of awards literature argues that when a person's performance can only be vaguely determined, awards are a better incentive than monetary payment, are less likely to crowd out the recipient's intrinsic motivation, and are not taxed, while income is. That is, awards are an important part of the incentive system of a society (Frey,

2005). In deluxe gastronomy, a high cuisine rating is an award for the chef that shows his rank in the hierarchy of excellent chefs. Then, incentive effects of high ratings may explain why several empirical studies find that for chefs in the highest category, financial goals are secondary: they exercise the métier for love for the art of cooking and for prestige (Johnson et al., 2005). That means, they weigh the acknowledgement of their excellent performance higher than monetary gains.[55]

Furthermore, TV presence has a moderate effect on income. Therefore, there is no "classical Superstar effect", either.[56] The fact that consumers pay TV-present chefs more – for the same quality of food that competitors offer – shows that consumer utility increases when consumers can discuss prominent chefs with others in their social networks: "the more you know the more you enjoy". Accordingly, the German star chef Alexander Herrmann states that since he has been in TV cooking shows, his career has accelerated immensely and customers travel long distances to his restaurant. Herrmann explains that he makes half of his income in his restaurant, the rest with TV appearances and product marketing; yet, the income made in the restaurant takes up the lion's share of his time and is much harder to acquire than TV-related revenues (Lembke, 2008).

In Germany, there is no chef who is present on screen, and who belongs to the highest rating category. This insight supports a suggestion by Surlemont, Chantrain, Nlemvo and Johnson (2005): chefs who get the highest rating concentrate on their core business and do not diversify. Being under enormous pressure to continuously ensure highest quality, they cannot "waste time" on fostering a TV presence. Thus, as to whether perfecting one's skills or self-marketing is more rewarding, history suggests that although both can have similarly positive income effects, self-marketing seems the less risky and the less stressful way to enhance income. This result matches the story of Gordon Ramsay, currently the most financially successful chef on earth: "Despite his Michelin Stars […] two years ago his company was in the red"; "TV helps

[55] The study focuses on price increases as a result of good ratings, not on motivational effects for chefs. Data on the impact of rating "awards" on motivation is unavailable.

[56] A less "exclusive" image of, e.g. German chefs compared with French chefs, may limit willingness to pay, and the limited market size for German deluxe cuisine must be considered a factor in preserving excess demand.

Ramsay cook up a £60m fortune" (Mail Online, 2006). Ramsay connects cooking and TV appearances nicely: "I haven't stopped cooking. Sure, I spend some time in the office but I haven't forgotten how I got the Michelin stars that got me here" (Mail Online, 2006). Back to Jamie Oliver, the well-known chef from the series "The Naked Chef". What gives him a superb second position on the list of the richest chefs?

First of all, he doesn't own a deluxe restaurant! Second, compared with Paul Bocuse and other chefs from French cuisine, he has not added that much innovation to cooking. Rather, he has brought his TV-personality to the world of quality cuisine. Thereby, he in fact demonstrates that in deluxe gastronomy, self-marketing can be much more rewarding than refining cooking skills.

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VI. ERKLÄRUNG

Ich versichere an Eides statt, dass ich die eingereichte Dissertation "*THE INFLUENCE OF NETWORK DESIGN ON FIRM PERFORMANCE – PERSPECTIVES AND EMPIRICAL EVIDENCE*" selbstständig verfasst habe. Andere als die von mir angegebenen Quellen und Hilfsmittel habe ich nicht verwendet. Alle wörtlich oder sinngemäß den Schriften anderer Autoren entnommenen Stellen habe ich durch Angabe der entsprechenden Quellen kenntlich gemacht. Ich versichere auch, dass diese Dissertation nicht bereits anderweitig als Prüfungsarbeit vorgelegen hat.

Brinja Meiseberg

Münster, 20. Februar 2010