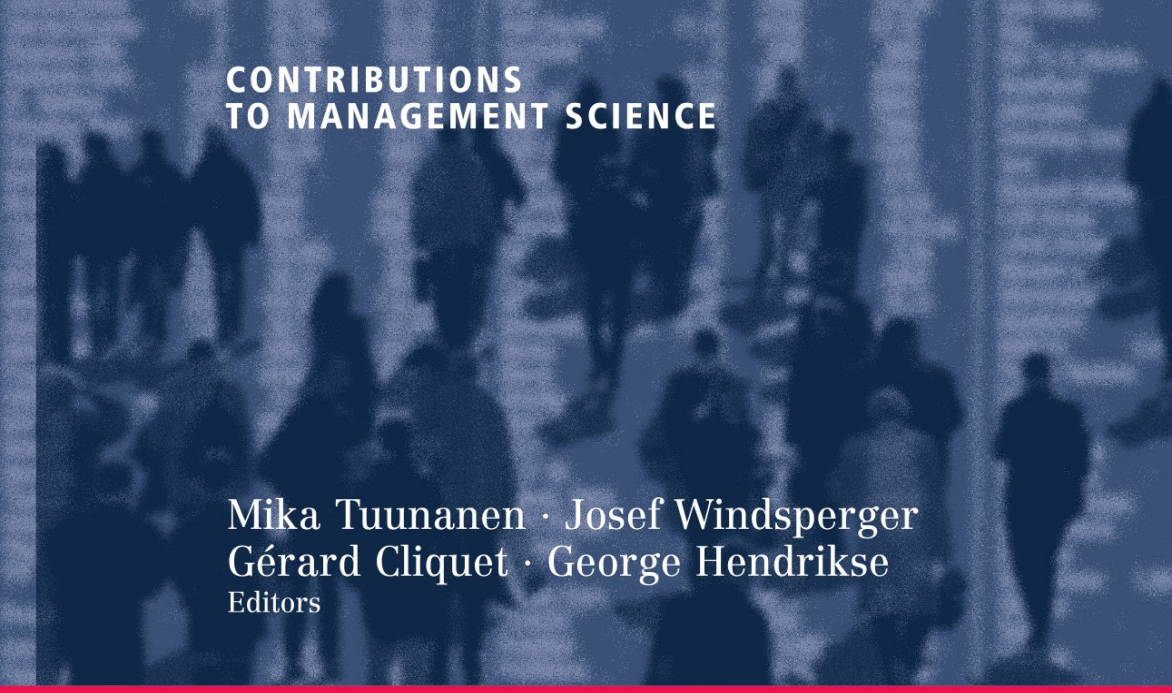

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TO MANAGEMENT SCIENCE

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Franchising, Alliances and Cooperatives

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New Developments in the Theory of Networks

Franchising, Alliances and Cooperatives

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New Developments in the Theory of Networks: Introduction

Josef Windsperger and Mika Tuunanen

The theory of networks aims at developing theoretical views on the design and management of alliances, franchise chains, licensing, joint ventures, cooperatives, and venture capital relations. It has become a very important research field in organizational economics, organization theory and strategic management in the last decade. The current trend in economics and management of networks is two-fold: First there is a strong tendency toward application of theoretical approaches developed both in organizational economics – agency theory (Blair and Lafontaine 2005), property rights theory (Hart and Moore 1990; Baker et al. 2008; Windsperger and Yurdakul 2007; Windsperger 2009) and transaction cost theory (Williamson 1991; Jap and Anderson 2003; Marcher and Richman 2008) – and in strategic management as well as organization theory – resource-based theory (Barney and Clark 2007), knowledge-based and organizational capability theory (Teece et al. 1997; Nonaka et al. 2000; Helfat et al. 2007), real options theory (Reuer and Tong 2007) and the relational view of the firm (Dyer and Singh 1998; Gulati 2007; Gulati and Nickerson 2008). The second trend refers to the development of more integrative approaches on networks. Especially, combining organizational economics, strategic management and relational views on networks are very promising research directions (e.g. Poppo and Zenger 1998; Combs and Ketchen 1999; Leiblein 2003; Hendrikse and Windsperger 2010). Starting from this status of research, the current book emphasizes network research as a theory-driven field by offering new perspectives on (a) contract design, decision rights, ownership rights and location decision in franchising networks, (b) value creation, innovation and knowledge management in alliances and (c) behavioral foundation and the role of social capital in cooperatives. A first version of these papers from different areas in economics and management of networks (franchising, alliances and cooperatives) were initially presented at the forth

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international conference on Economics and Management of Networks (*EMNet*) that took place at the School of Economics and Business at the University of Sarajevo from September 3 to September 5, 2009.

The book is structured in three parts:

Franchising

- Contract design and decision rights
- Incentives and ownership strategy
- Strategy, competition and internationalization of franchise firms
- Entrepreneurship and franchising
- Franchising and regulation

Alliances

- Value creation in network relationships
- Organization of innovation through alliances
- Knowledge management in networks

Cooperatives

- Behavioral Logics and Governance of Cooperatives

1 Franchising

1.1 Contract Design and Decision Rights

Hendrikse and Windsperger examine the determinants of contractual completeness in franchise relationships by formulating and testing various propositions derived from transaction cost theory, agency theory, property rights theory, organizational capability theory and relational view of governance. The degree of contractual completeness depends on behavioural uncertainty, trust, franchisees' specific investments, environmental uncertainty, intangibility of system specific know-how and contract design capabilities. The hypotheses are tested with a data base consisting of 52 franchise systems in Austria. The empirical results support the hypotheses regarding behavioural uncertainty, trust and intangible system-specific know-how.

López-Fernndez and López-Bayón address the delegation of decision rights in franchise relationships. They argue that the franchisor chooses the level of delegation to leverage the intangible assets of the franchisees and the franchisor and, simultaneously, to preserve the value of the brand name. While the empirical literature on franchising has studied these effects separately, they investigate them together in a model on decentralization. The results show that the franchisee's autonomy varies negatively with the franchisor's intangible assets and brand name and positively with trust and the franchisees' intangible assets. Finally, autonomy also varies negatively with the specific investments of the franchisees.

The aim of *Mumdžiev*'s study is to explain the allocation of decision rights in international franchise firms. This conceptual paper combines the perspectives of the property rights, agency theory and transaction cost theory to reveal the differences in the allocation of decision rights between master franchising and direct/multi-unit franchising. The property rights theory predicts that the allocation of residual decision rights depends on the intangible knowledge assets of the franchisor and the franchisees in the foreign markets. The agency-theoretical hypothesis suggests that the decision rights allocation is influenced by the monitoring costs, due to information asymmetry between the headquarters and the foreign local partners. Finally, under the transaction costs view, attention is directed towards environmental and behavioral uncertainty as determinants of the allocation of decision rights.

1.2 Incentives and Ownership Strategy

Chabaud, Lavit d'Hautefort and Saussier investigate the relative performances of company-owned outlets vs. franchised outlets using an original database consisting of 231 units of a French chain. At first glance, the financial and quality performance of company-owned units is better than franchised units. However, the opposite is true when the particular characteristics of each unit are considered in the analysis.

Perdreau, Le Nadant and Cliquet examine the relationship between plural form and performance in franchising networks in Europe. By applying the "critical" assets view of control (based on Rajan and Zingales) they argue that franchisor's life cycle stage and human capital assets influence the relationship between plural form and performance. The model has been estimated using panel data on 41 publicly listed European franchising networks in the 1998–2007 period. The results show that the impact of franchise proportion on performance is greater for franchisors with high intangible human capital compared to franchisors with low intangible human capital. Overall, the results provide support for hypothesis that the franchisors' performance is contingent on the "fit" between governance structure (franchise proportion) and resources (critical human assets).

1.3 Strategy, Competition and Internationalization of Franchise Firms

Ehrmann and Meiseberg explore the location strategy for franchise network expansion. Location decisions can be based on strengths found in local markets or on the expanding chain's own strengths. 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 study combines both literature strands by using a sample of 201 German franchisees. Results show that location decisions rely on both perspectives; yet, franchisee performance depends rather more on inner strength factors.

Using 1997 and 2002 U.S. Economic Census data for sales per establishment measures of performance, *Stassen and Grünhagen* examine the effects of market structure and concentration in a cross-sectional analysis of 55 metropolitan areas. Their findings challenge traditional perspectives on market concentration, whereas markets with higher concentration ratios based on a brand's outlets and revenue were found to have significantly lower sales per establishment. Conversely, markets with greater variety of franchised and non-franchised restaurants show above average performance. The results indicate the existence of an institutional submarket within a broader market of limited-service restaurant types, where evidence for competition exists among only the leading franchised formats, with non-franchised formats exhibiting little or no effects on the overall market's sales per establishment. Both franchisors and franchisees considering entry into a new geographic market should continue to evaluate traditional measures of sales per store, and if unavailable, examine the concentration or variety of competitors at the brand level to estimate the potential for new establishments.

Aliouche and Schlentrich present a model of international expansion and apply it to determine the optimal country to be targeted for entry by a US hotel firm. To illustrate how this international expansion assessment model can be used, it is applied to a hypothetical US-based hotel company that is representative of major US hotel firms. Though only 12th in the ranking of the top desirable expansion destinations from a macro opportunity/risk perspective, China moves to the top after the micro (country/industry/firm) assessment. For a US-based hotel company, it is determined that expansion into the China mid-market segment through management contracts would provide the optimal value for this firm. This study highlights the need for a strategic approach to international expansion decisions and the central role that risk assessment and risk management can play in these decisions. It also underscores the importance of country-specific macro-environmental and micro-environmental factors.

1.4 Entrepreneurship and Franchising

Torikka explores the applicability of the general theory of entrepreneurship developed by Shane (2003) in the franchising context. According to Shane, prior research has tended to look at only parts of the entrepreneurial process, with the result that no general theory of entrepreneurship has been developed. Studies that consider franchising as a form of entrepreneurship are relatively rare. According to Torikka, franchising is seen as belonging to the field of entrepreneurship, i.e. franchising is understood as a form of starting up and growing new ventures, as well as a mechanism

for introducing new products and services to growing markets. This essay looks at the process of becoming an entrepreneur and franchisee by applying Shane's framework.

1.5 Franchising and Regulation

According to *Terry and Di Lernia*, regulators increasingly face the challenge of the appropriate manner of franchise regulation, as franchising increases its influence internationally. A recent Australian report has focused attention on an obligation of good faith as an appropriate regulatory strategy to address opportunistic conduct and has concluded that while the prior disclosure obligations of Australia's regulatory instrument for franchising (the *Franchising Code of Conduct*) are for the most part adequately addressed, there remain concerns because of the "continuing absence of an explicit overarching standard of conduct for parties entering a franchise agreement". The *Opportunity not opportunism* report of the Parliamentary Joint Committee on Corporations and Financial Services (December 2008) recommended that the optimal way to provide a deterrent against opportunistic conduct in the franchising sector was "to explicitly incorporate, in its simplest form, the existing and widely accepted implied duty of parties to a franchise agreement to act in good faith". In November 2009 the Australian Government rejected this recommendation on the basis that it would "increase uncertainty in franchising". This paper explores the challenges faced in grafting the civil law concept of good faith onto a common law system. It suggests that in Australia and other common law jurisdictions – and even in civil law jurisdictions – good faith is more an elusive ideal than a well settled commercial standard and that issues of definition, scope and application may frustrate its intended application in the franchising context.

The purpose of *Bordonaba-Juste, Lucia-Palacios and Polo-Redondo's* study is to analyze the effect of the change from a general regulation to a franchise-specific legislation on survival rates and discontinuance rates in the Spanish market. They use a descriptive methodology and a comparison between survival curves. After controlling for time-in-market, results suggest that, after regulation, there is an increase in the organizational failure rates but a decrease in discontinuance rates. Furthermore, they show that regulation affects foreign franchisors slightly more negatively than domestic ones and the reaction of growing firms is different from that of firms with negative growth.

2 Alliances

2.1 Value Creation in Network Relationships

Yaqub and Vetschera integrate and extend insights from relational exchange theory and value exchange model to discuss the efficacy of relational governance

and value-creating relational investments to affect certain revenue-enhancing (relational) behaviours. It is postulated that value-creating relational investments made in a highly relational environment successful enough to engender high relationship quality (manifested through total partner satisfaction and inter-organizational trust) result in higher interorganizational commitment. This commitment ultimately translates into superior performance of the focal firm since partners exhibit revenue-enhancing behaviours like longevity of relationship, increased business share, positive word-of-mouth and reduced partial defection. They further argue that the dynamics of model may vary across different phases of relationship life cycle and are moderated by the nodes' relational polygamy.

Grandori and Cacciatori's study on new innovative entrepreneurial firms tests the hypothesis that there are complementarities between firms' networked access to human, technical and financial resources and the networked growth of those firms. This 'double network hypothesis' supports a view of entrepreneurial firms generating value through shifting combinations of resources and growing by external networks, rather than as a necessarily unique combination of highly specific resources. In addition, the test of complementarities between types of networks bringing resources to the firm and types of networks through which growth occurs, contributes a much needed specification of the sources of complementarities among organizational practices, at least as far as network practices are concerned.

2.2 Organization of Innovation Through Alliances

According to *Arranz and Fdez. de Arroyabe*, joint R&D projects have long been studied as an important determinant of innovation success. Researchers have highlighted the benefits that such technological projects offer to partners and to their industries and countries. However, the multiple interactions involved in joint R&D projects in order to achieve the common objectives are not fully understood. Such complexity justifies the need to seek adequate methodologies for determining the project attributes that will lead to an explanation of how joint R&D projects operate. Arranz and Fdez. de Arroyabe introduce ideas about the structure and organization of joint R&D projects in order to explore how attributes and properties of networks influence the attainment of R&D project objectives. The Delphi approach allows a detailed look at the functioning of networks.

Gretzinger, Hinz and Matiaske argue that dynamic changes in the structure of value-added chains lead to an enhancement of innovations of SMEs (small and medium sized enterprises) and therefore to an impact on the national economies. In the European context the support of the innovation process of SMEs is a goal of the economic policy. In this context private and public consultancies should provide advice for the innovation management of SMEs. The integration of consultancies leads to weak relations in the innovation network and so the risk of losing the competitive edge increases. Based on a Danish–German dataset, this study addresses the

question of which conditions initiate and impede the utilization of the consulting system from a business point of view. Gretzinger, Hinz and Matiaske found that both Danish and German SMEs utilize far more strong ties than weak ties when choosing the cooperation partners in the innovation process, but at the same time the Danish SMEs manage to exploit the range of services offered by consultancies better.

2.3 Knowledge Management in Networks

Srećković and Windsperger develop a knowledge-based view on the organization of knowledge transfer in clusters. Starting from the information richness theory, they argue that tacitness of the partners' knowledge determines the information richness of the knowledge transfer mechanisms in clusters. The following hypotheses are tested: (a) If the cluster partners' knowledge is characterized by a low degree of tacitness, knowledge transfer mechanisms with a lower degree of information richness (e.g. email, intranet, documents, newsgroups) are used; (b) if the cluster partners' knowledge is characterized by a high degree of tacitness, knowledge transfer mechanisms with a higher degree of information richness (e.g. seminars, workshops, formal meetings) are used. Srećković and Windsperger test these hypotheses by using data from the Green Building Cluster in Austria. The empirical results indicate that an increase in teachable knowledge results in the use of more knowledge transfer mechanisms with a lower degree of information richness, and an increase in complex, but articulable knowledge results in the use of more knowledge transfer mechanisms with a higher degree of information richness. In addition, they show that trust positively influences the use of all modes of knowledge transfer.

Mirić investigates the importance of network age for learning and knowledge transfer among network members. The research is carried out through multiple exploratory case study analysis. The results indicate that network age per se does not have adequate power to explain learning processes occurring within a network. Age is an important factor of learning, but only as part of a broader concept associated with the evolution of the network, and therefore not directly connected with learning. Mirić takes this into account by defining the concept of network maturity. Network maturity is a function of network age, pre-existing experience in working together and the development of social networks among the employees of organisations that form the network.

3 Cooperatives

3.1 Behavioral Logics and Governance of Cooperatives

Nilsson and Hendrikse explore the behavioural logics within a cooperative. A cooperative business consists of a cooperative society and a cooperative business

firm. The society of members intends to control the business in such a way as to focus the business operations on its interests. The two organizational units tend, however, to follow different behavioral logics. Borrowing some core concepts from classical sociology, Gemeinschaft norms rule within the memberships, while Gesellschaft norms dominate the business firms. Thereby it may be difficult to accomplish alignment between the membership organization and the business organization in order to be competitive. This study addresses the difficulties of following the different logics by exploring Gemeinschaft and Gesellschaft within agricultural cooperatives with a focus on the membership logics.

Based on a network model of social capital, *Lang and Roessl* develop a set of hypotheses on the formation of social capital among activists engaging in community-based cooperatives for public service delivery. The hypotheses are tested in a large-scale questionnaire survey in Austria. The results of the study support the findings of Granovetter (1973) and Burt (2001) on the importance of weak ties and structural holes in social networks. On the one hand, critical resources for a community-based cooperative can be found in the acquaintance networks rather than friend or family networks of residents. On the other hand, Lang and Roessl identify cooperatives as a suitable form of organising community-based initiatives. Its flexible and open network structure allows the bridging of structural holes within and outside the community, which facilitates necessary information and resource flows. The empirical analysis provides valuable insights for policy makers concerned with fostering community engagement through cooperatives.

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Part A
Franchising

Contract Design and Decision Rights

Incentives and Ownership Strategy

Strategy, Competition and Internationalization of Franchise Firms

Entrepreneurship and Franchising

Franchising and Regulation

Determinants of Contractual Completeness in Franchising

George Hendrikse and Josef Windsperger

Abstract The aim of the study is to explain the determinants of contractual completeness in franchise relationships by formulating and testing various propositions derived from transaction cost theory, agency theory, property rights theory, organizational capability theory and relational view of governance. The degree of contractual completeness depends on behavioural uncertainty (negatively), trust (positively), franchisees' specific investments (negatively), environmental uncertainty (negatively), intangibility of system specific know-how (negatively) and contract design capabilities (positively). The hypotheses are tested with a data base consisting of 52 franchise systems in Austria. The empirical results support the hypotheses regarding behavioural uncertainty, trust and intangible system-specific know-how.

1 Introduction

Under bounded rationality and opportunism complete contracts do not exist between the network partners (Williamson 1975; Hadfield 1990; Scott 2006). In recent years researchers in organizational economics and strategic management have examined the question about the efficient contractual design (e.g. Joskow 1985; Luo 2002; Kalnins and Mayer 2004; Ariño and Reuer 2005; Reuer et al. 2006; Ryall and Sampson 2006; Mayer and Argyres 2004; Mellewigt et al. 2007; Mesquita and Brush 2008; Hendrikse and Hu 2009; Hendrikse and Windsperger 2009). Researchers in organizational economics have tried to explain the degree of contractual completeness by applying transaction costs and property rights reasoning (Crocker and Reynolds 1993; Crocker and Masten 1991; Saussier 2000; Bernheim and Whinston 1998; Al-Najjar 1995; Masten and Saussier 2000). Researchers in strategic management have examined contractual complexity that is closely related to contractual incompleteness (e.g. Barthelemy and Quelin 2006;

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Reuer and Ariño 2007; Hansen and Higgins 2007; Hagedoorn and Hesen 2007). In organizational economics contractual completeness is a concept derived from a complete contract situation. A complete contract specifies all actions to be taken and payments made under every possible environmental situation (Milgrom and Roberts 1992; Bolton and Dewatripont 2005). In the 1990s, the first generation of incomplete contracting theories (e.g. Grossman and Hart 1986; Hart and Moore 1990) explain incompleteness by high enforcement costs due to exogenous verifiability constraints in the contract execution period (Eggleston et al. 2000, p 119; Scott and Triantis 2005). More recently, the second generation of incomplete contracting theories (e.g. Hart and Moore 2008; Tirole 2009; Bolton and Faure-Grimaud 2009) argues that incompleteness of contracts result primarily from adaptation and endogenous verifiability problems under bounded rationality of the contract partners. Under uncertainty/complexity and bounded rationality (Williamson 1975) as well as intangibility of knowledge, the network partners are unable to specify all actions to be taken and payments made under every possible environmental situation. In this situation, the contract design is an adaptation mechanism (incentive and information processing mechanism) that assigns specific rights and control rights in order to regulate the transactions between the partners (Simon 1951; Gibbons 2005; Baker et al. 2008).

Starting from this adaptation view of contract design, the objective of our paper is to develop a theoretical foundation of the concept of contractual completeness and to examine the determinants of contractual completeness in franchising by testing hypotheses derived from transaction costs, agency theory, property rights, relational governance view of governance and organizational capabilities theory. First, based on the transaction cost theory we argue that completeness varies negatively with the franchisee's specific investments and environmental uncertainty. Franchisee's specific investments increase their quasi-rents and hence the self-enforcing range of contracts, and environmental uncertainty prevents the franchisor from specifying detailed contract terms. Second, by applying the agency-theoretical view, we argue that contractual completeness varies negatively with monitoring difficulties due to behavioural uncertainty. Third, we examine the property rights hypothesis that completeness varies negatively with intangibility of the franchisor's system-specific assets. Forth, based on the relational view of governance, we investigate the relationship between trust and the degree of contractual completeness. The complementarity hypothesis states that trust increases knowledge sharing and enables the franchisor to design more complete contracts; on the other hand, according to the substitutability hypothesis, trust decreases relational risks and results in less complete contracts. Finally, based on the organizational capability view, we examine the relationship between contract design capabilities and contractual completeness. We argue that higher contract design capabilities result in a higher degree of contractual completeness. These hypotheses are tested by using data from the Austrian franchise sector.

The article is organized as follows: Section 2 investigates the concept of contractual incompleteness. In Section 3 we develop the agency cost hypothesis, the hypotheses based on the relational view of governance and the property rights

theory, the transactions cost hypotheses and the organizational capabilities hypothesis. Finally in Section 4 we test these hypotheses by using data from Austria.

2 Contractual Completeness

Recent empirical studies on completeness and complexity of contracts show that contractual completeness is a heterogeneous concept without sufficient theoretical foundation (e. g. Parkhe 1993; Saussier 2000; Reuer and Ariño 2002, 2007; Ryall and Sampson 2006; Furlotti 2007; Mesquita and Brush 2008). In the following, first we develop the concept of contractual completeness and second we examine the relationship between completeness and complexity of contracts.

2.1 Contractual Completeness and Decision Rights

Designing an efficient contract refers to the question of formulating and assigning specific and residual rights to the contract partners. Specific rights refer to the detailed specification of decision actions in the ex ante period and residual rights refer to the planning of decision procedures which enable decision making about specific actions in the ex post period. The partner who has non-contractible knowledge that generates the residual surplus should have residual decision rights, and the partner who has contractible knowledge should have specific decision rights that are explicitly stipulated in contracts (Demsetz 1998). Complete contract refers to the case where all actions are specified in a comprehensive contract covering every possible environmental situation. In this situation only specific rights are included in the contract. Incomplete contracts refer to the situation in which the agents cannot fully specify the decision actions (contractual obligations) under every possible environmental situation. In this case, specific and residual rights are formulated and assigned in the contract. There is a trade-off on the choice between specific rights (sDR) and residual rights (rDR) which is determined by the contractibility of knowledge. When contractability is low, a low portion of specific rights and a high portion of residual rights are assigned to the partners, and when contractibility of knowledge is high, a high portion of specific and a low portion of residual rights are specified in contracts. The ratio between specific and residual rights of the partners defines the degree of contractual completeness: sDR/rDR. The higher the portion of specific rights compared to residual rights specified in the contract, the higher is the degree of contractual completeness; and the higher the portion of residual rights compared to specific rights, the lower is the degree of contractual completeness. Hence a contract is characterized by a low degree of completeness under a low contractibility of knowledge, and a contract is characterized by a high degree of completeness under a high contractibility of knowledge. This approach is compatible with the adaptability view of governance (Simon 1951; Gibbons 2005) that formulates a trade-off between planning of decision actions

(formulating specific rights) and the planning of decision procedures (assigning residual rights) (Bolton and Faure-Grimaud 2005). A similar trade-off is well known in the regulation literature on the choice between rules and standards (Kaplow 1992; Scott and Triantis 2005).

2.2 *Relationship Between Completeness and Complexity*

After defining contractual completeness we address the question: what is the relationship between contractual complexity and contractual completeness? Recent studies on contractual complexities show that complexity is a heterogeneous concept (e.g. Poppo and Zenger 2002; Ariño and Reuer 2005; Reuer and Ariño 2007; Hagedoorn and Hesen 2008; Barthelemy and Quelin 2006). Although these studies differ widely in their approach and definition of complexity, the main characteristics of complexity concept can be defined as follows: Complex contracts have detailed specification of promises, obligations, responsibilities to be performed, procedures for monitoring and dispute resolution and determine in detail outcomes or outputs to be delivered. Compared to our completeness concept (sDR/rDR), complexity can be defined by the sum of contract provisions consisting of both specific decision rights (as outcome planning) and residual decision rights (as procedural planning) (sDR + rDR). Hence completeness and complexity are related as follows: A more complex contract can be both more or less complete. If the contract has a higher number of detailed provisions regarding the partners' actions in different environmental situations and a low number of provisions regarding residual decision rights, the contract has a high degree of completeness and a high degree of complexity. On the other hand, if the contract has a high number of provisions regarding the assignment of residual decision rights and a low number of provisions regarding specific rights, the contract has a high degree of complexity, but a low degree of completeness. Therefore, complexity and completeness only go hand-in-hand when the use of assets can be specified in detail in a contract due to high contractibility of knowledge. On the other hand, complexity and completeness are negatively related when the use of assets is costly and difficult to specify in a contract due to low contractibility of knowledge, but in this situation the contract specifies in detail the assignment of residual decision rights. Therefore, we do not agree with Ariño and Reuer (2005) that "a contract with more specific and detailed terms is more complete than one with less specific and detailed terms".

3 Determinants of Contractual Completeness in Franchising

Now we examine the determinants of contractual completeness in franchising by applying transaction costs theory, agency theory, property rights theory, organizational capabilities theory and the relational view of governance.

3.1 Transaction Cost Theory

3.1.1 Environmental Uncertainty

According to the transaction cost theory (Williamson 1975, 1985), environmental uncertainty influences the contract design as governance structure. Transaction costs arise due to bounded rationality under a complex and changing environment resulting in high environmental uncertainty (market, cultural and institutional uncertainty). Environmental uncertainty prevents the franchisor from setting detailed contract terms and hence it increases the need for ex-post adaptations by allocating residual decision rights. The greater the environmental uncertainty, the less complete is the franchise contract and the more residual rights and the less specific decision rights are assigned to the franchise partners.

3.1.2 Transaction-Specific Investments

According to the transaction cost theory, specific investments results in quasi-rents that can be expropriated by the less dependent partner (Williamson 1985; Klein et al. 1978). In franchising, both the franchisor and the franchisee have to undertake high transaction-specific investments that increase bilateral dependency (Windsperger 1994). When the franchisor's and the franchisee's specific investments result in high quasi-rents, they likely exceed the potential hold-up gain from opportunistic behaviour, thereby increasing the self-enforcing range of contracts (Klein 1996; Klein and Murphy 1997). In this situation, the hostage effect of specific investments motivates both partners to behave cooperatively in order to realize the relationship-specific quasi-rents. Consequently, the bonding effect of high bilateral specific investments increases the self-enforcing range of contract and reduces the requirements for specifying detailed contract terms. We can derive the following testable hypotheses from this transaction cost view:

H1a: *Contractual completeness is negatively related with environmental uncertainty.*

H1b: *Contractual completeness is negatively related with the franchisee's specific investments.*

3.2 Agency Theory

According to the agency theory (e.g. Lafontaine 1992; Lafontaine and Slade 1998), asymmetric information and opportunism result in high agency costs. The franchisor has two possibilities of reducing agency costs: On the one hand, to reduce the residual loss by increasing monitoring activities and performance measurement

and, on the other hand, by allocating a higher fraction of residual decision rights to the franchisees (Brickley et al. 2003). The higher the behavioural uncertainty (due to moral hazard and adverse selection), the more residual rights should be transferred to the local entrepreneurs, and the less specific rights are formulated in contracts. Consequently, behavioural uncertainty results in measurement difficulties under a multitasking environment and hence in a lower degree of contractual completeness (Holmstrom and Milgrom 1991; Bernheim and Whinston 1998; Eggleston et al. 2000, p 110). We derive the following hypothesis:

H2: *Contractual completeness varies negatively with behavioural uncertainty*.

3.3 Property Rights Theory

According to the property rights approach, intangibility of knowledge assets results in allocating residual decision rights to the network partners (Aghion et al. 2004; Lerner and Malmendier 2010; Windsperger 2009). The relationship between the intangibility of knowledge assets and the degree of contractual completeness can be stated by the following proposition: The higher the intangibility of the partner-specific knowledge, the greater is the difficulty for the franchisor to explicitly specify the use of system-specific and local market know-how in the contract, the lower is the ratio between specific and residual decision rights, and hence the lower is the degree of contractual completeness. For the franchisor's system-specific know-how, we formulate the following hypothesis:

H3: *Contractual completeness is negatively related with intangible system-specific assets*.

3.4 The Relational View of Governance

Under the relational view of governance (Dyer and Singh 1998; Dyer and Chu 2000; Gulati and Nickerson 2008; Mellewigt et al. 2007), there are two perspectives on the impact of trust on the use of contractual provisions: (a) Substitutability view: Knowledge-based trust is a substitute for formal contractual planning (Gulati 1995; Yu et al. 2006). Trust mitigates the contractual hazards due to lower relational risk (Roberts 2000) and hence reduces the extent of formal contract planning. Consequently, the franchisors are likely to use less complete contracts when trust exists between the network partners. (b) Complementarity view: Trust facilitates interorganizational knowledge sharing and enables the formulation of more refined contract terms as "reference points" (Hart and Moore 2008) that determine the boundaries of the self-enforcing range of the contracts (Seppänen et al. 2007; Blomqvist et al. 2005; Klein 1996). Consequently, under a high level of trust the

franchisor uses more complete contracts because trust creates an incentive for intense and open information sharing. We derive the following hypothesis:

H4a: *Substitutability view: Contractual completeness is negatively related with trust.*

H4b: *Complementarity view: Contractual completeness is positively related with trust.*

3.5 Organizational Capability View

The organizational capability view argues that firm-specific capabilities result in competitive advantage through efficient knowledge creation and knowledge exploitation (Nonaka 1994; Teece 2007; Helfat et al. 2007). In franchising, franchisors develop contract design capabilities through interorganizational learning (Argyres and Mayer 2007). Prior relationships may allow for the design of more complete contracts because the partners learn what they need to specify in contracts thereby developing contract design capabilities (Mayer and Argyres 2004; Ryall and Sampson 2006; Argyres et al. 2007; Bolton and Faure-Grimaud 2009). The older the franchise company, the more the franchisors learn about the application of system-specific and the local market knowlege, and the higher are the franchisor's contract design capabilities, i. e. the capabilities to specify more refined contract. We formulate the following hypothesis:

H5: *Contractual completeness is positively related with interorganizational learning.*

4 Empirical Analysis

4.1 Sample and Data Collection

The empirical setting for testing these hypotheses is the franchising sector in Austria. We started our empirical work by obtaining the list of all franchise systems in Austria from the Austrian Franchise Association (AFA). AFA identified a total of 260 franchised systems in Austria in 2004. After several preliminary steps in questionnaire development, including interviews with franchisors and franchise consultants and the representatives of the AFA, the final version of the questionnaire was sent out by mail to the general managers of the franchise systems in June 2005 and September 2005. The questionnaire took approximately 15 min to complete on average. We received 52 completed responses; hence the response rate is 20%. This low response rate might be due to the relatively long questionnaire (7 pages). The general managers (CEOs) as respondents to the survey were the key

informants of the franchise systems. Key informants should occupy roles that make them knowledgeable about the issues being researched (John and Reve 1982). Since the general managers as top decision makers in the franchise systems are involved in all contractual decisions (including the design of franchise contracts), they were judged to be the most suitable respondents.

In implementing the survey we took several steps to ensure a good response rate, ranging from including a support letter from the president of the Austrian Franchise Association to conducting multiple follow-ups with non-respondents (Fowler 1993). We examined the non-response bias by investigating whether the results obtained from analysis were driven by differences between the group of respondents and the group of non-respondents. Non-response bias was estimated by comparing early versus late respondents (Armstrong and Overton 1977), where late respondents serve as proxies for non-respondents. No significant differences emerged between the two groups of respondents. In addition, based on Podsakoff et al. (2003), we used Harman's single-factor test to examine whether a significant amount of common method variance exists in the data. After we conducted factor analysis on all items and extracted more than one factor with eigenvalues greater than one, we felt confident that common method variance is not a serious problem in our study.

4.2 Measurement

To test the hypotheses the following variables are important: contractual completeness, transaction-specific investments of the franchisee, behavioral uncertainty, intangible system-specific assets, environmental uncertainty, trust and contract design capabilities (see appendix).

Degree of contractual completeness

The indicator of COMPLETENESS is a proxy for the degree of contractual completeness defined by the ratio between specific and residual decision rights. Hence it addresses the extent to which specific rights of the franchisor and the franchisee are included in the contract. The general managers were asked to rate the degree of contractual completeness on a five-point scale: "The tasks between the franchisor and the franchisee are regulated in a detailed manner in the contract". The higher the indicator, the higher is the degree of contractual completeness.

Transaction specific investments of the franchisee

Transaction-specific investments (SPECIFIC_INVESTMENTS) reduce the requirements for formulating specific contract terms because they increase the self-enforcing range of the contracts (Klein 1996). The franchisee's transaction-specific investments are measured by the initial investments (including initial fees).

Behavioral uncertainty

Behavioral uncertainty (BEHAV_UNCERTAINTY) results in measurement difficulties and monitoring costs under asymmetric information. Higher monitoring costs are negatively related to contractual completeness (Eggleston et al. 2000, p 110). Consistent with previous studies we operationalize behavioral uncertainty with a four-item scale (e.g. Anderson 1985; John and Weitz 1989; Heide and John 1990) (see appendix). The reliability of this scale was assessed by Cronbach's alpha (0.83).

Environmental uncertainty

According to Crocker and Reynolds (1993) and Ryall and Sampson (2009), contract duration is positively related with environmental uncertainty. We use contract duration as indicator of environmental uncertainty (ENV_UNCERTAINTY). This indicator represents the difficulty regarding preplanning of the franchisor's and franchisees' actions under a complex and changing environment. The longer the contract duration, the more difficult and costly is the planning of decision actions in the ex ante period, and the lower is the degree of contractual completeness.

Intangible system-specific assets

Based on indicators used in earlier studies (e.g. Windsperger 2004) we used training days (franchisees and franchisee's employees) (INTANGIBLE_SYSTEM ASSETS) as proxy for the franchisor's intangible system-specific assets. The number of training days is an indicator for intangibility of the franchisor's system-specific know-how. The assumption behind this measure is that as intangibility of knowledge assets increases, so does the number of days of face-to-face interaction. Consistent with the view of Simonin (1999a, 1999b), the higher the degree of intangibility, the more tacit (less contractible) is the system-specific know-how, and the more personal knowledge transfer methods are used, such as meetings, coaching and training.

Trust

Under the relational view of governance trust may be a substitute for or complement of formal contract planning. Trust is a very heterogeneous concept (e.g. Levin and Cross 2004; Seppänen et al. 2007; Lazzarini et al. 2008). We operationalize trust (TRUST) with a four-item scale (see Appendix) (Cronbach alpha = 0.86).

Contract Design Capabilities

Prior relationships may allow for the design of more complete contracts because the franchisor develops contract design capabilities (Argyres et al. 2007; Bolton and Faure-Grimaud 2009). Experience of the franchise company (as number of years since the opening of the first franchise outlet in Austria) is a proxy for interorganizational learning and developing contract design capabilities (CD-CAPABILITIES).

4.3 Results

Table 1 presents the descriptive data for the sample in Austria.

To test the hypotheses we carry out a regression analysis. We conduct an OLS regression analysis with COMPLETENESS as dependent variable. The explanatory variables refer to trust (TRUST), behavioral uncertainty (BEH_UNCERTAINTY), environmental uncertainty (ENV_UNCERTAINTY), franchisee's specific investments (SPECIFIC_INVESTMENTS), intangible system-specific assets (INTANGIBLE_SYSTEM ASSETS) and contract design capabilities (CD-CAPABILITIES). Table 2 presents the correlations of the variables used in the regression analysis. In addition, the variance inflation factors are well below the

Table 1 Descriptive statistics

	N	Minimum	Maximum	Mean	Standard Dev.
INITIAL INVESTMENTS (incl. initial FEES)	44	.00	590,000.00	81,546.09	1.18956E5
TRAINING DAYS (Franchisees and employees)	45	2.00	68.50	15.0000	14.76097
There is a lot of trust between the partners	49	3	5	4.27	.700
There is an atmosphere of openness and sincerity	49	2	5	4.35	.751
Information exchange is more than agreed	49	3	5	4.20	.763
Partnership is on the basis of cooperation	49	3	5	4.59	.574
TRUST	50	3.20	5.00	4.4040	.54733
It is difficult to predict the behaviour of the outlet manager (or franchisee)	51	1	5	2.59	1.004
It is difficult to control the behaviour of the outlet manager (or franchisee)	51	1	5	2.10	1.044
It is difficult to evaluate performance of the outlet manager (or franchisee)	51	1	4	2.25	.744
It is difficult to measure the local services	51	1	5	2.08	.977
BEHAVIOURAL UNCERTAINTY	51	1.00	4.25	2.2549	.77054
CD-CAPABILITIES (Age of the Franchise System)	50	1	29.00	9.8400	7.58183
ENVIRONMENTAL UNCERTAINTY (Contract Duration in years)	47	1	20	7.83	4.493

Table 2 Correlations

	1	2	3	4	5	6	7
ENVIR_UNCERTAINTY	1.000						
BEHAV_UNCERTAINTY	−0.249	1.000					
TRUST	0.320[a]	−0.304[a]	1.000				
CD-CAPABILITIES	0.022	−0.011	0.122	1.000			
INTANGIBLESYSTEM_ASSETS	0.176	−0.365[a]	0.217	0.001	1.000		
SPECIFIC_INVESTMENTS	0.478[b]	−0.466[b]	0.269	0.291	0.259	1.000	
COMPLETENESS	0.063	−0.296[a]	0.302[a]	0.105	0.009	0.168	1.000

[a]Correlation is significant at the 0.05 level (2-tailed)
[b]Correlation is significant at the 0.01 level (2-tailed)

rule-of-thumb cut-off of 10 (Netter et al. 1985). We do not find any collinearity indication.

We estimate the following regression equation:

$$\begin{aligned}\text{COMPLETENESS} = {} & \alpha + \beta_1 \text{TRUST} + \beta_2 \text{BEHAV\_UNCERTAINTY} \\ & + \beta_3 \text{ENV\_UNCERTAINTY} + \beta_4 \text{SPECIFIC\_INVESTMENTS} \\ & + \beta_5 \text{INTANGIBLE\_SYSTEM ASSETS} \\ & + \beta_6 \text{CD-CAPABILITIES}\end{aligned}$$

According to the relational view of governance, COMPLETENESS varies positively or negatively with trust. Under substitutability view, trust reduces relational risk and decreases contractual completeness; under complementarity view, trust enables knowledge sharing and increases contractual completeness. According to the agency theory, completeness varies negatively with behavioral uncertainty. Based on transaction cost theory, environmental uncertainty is negatively related with completeness because it is not possible or very costly for the franchisor to preplan all relevant actions under a complex and changing transactional environment. Furthermore, completeness varies negatively with franchisees' specific investments due to the hostage effect of these investments. According to the property rights view, completeness varies negatively with intangibility of system-specific assets. Finally, the development of contract design capabilities is positively related with completeness of contracts, due to interorganizational learning.

Table 3 reports the results of regression analysis. The coefficient of trust (TRUST) is positive and highly significant. This is consistent with our complementarity view that an increase in trust enables the franchisor to design more refined contract terms. The coefficient of behavioral uncertainty (BEHAV_UNCERTAINTY) is negative and significant. This implies that high behavioral uncertainty results in high monitoring costs preventing the franchisor from designing more complete contracts. The coefficient of intangible system-specific assets (INTANGIBLE_SYSTEM ASSETS) is negative and significant indicating that higher intangibility of system-specific assets results in less complete contracts.

Table 3 Regression results

COMPLETENESS	
Intercept	2.438 (1.514)
TRUST	0.709** (0.325)
BEHAV_UNCERTAINTY	−0.579** (0.22)
ENVIR_UNCERTAINTY	−0.042 (0.05)
SPECIFIC_INVESTMENTS	3.219E-007 (0.000)
INTANGIBLE SYSTEM_ASSETS	−0.039** (0.015)
CD-CAPABILITIES	0.225 (0.157)
	F = 4.041***
	Adj. R Square = 0.378
	$N = 44$

*$p < 0.1$; **$p < 0.05$; ***$p < 0.01$; values in parentheses are standard errors

In addition, the coefficient of contract design capabilities (CD-CAPABILITIES) is compatible with the view that interorganizational learning increases contractual completeness. Furthermore, the coefficient of environmental uncertainty (ENV_UNCERTAINTY) is negative as expected but not significant. Finally, the coefficient of franchisee's specific investments (SPECIFIC_INVESTMENTS) is not significant.

4.4 Discussion and Conclusion

The goal of the paper is to explain the degree of contractual completeness in franchising by developing and testing hypotheses derived from transaction cost theory, agency theory, property rights theory, organizational capability theory and the relational view of governance. *First*, starting from the recent literature on contractual completeness and complexity that shows that contractual completeness is a heterogeneous concept without sufficient theoretical foundation, we develop the concept of contractual completeness based on the property rights view of allocation of specific and residual decision rights between contract partners. Contractual completeness is defined by the ratio between specific rights and residual decision rights stipulated in contracts. The higher (lower) this ratio, the more (in-) complete is the contract. *Second*, we develop and test the following hypotheses about contractual completeness in franchising: According to the agency theory, completeness varies negatively with behavioural uncertainty. The results provide support for the hypothesis that measurement difficulties, due to behavioural uncertainty, result in a lower degree of contractual completeness. Based on the relational view of governance, we investigate the relationship between trust and the degree of contractual completeness. Our data support the complementarity hypothesis that trust enables the franchisor to design more

complete contracts. Further we examine the property rights hypothesis that completeness varies negatively with intangibility of system-specific assets. The results indicate that non-contractible system-specific know-how results in difficulties explicitly specifying the use of system know-how in the franchise contract and hence in a lower degree of contractual completeness. In addition, based on the organizational capability view, we show that contract design capabilities and contractual completeness are positively related but the coefficient is not significant. Finally, the data from the Austrian franchise sector do not confirm the transaction costs hypotheses that completeness varies negatively with the franchisee's specific investments and environmental uncertainty.

How does our study extend the results in the literature? The major contribution of our study is first the clarification of the relationship between contractual completeness, decision rights, and complexity, and second the explanation of the determinants of contractual completeness in franchise relationships by applying transaction cost theory, agency theory, property rights theory, relational view of governance and organizational capability theory.

What are the business/managerial implications of (the degree of) contractual completeness in franchising? We limit ourselves to two observations. First, the design of contracts is the most important organizational task in franchising. A choice has therefore to be made which aspects to include in the contract. Our study may be helpful in this respect because it has identified a number of the determinants of contractual completeness and the direction of their effect. Second, the coverage of the business format by formulating specific and residual rights varies between franchises. Kaufmann and Eroglu (1998) stated therefore that "[o]f the many types of management issues faced by franchisors, perhaps one of the most difficult is defining the appropriate boundaries of their format, i.e., maintaining the required level of uniformity for the system to obtain economies of scale, while avoiding the danger of stifling efficient local market adaptation". Our study has provided a start to make concepts like the boundary of a business format and the required level of uniformity measurable by proposing to use the various rights specified in actual franchise contracts.

However, this study has important limitations: Due to the small sample size the generalizability of the results is limited; further research analysing data from other countries with a larger number of franchise systems would help ascertain generalizability of our research results. In addition, environmental uncertainty should be measured by a multiple-item scale since contract duration may result in endogenity problems. Furthermore, the measurement of contractual completeness is not without limitations; it is a first step to measure contractual completeness. In future studies, we will use a multiple-item scale that differentiates between specific decision rights and residual decision rights specified in the franchise contract. In addition, the development of a more valid indicator for contractual completeness requires the use of more objective measures based on contract data. The collection of contract data is an important issue for future research.

Appendix: Measures of Variables

COMPLETENESS (contractual completeness)	The franchisor has to evaluate contractual completeness on a 5 point scale (1, strongly disagree; . . .5, strongly agree): The tasks between the franchisor and the franchisee are regulated in a detailed manner in the contract.
TRUST (trust)	The franchisor has to evaluate trust on a 5 point scale (1, strongly disagree; . . .5, strongly agree):
Coefficient alpha: 0.86	There is a lot of trust between the partners There is an atmosphere of openness and sincerity Information exchange is more than agreed Cooperation is on the basis of partnership
BEHAV_UNCERTAINTY (behavioral uncertainty)	The franchisor has to evaluate behavioral uncertainty on a 5 point scale (1, strongly disagree; . . .5, strongly agree):
Coefficient alpha: 0.827	It is difficult to predict the behaviour of the outlet manager (or franchisee) It is difficult to control the behaviour of the outlet manager (or franchisee) It is difficult to evaluate performance of the outlet manager (or franchisee) It is difficult to measure the local services
ENVIR_UNCERTAINTY (environmental uncertainty)	Environmental uncertainty is measured by the contract duration (in years)
SPECIFIC_INVESTMENTS (franchisee's specific investments)	Franchisee's specific investments are measured by the sum of initial fees and initial investments
INTANGIBLE_SYSTEM ASSETS (intangible system-specific assets of the franchisor)	Total training days of the franchisee and its employees (per year)
CD-CAPABILITIES (contract design capabilities)	Natural log of years since opening the first franchise outlet in Austria

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Delegation and Autonomy in Franchising

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Abstract This article provides evidence on the determinants of delegation of decision rights in franchise relationships. We suggest that the franchisor chooses the level of delegation to leverage the intangible assets of the franchisees and the franchisor and, simultaneously, to preserve the value of the brand name. While the empirical literature on franchising has studied these effects separately, we consider them together in a model on decentralization. The results show that the franchisee's autonomy varies negatively with the franchisor's intangible assets and brand name and positively with the inter-firm trust and the franchisees' intangible assets. Finally, autonomy also varies negatively with the specific investments of the franchisees.

1 Introduction

A key issue for franchisors in managing relationships with franchisees is to balance the conflicting forces of control and autonomy. In fact, the delegation of decision rights is an essential component of the organizational design of franchise chains. Nevertheless, the degree of delegation is not fully developed in the research agenda for the field of franchising.

On the one hand, excessive restraints on outlet operation may lessen the intrinsic motivation of franchisees seeking autonomy (Dant and Gundlach 1999). Furthermore, excessive centralization may prevent leverage of franchisee outlet-specific know-how (Windsperger 2004). But, on the other hand, increasing levels of autonomy may give rise to the agency problems of free-riding in franchise networks (Manolis et al. 1995). In fact, decentralization is not homogeneous across different chains, reflecting a variety of responses to these trade-offs.

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This paper investigates this topic by empirically testing a model that simultaneously considers the influence of these competing factors on franchisee's autonomy. Our study contributes to the literature in the following ways. First, although past work has investigated appropriate functional areas for the autonomy of franchisees, distinguishing core and peripheral elements of the system (Kaufmann and Eroglu 1998), little is known about how this delegation is actually crafted. There are some case studies (Bradach 1997, 1998; Pizanti and Lerner 2003; Azevedo 2009) that examine the balance between control and autonomy. There is also some empirical evidence on the importance of the knowledge advantage to decide the proper allocation of decision rights (Windsperger 2004; Azevedo 2009). But these studies are focused either on a single industry or variable. We build on these results by adding explanatory variables related to self-enforcement.[1] Although investigating the interaction between formal and informal (i.e. relational) mechanisms of governance is not a central focus in our study, our analysis provides evidence on the substitution effect between trust and formal restrictions on franchisee's autonomy.

Additionally, this work has implications for managers responsible for organizing decision-making processes within the chain. In order to confer autonomy on their franchisees, they should be aware of the linkage among the contractual clauses, the structural conditions and the relational governance processes that shape the need for close coordination.

The remainder of the paper is organized as follows. Section 2 deals with the theoretical bases of our model for explaining franchisees' autonomy. The data-gathering process, the sources of information used and the econometric models adopted are discussed in the third section, and the results and conclusions of the study are set out in the fourth and fifth sections respectively.

2 Control Versus Autonomy in Franchise Relationships

The delegation of decision rights to the franchisees depends on the free-riding hazards, the role of self-enforcement mechanisms and the importance of the franchisees' and franchisor's intangible assets. Franchisors delegate decision rights to franchisees because they have valuable knowledge about the local market environment. On the other hand, the hazards of free-riding on the common brand name constrain franchisees' authority for managing the local outlets. However, self-enforcement mechanisms reduce this opportunism risk.

[1]Cochet et al. (2008) also examine the relationship between relational governance and decentralization in franchise chains, but their econometric model is constructed to explain relational governance instead of delegation.

2.1 Autonomy and Free-Riding Hazards

It is widely accepted that franchising is an efficient organizational response to the shirking problems faced by a chain of geographically dispersed units. Franchisees are local entrepreneurs that pay an up-front franchise fee and ongoing royalties in exchange for the right to use the brand name and operating system of the franchisor. As outlet owners, franchisees have a claim on the profits generated by their franchised outlets. Consequently, they are endowed with high-powered incentives and hence they are more motivated than managers of company-owned outlets (who typically receive compensation in the form of a salary and bonuses) (Caves and Murphy 1976; Rubin 1978; Mathewson and Winter 1985; Brickley et al. 1991; Lafontaine 1992; Shane 1996). Nevertheless, the transfer of ownership rights may result in an increase in free-riding problems: To maximize their individual profits, franchisees could free-ride on other units, withholding effort or reducing costs while counting on other franchisees to invest in quality to maintain the brand name of the system (Klein 1980; Lafontaine 1992; Bercovitz 2004; Garg et al. 2005). In sum, franchisees' status as residual claimants is precisely what promotes their tendency to free-ride on the brand name (Lafontaine and Raynaud 2002; Bercovitz 2004).

Therefore, once franchising has been selected as a vehicle for growth, franchisors must decide how to manage franchisees in order to maintain uniformity across units and thereby to preserve the brand name value (Caves and Murphy 1976; Rubin 1978; Bradach 1997). The allocation of decision rights in the chain – i.e. the degree of franchisee autonomy – is a basic control mechanism to deal with this problem. That is, the franchisor may achieve the required standardization across outlets by increasing the degree of control over decisions. Specifically, franchisors may retain the "legal" or "formal" rights to decide by prescribing a large number of very detailed tasks that franchisees must perform in each outlet. These prescriptions can be incorporated either in the franchise manual or in contractual clauses. Additionally, the intensity of monitoring of franchisees (e.g. inspection and auditing rights, advertising approvals, recommendation) may affect franchisors' effective control over decision-making (Azevedo 2009).

Nevertheless, the *level* of the free-riding hazard depends on two factors, both the value of the franchisor's intangible assets at stake (i.e. the common brand name) and the spillover potential associated with customer mobility (Brickley and Dark 1987; Klein 1995). For instance, stronger brand names enable franchisees to sell products at higher premium prices, making free-riding more attractive. Likewise, if negative reputation effects (caused by the substitution of lower quality inputs) are largely dispersed across outlets, returns to cheating and thus the risk of free-riding will be higher. Summarizing, in circumstances where the brand-name value results in high free-riding risk, we would expect a significant reduction in franchisee autonomy. Thus, the following hypothesis:

H1: *The higher the value of the franchisor's intangible assets at stake, the lower the franchisee autonomy*.

2.2 Relational Governance and Autonomy

Relational contracts are characterized by the fact that they rely little on what is written down, and disputes are settled with reference to informal or social norms.[2] Accordingly, relational governance can be defined as the "informal agreements and unwritten codes of conduct that powerfully affect the behaviour of individuals (Baker et al. 2002, p 39)".[3] Scholars have realized that such informal codes of conduct can be both economic and sociological in nature (Dyer and Singh 1998; Poppo and Zenger 2002). On the one hand, economists have pointed to self-enforcement as the principal mechanism by which relational governance operates (Klein and Leffler 1981; Williamson 1985). In general, self-enforcement is effective if the profits from the relationship-specific investments exceed those that can be realized from short-term opportunistic behavior (Klein 1996; Klein and Leffler 1981). Therefore, performance will not be assured by the threat of legal enforcement but by the threat of termination of the business relationship. On the other hand, the sociology literature has pointed out the value of social norms that emerge from previous trade, such as *reciprocity* and *social embeddedness*, in prompting dealer cooperation in the present (Gulati 1995; Nooteboom et al. 1997; Uzzi 1997). Consequently, both perspectives (economic and sociological) conclude that relational governance is sustained by the *trust* that emerges from the norms and values encouraged by repeated exchange (past or future) among traders.[4]

Within the context of inter-firm relationships, scholars have long understood that trust (whether "calculative" or "non-egoist") may serve as an informal safeguard that facilitates complex exchange and enhances performance. This is because goodwill trust ultimately fosters behavioral norms of flexibility, solidarity and information exchange among individuals, thereby reducing transaction costs and facilitating coordination (Dyer and Singh 1998; Poppo and Zenger 2002). Moreover, recent papers have found that relational governance is a good substitute for formal contracts (Gulati and Nikerson 2008; Mesquita and Brush 2008). In this case, the presence of trust may make complex contracts unproductive or redundant, since it may offer a less costly safeguard.[5]

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[2]Relational governance has been examined from a wide array of disciplinary viewpoints. For a review of this diverse literature, see, e.g., Milgrom and Roberts (1992), Goldberg (1980), Baker, Gibbons and Murphy (2002), Levin (2003).

[3]See also Dyer and Singh (1998), Poppo and Zenger (2002), Gulati and Nickerson (2008), Mesquita and Brush (2008).

[4]The distinction between the roles of expected future trade and social norms as alternative forces supporting trust (i.e. relational governance) has produced a theoretical distinction between a "calculative" and a "non-egoist" form of trust respectively (Williamson 1993; Nooteboom et al. 1997).

[5]Other authors suggest a *complementary* relationship between the relational and the formal modes of governance (Klein 1996, 2002; Poppo and Zenger 2002; Lazzarini et al. 2004, 2007). From this point of view, a firm will not abandon legally enforceable safeguards even though it is increasingly embedded in a relationship of trust with another firm. Nevertheless, we agree with Gulati and Nickerson (2008) and Mesquita and Brush (2008) that unless inter-firm trust can always *complement* any mode of governance so as to improve exchange performance, relational governance is also a good substitute for a more hierarchical (formal) governance mode.

From this point of view, for franchising relationships, it has been suggested that if there are efficient relational mechanisms for dealing with the free-riding hazards of franchisees, the franchisor will use less formal (or less hierarchical) controls over decision-making processes, conferring greater franchisee autonomy. Particularly, such informal safeguards will operate when franchisees refrain from opportunistic actions to preserve their "reputation capital" and avoid the termination of a valuable, long-term franchise agreement. Previous studies have found some evidence on this topic. Thus, Cochet et al. (2008) construct a model to empirically explain the intensity of relational governance as perceived by franchisees, finding a positive and significant relationship between this perception and their autonomy.

In our model, however, the degree of franchisee autonomy is explained by the intensity of the self-enforcement mechanisms developed by the franchisor. Note that self-enforcement requires two elements to effectively safeguard an agreement. (1) A bond, i.e. a mechanism that creates relation-specific rents that exceed the expected short-term gains from cheating. Specific franchisee investments, territory rights and multi-unit ownership possibilities could provide such a bond (Klein and Leffler 1981; Klein 1995; Brickley 1999). (2) A threat, i.e. a disciplinary device that provides the franchisor with the means to credibly threaten termination of the relationship if opportunistic behaviour is detected (Klein 1995; Bercovitz 2004). Shorter contract duration and extensive termination conditions could achieve this (Klein and Leffler 1981). We therefore propose that:

H2: *Self-enforcement mechanisms (relationship-specific investments and trust) positively affect the degree of franchisee autonomy (decentralization of franchise system).*

2.3 Knowledge Assets and Autonomy

The residual income of the franchise system depends not only on the lack of free-riding and shirking hazards (i.e. on the provision of an adequate and sufficient level of effort by franchisor and franchisees), but also on how decision rights are allocated between the partners, due to the franchisor's and franchisees' intangible knowledge assets.

In order to analyse how responsibilities are allocated throughout the chain, scholars have pointed out that franchise systems are generally characterized by "divergent scale economies". Therefore, the franchisor will retain control over those tasks that are best centralized and supplied to the entire system (Caves and Murphy 1976). This usually implies distinguishing between strategic and operational decisions. The former are mostly made by the franchisor (commonly cited examples are national advertising, site selection, and product development). The latter include marketing tasks (price, assortment, promotion), human resources management, and procurement decisions, which may be allocated either to the franchisor or the franchisee.

Following the property rights approach, the degree of decentralization of operational decisions will depend on the anticipated gains from leveraging the franchisee's specific knowledge (Windsperger 2004; Cochet et al. 2008; Azevedo 2009). It is suggested, particularly, that the responsibility for a decision must be matched with the agent who has the relevant knowledge that is valuable for that decision (Jensen and Meckling 1992). If the valuable knowledge about the local market is not specific to the franchisee, it could easily be communicated to the franchisor and the decision would be centralized. On the other hand, when the decision-making requires more outlet-specific know-how, it will be more decentralized (Jensen and Meckling 1992; Windsperger 2004).

Additionally, if the franchisor retains too much authority, franchisees may lack incentives for appropriate use of their local knowledge. Although they are only semi-independent owners, as entrepreneurs they expect to be endowed with authority (Peterson and Dant 1990; Dant and Gundlach 1999; Cochet et al. 2008). Thus, the more autonomy franchisees have, the more incentives they have to search for innovative solutions. Although decisions adopted by franchisees are likely to be biased towards their own interests, they nevertheless may bring about savings in search costs that would otherwise be incurred by the franchisor (Azevedo 2009).

In sum, if the franchisees intangible knowledge assets generate a high residual income for the network, it is desirable to allocate a high portion of decision rights to the franchisees. On the contrary, if franchisor's intangible system knowledge is more important, there will be limited gains from delegation. As a result, the following hypothesis can be put forward.

H3: *The more important the franchisees' outlet-specific knowledge compared to the franchisor's system-specific know-how, the more decentralized the franchise system will be.*

3 Data and Procedures

The dataset contains information from a survey on Spanish franchising carried out by the authors in 2008. Questionnaires were sent to firms previously taken from the two main professional guides edited in Spain (Tormo 2008 and Barbadillo 2008). The formulation of the Likert-type questionnaire items emerged from in-depth interviews with franchisors, consultants and franchisees and the final version of the questionnaire was pretested with six franchisors.

In total, 870 questionnaires were sent out. The response rate was about 20%, but 4 of the respondents had closed down. Of the active respondents, 19 used alternative forms of distribution such as licensing. Finally the sample covered 163 franchise chains.

The dataset provides information on the franchise chain as a whole, including advertising expenditure, degree of specificity of investments per outlet, customer loyalty, franchisee profile in terms of selection and training and contractual clauses related to the degree of delegation, monitoring and enforcement terms.

3.1 Dependent Variable

The paper aims to analyze the determinants of franchisees' decision-making authority. Our proxy for the level of delegation is built on franchisor ratings for the level of authority they consider their franchisees to have. Particularly, franchisors rated (on 5-point Likert scales) their franchisees' authority regarding five operative decision rights: (a) pricing, (b) assortment, (c) local advertising, (d) decoration and (e) employee training.[6] By adding up the scale values for the five items, we obtained a summated index for the level of franchisees' autonomy within each chain.

3.2 Independent Variables

The explanatory variables are related to the potential free-riding hazards of the franchise relationship and to the importance of franchisees' local knowledge. They were operationalized as follows.

Firstly, for H1 to capture the effect of the value provided by the franchisor, we used the brand-name value. To identify its effects, we included the franchisor's advertising expenses per outlet (Lafontaine and Shaw 2005). We also included the value of other knowledge assets provided by the franchisor but not integrated in the brand name. As proxy for these intangible assets, we used the percentage of the franchisor business devoted to franchising and the number of franchisor employees at the headquarters. These variables are intended to estimate the significance of franchisor knowledge assets derived from his specialization in the franchising business. In addition, the number of employees may indicate that system-specific knowledge is very important for the generation of the residual income. Large firms can better control the local outlets than small firms. Small firms do not have the minimum efficient scale (MES) to sustain staffs to deal with the job of formalizing and supervising franchisees' tasks.

Secondly, as suggested in H2, incentives for free-riding are shaped by relational governance mechanisms that alienate franchisor and franchisee interests, making opportunism less appealing. In fact, free-riding hazards might diminish if self-enforcing mechanisms were in place. We included as explanatory variables for self-enforcement both economic hostages and disciplinary devices. In franchise relationships, particularly, specific investments and multi-unit ownership possibilities might play the role of a "hostage" in the transaction, credibly committing the franchisee in the contract (Williamson 1993; Bai and Tao 2000; Bercovitz 2004). Additionally, there is a need for disciplinary devices to make self-enforcing necessary and we consider the possibilities of relationship termination to capture

[6]The results of a principal component factor analysis confirmed that these characteristics were part of single higher-order construct (*decision-making authority*). All variables had a loading in excess of 0.51. The total amount of variance explained by the factor solution is 43.81%.

this effect. Finally, we also include the past experience of the franchisor with its franchisees as a proxy for the non-calculative form of trust that determines their relationship.

- We measured specific investments using a Likert-type scale. We asked franchisors which percentage of their investments franchisees would lose if they closed down. Such sunk investments could act as hostages preventing opportunism. We expect the level of specificity to increase with the size of the initial investments. Accordingly, we include the interaction term between the level of specificity and initial investment.
- We measured multi-unit ownership possibilities and termination at will by using a dummy variable to show whether or not the franchisor offered additional licenses to standing franchisees (1 = yes) and whether they can terminate the franchise agreement without penalization (i.e. after an initial term, parties can rescind the contract with the sole requisite of prior notice) (1 = yes).
- To approximate the importance of other non-calculative forms of trust we used the age of the chain – i.e. number of years franchising. The assumption behind this is that this form of trust arises from previous contacts and dealings (Gulati 1995). Companies with more franchising experience tend to have older franchisees. As a consequence, they may develop a non-calculative form of trust giving rise to a relational mechanism of governance not captured in our other self enforcement proxies.

Finally, as suggested in H3, the required autonomy is expected to depend not only on free-riding hazards but also on the importance of the franchisor's and franchisees' local knowledge. If the franchisor retains too much authority, franchisees may lack incentives for the appropriate use of local specific knowledge or, simply, they may have no means to apply it in the decision-making processes. To identify the importance of franchisee local knowledge, we used sector dummies.

Three dummy variables represent the sub-sectors typically identified in franchising: restaurant, retail and service industries. We assume that services and restaurants require franchisee expertise to satisfy local demands. Retailing is much more standardized because the product is centrally produced. Retail franchising firms possess a higher proportion of intangible system-specific assets of the franchisor compared to the intangible local market assets of franchisees. In fact, it is suggested that monitoring difficulty increases as one moves from product to combined product/service offerings.

4 Methods and Results

Table 1 presents descriptive statistics on the variables. The dependent variable shows a high range of scores, from 1.2 to a maximum of 5 (mean = 2.97, SD = 0.80). This variance across chains shows that our scale captures "true" autonomy aspects and not a common feature to all franchising business.

Table 1 Decision-making autonomy in different areas

	N	Minimum	Maximum	Mean	Standard deviation
Assortment autonomy	166	1	5	2.75	1.37
Pricing autonomy	165	1	5	2.78	1.37
Local advertising autonomy	164	1	5	3.65	1.10
Decoration autonomy	165	1	5	2.16	1.09
Training autonomy	165	1	5	3.5	1.17

Our dependent variable was a summated scale of different aspects of franchisees' decision-making. The structure of each decision right is presented in Table 1. Franchise chains tend to decentralize but there are slight differences depending on the nature of the decision rights. Similarly to Windsperger (2004), we observe that decisions on human resources and local marketing are more decentralized, and assortment, price and decoration choices are more centralized. So franchisees retain higher residual rights over daily decisions that are more related to outlet-specific know-how while the franchisor exercises more control over variables that affect homogeneity.

Collinearity diagnosis was performed using correlations between the independent variables and VIF statistics. The high correlations among some of the variables and the excessively large VIF statistics (VIF $>$ 10) made it desirable to separate those variables in several independent estimations. Table 2 shows bivariate Pearson correlations between the predictors.

To test our hypotheses, we carry out a regression analysis (OLS) with the index of decision rights as dependent variable. Table 3 presents the results of five models with different specifications.

As expected, the three variables that measure the franchisor brand name and, overall, the franchisor's intangible assets at stake – advertising expenses per outlet, percentage of the business devoted to franchising and the size of the franchisor's headquarters – have a robust, negative effect on the level of delegation. If brand-name value is higher, the potential costs of delegation are greater, decreasing the allocation of authority to franchisees. Autonomy varies negatively with advertising expenses as expected in our brand-name value hypothesis. This result is consistent with Windsperger (2004) results. Moreover, the greater the importance of franchisor' system-specific knowledge, the fewer the advantages of allocating decision rights to franchisees.

The data provide partial support to our self-enforcement hypotheses that indicate a positive relationship between the different self-enforcing measures and decentralization. In fact, two of the three variables that proxy the self-enforcement range are statistically significant and one of them has the opposite sign.

As expected, the variable that approximates the relational governance sustained by the trust arising from past relationships – years franchising – has a positive effect on the level of delegation, as found by Azevedo (2009). That is, as the franchisor's experience with franchisees increases, so does franchisees' autonomy. However, the influence of multi-unit ownership possibilities is not statistically different from

Table 2 Pearson correlation coefficients and descriptive statistics

	Mean	SD	1	2	3	4	5	6	7	8
Specific investments (%)	3	1.559								
Franchisee investment	105293	14064	0.20*							
MUF possibility	1.96	0.20	0.06	0.11						
Termination at will possibility	1.56	0.50	−0.14	−0.17*	0.06					
Advertising expense/outlet	11736	38441	−0.03	0.12	0.04	−0.03				
Percentage of business devoted to franchising	85	28	0.09	0.10	−0.10	−0.07	−0.10			
Number of franchisor employees	143	807	−0.01	0.33**	−0.00	−0.15	0.5**	−0.14		
Years franchising	10	12	−0.06	−0.22**	−0.08	0.02	−0.02	0.23**	−0.03	
Retail sector	0.63	0.48	0.10	0.15	−0.11	−0.26**	−0.06	0.18*	0.10	−0.0

*$p < 0.01$ (two-tailed), **$p < 0.001$ (two-tailed)

Table 3 OLS estimations

	Multicollinearity control				Interaction effect (% specific investment *Initial Investment)
	Model 1	Model 2 Excludes variables with small Tolerance index	Model 3 Coefficients for collinear variables	Model 4 Coefficients for collinear variables	Model 5
Constant	21,067*** (4,330)	20,490*** (3,907)	15,488*** (1,116)	14,592*** (0.409)	19,827*** (3,96)
Z-Specific investments (%)	−0.160 (0.413)	−0.202* (0.392)	–	–	−0.184* (0.398)
Z-Franchisee investment	0.032 (0.452)	0.036 (0.364)	–	–	−0.047 (0.478)
Z-Specific investment (%)* Z-Franchisee investment	–	–	–	–	0.125 (0.427)
MUF possibility	−0.111 (1,761)	−0.103 (1,752)	–	–	−0.095 (1,758)
Termination-at-will possibilities	0.122 (0.801)	0.140 (0.768)	–	–	0.155 (0.778)
Advertising expense per outlet (brand name value)	−0.265*** (0.000)	−0.321 (0.000)	–	–	−0.305** (0.000)
Percent of business devoted to franchising (No-Diversification)	−0.265** (0.015)	−0.232** (0.014)	–	–	−0.229** (0.014)
Number of franchisor employees (head-quarter size)	−0.157 (0.013)	–	–	−0.153* (0.000)	–
Years franchising	−0.189* (0.048)	–	–	0.100 (0.025)	–
Sector: Retailing	−0.127 (1,364)	–	−0.237* (0.915)	–	–
Sector: Services	0.190 (1,365)	–	0.219† (0.885)	–	–
	N: 96	N: 101	N: 163	N: 147	N: 101
	F: 3,159**	F: 4,342***	F: 2,47†	F: 2,422†	F: 3,871***
	Adjusted R^2: 0.18	Adjusted R^2: 0.17	Adjusted R^2: 0.018	Adjusted R^2: 0.018	Adjusted R^2: 0.17

Dependent variable: 5-point scale measuring the degree of franchisee authority concerning: (a) Price; (b) Assortment; (c) Local advertising; (d) Decoration; (e) Workforce training

***p < 0.001; **p < 0.01; *p < 0.05; + < 0.1

zero. Likewise, although it has the expected positive sign, the coefficient of the "termination at will" variable is not significant. This clause imposes a disciplinary device in case of misbehaviour. But it may not affect the degree of delegation because contract termination is actually so difficult (Bradach 1997) that franchisors need other mechanisms to prevent opportunism and rarely have to enforce that clause.

On the other hand, contrary to our expectations, the level of specific investments negatively affects decentralization. One plausible explanation is the two-sided moral hazard nature of franchise relationships. Franchisees' specific investments make them more vulnerable to hold-up risks. The higher the franchisee's investment, the higher is their dependency, and the lower is the franchisor's motivation to transfer more decision rights (as incentives) to the franchisees. In addition, the interaction term is not significant either.

Finally, hypothesis 3 regarding the relative importance of franchisees' knowledge is partially supported. Compared to the restaurant sector, within the retail industry the level of franchisees' autonomy seems to be lower. The explanation is that retailing is more standardized and so it requires less franchisee knowledge to satisfy local demands.

5 Conclusions

This paper analyzes the allocation of decision rights in franchise chains. Our results show that franchisors that invest more in their system by providing a valuable brand name, by specialising in the franchise chain (not diversifying) and/or by developing larger headquarters tend to restrict more franchisee's decision rights. So the risk of free-riding and the firm-size effects negatively influence the degree of decentralization.

The requirements of standardization under the common trademark to preserve homogeneity constrain franchisees from fully using their human capital. As a result, they cannot fully exploit the profit opportunities from their knowledge of local conditions. Our industry proxies that measure the impact of franchisee's intangible knowledge assets may not fully capture the importance of franchisee local market investments. Additionally, it is possible to have a high level of resource and domain-specific autonomy in certain areas and, simultaneously, a high level of dependence on other domains (Dant and Gundlach 1999). So, the importance of franchisee knowledge might affect autonomy in other areas of daily operations not captured in our dependent variable, such as customer service.

Our results also provide evidence on the value of trust as an informal safeguard that can assure franchisee performance. In fact, the duration of previous franchise relationships appears to favour the degree of decentralisation. In contrast, our findings do not confirm the value of franchisees' specific investments as an economic hostage resulting in more decentralization.

Finally, while our study offers new insights about decision-making authority in franchising, it also has some limitations. Especially, the measurement of the dependent variable can be improved by including the whole range of operational decisions in the decision index. Additionally, the proxy for the franchisee's intangible knowledge assets must better cover the franchisee's local market know-how. Future research should also investigate the relationship between the allocation of decision rights and performance of franchise systems.

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Allocation of Decision Rights in International Franchise Firms: The Case of Master and Direct Franchising

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Abstract In international franchising the control over franchisees' actions is becoming increasingly difficult. Franchisors must allocate a certain portion of decision rights to franchisees to enable effective decision making and maximize residual income, while still retaining control over the network. This conceptual paper combines the perspectives of the property rights, agency theory and transaction cost theory to reveal the differences in the allocation of decision rights between master franchising and direct/multi-unit franchising, as well as to understand the franchisors' choice between these two modes when entering new markets. The property rights theory predicts that the allocation of residual decision rights depends on the impact of intangible knowledge assets on the residual surplus generation. The agency theory hypothesis suggests that the decision rights allocation is influenced by the monitoring costs due to the information asymmetry between the headquarters and the foreign local partners. The analysis involves two determinants of monitoring costs: the geographic and cultural distances of the host markets. Finally, under the transaction costs view, attention is directed towards environmental and behavioral uncertainty, as determinants of the entry mode choice and the allocation of decision rights.

1 Introduction

Franchising is one of the most important organizational forms of international retail and service firms in today's economy. According to the US Department of Commerce, business format franchising accounts for over 40% of the retailing industry in the United States and is applied in more than 75 industries (Castrogiovanni et al. 2006). In retailing, franchising is one of the most important foreign market entry modes (Burt 1993; Doherty and Alexander 2004; Quinn and Doherty 2000).

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The concept referred to in this study is business-format franchising[1] (e.g. Bercovitz 1999; Burton et al. 2000; Rubin 1978), defined as a form of contractual relationship where the owner of a brand and business concept (franchisor) grants exclusive rights to independent entrepreneurs (franchisees) to conduct business in a prescribed manner within a certain geographical region and over a specified period of time under a trade name owned and developed by the franchisor. In return, the franchisor receives payment of royalties and fees. International franchising refers to the business arrangement with a franchisee located outside the franchisor's home market (Konigsberg 2008).

There are several directions of franchising research in organizational economics. The first focuses on the choice between franchising and vertical integration (see Blair and Lafontaine 2005; Lafontaine and Slade 1997). The second investigates the choice among different franchising modes of foreign market entry and the factors that influence the choice (e.g. Alon 2006; Burton et al. 2000; Chan and Justis 1992; Garg and Rasheed 2006; Zietlow 1995). The third deals with the design and provisions of franchise contracts, concerning primarily royalties and fees, i.e. incentives and compensations (e.g. Lafontaine 1992; Lafontaine and Shaw 1999; Sen 1993). A relatively small body of literature deals with other contractual provisions (e.g. Brickley 1999; Dnes 1996; Mathewson and Winter 1994) or the allocation of ownership and decision rights between franchising partners (e.g. Arrunada et al. 2001; Windsperger 2002, 2003, 2004).

The allocation of decision rights is an important issue in franchising since having the decision right implies having control over the particular use of an asset. Hence, the allocation of decision rights determines the allocation of control between business partners. In international franchising this issue raises the following research questions: Which decision rights should be delegated to local partners and how could control over the network be retained by the franchisor? Due to the differences in their respective contractual designs, each franchise mode provides the franchisor with a different level of control.

This study focuses on master and direct (single and multi-unit) franchising in particular. The aim is to explain the differences in the allocation of residual decision rights between these two franchise modes by applying the property rights, agency and transaction cost theories. Section 2 analyses the differences between master and single/multi-unit franchising forms, and reviews the theory on decision rights. In the Sect. 3, the literature on all three theoretical perspectives is reviewed and hypotheses about the allocation of decision rights are proposed. Section 4 includes the discussion of the model, implications of the study and the possibilities of application of the proposed model in further research.

[1]The definition accepted from the US Department of Commerce identifies two types of "franchising": (1) "Product and trade name franchising" which represents an independent sales relationship between supplier and dealer in which the dealer[s] acquire[s] some of the identity of the supplier. (2) "Business-format franchising" which is characterized by an ongoing business relationship between franchisor and franchisee and includes not only the product, service and trademark, but the entire business format itself.

2 Organization of International Franchise Firms

A franchising relationship involves two independent business entities cooperating on the basis of a franchise contract. Franchising can generally be divided into two basic forms – *direct* and *indirect* franchising. In direct franchising, agreements are arranged with each franchisee on an individual basis (Burton et al. 2000; Fladmoe-Lindquist and Jacque 1995; Konigsberg 2008) and franchisees are served *directly* from the franchisor's home market. The basic direct franchising forms – single unit franchising (SUF) and multi-unit franchising (MUF), both involve a direct interaction with local franchisees. The difference is that MUF implies the possibility that a local franchisee owns and operates several outlets (Kaufmann and Dant 1996; Konigsberg 2008). However, single-unit franchisees often gain the right to open additional outlets when they obtain positive results, which is also known as incremental or sequential MUF (Kaufmann and Dant 1996). Indirect franchising, in contrast, refers to an agreement with an intermediary located in the host market which develops and coordinates the entire network in the foreign market (or a particular geographic area) and in which franchisees are served *indirectly* by the franchisor. Master franchising is an indirect franchising form in which the master franchisee acts as a franchisor in the local market. This implies the possibility of granting sub-franchises to independent entrepreneurs in the local market. The master franchisee is therefore frequently referred to as a *sub-franchisor* (e.g. Alon 2000, 2006; Burton et al. 2000; Chan and Justis 1992; Garg and Rasheed 2006; Konigsberg 2008; Welsh et al. 2006; Zietlow 1995). The structures of the described franchise modes are illustrated in Fig. 1.

2.1 Decision Rights

Franchisors transfer decision rights across a firm's boundaries through franchise contracts (Baker et al. 2005; Lerner and Merges 1998) without transferring ownership of assets. The allocation of decision rights is of substantial importance because it affects the capability and motivation of the franchisor and franchisees to undertake investments in system-specific and local market assets, thereby influencing the creation of the residual income of the network (Aghion and Tirole 1997). In organizational economics the concept of decision rights refers to the rights and authority regarding deployment and use of the firm's assets (Hansmann 1996). Decisions can be made on the strategic level, e.g. decisions about international expansion, product line, distribution channels, investment, etc., or on the operational level, e.g. marketing decisions (pricing, product, promotion and service), human resource decisions, procurement decisions and quality control decisions (Windsperger 2004). Franchisors usually retain strategic decisions, whereas certain operational decisions are either fully transferred to franchisees, or franchisees have certain influence on them.

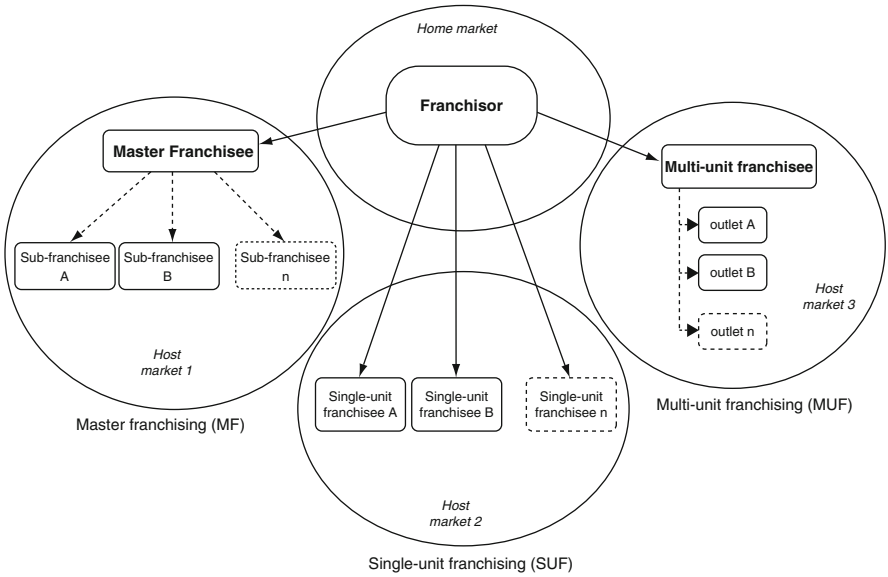

Fig. 1 The structure of direct (SUF/MUF) and master franchising

Organizational economics differentiates between *non-residual* (specific) and *residual* decision rights. Non-residual decision rights are explicitly defined by the contract (Demsetz 1998) and they refer to the use of tangible (explicit) knowledge which is easy to codify and less costly to transfer. Residual decision rights refer to the use of system-specific and local market assets which are "intangible", i.e. they have substantial tacit components and are difficult to communicate, codify or transfer due to the high transaction costs (Contractor 2000; Contractor and Ra 2002; Kogut and Zander 1993). Intangible knowledge assets are also referred to as the "knowledge of particular circumstances in time and place" (Hayek 1945, p 24). Franchisors' intangible assets refer to the brand-specific and system-wide knowledge in marketing, customer service, quality control, human resource management, product and service innovation, distribution, choice of the outlet locations, etc. Franchisees' intangible assets, however, refer to the knowledge of the local market and its conditions. This includes marketing, customer service, quality control, human resource management, and product and service innovation (Caves and Murphy 1976; Sorenson and Sørensen 2001; Windsperger 2004) but on the local market level.

What is the difference in the distribution of decision rights between master and multi-unit franchisees, and how do franchisors allocate them? Depending on the allocation, master and single/multi-unit franchising systems provide different levels of control. Compared to multi-unit franchisees, master franchisees can hold certain strategic decision rights. Furthermore, in master franchising the franchisor cannot directly control the local network of sub-franchisees. On the other hand, single/multi-unit franchising provides the franchisor with direct control over all local

franchisees, with strategic decision rights regarding the local market being held by the franchisor.

3 Theoretical Views on the Allocation of Decision Rights

This paper applies three major theories of organizational economics – transaction costs theory, agency theory and property rights theory – to explain the allocation of decision rights of the international franchise firm.

3.1 Property Rights Theory and Allocation of Decision Rights

Property rights theory explains the allocation of residual decision rights in firms and networks (e.g., Alchian and Demsetz 1973; Brynjolfsson 1994; Jensen and Meckling 1976; Kim and Mahoney 2005). It suggests that in the absence of comprehensive contracting the ownership of residual decision rights depends on the distribution of intangible knowledge assets that cannot be explicitly specified in contracts[2] (Hart 1995; Windsperger 2004). In franchising, high intangibility of franchisees' knowledge assets implies high costs of transferring this knowledge to the network headquarters (i.e. acquisition of the local knowledge). If the franchisor cannot acquire the local market knowledge, or it would be very costly, he will be motivated to relinquish a higher portion of residual decision rights to a better-informed party (franchisee) to maximize the network's residual income. The higher the impact of the franchisee's intangible knowledge on the generation of the residual income, the larger should be the proportion of residual decision rights allocated to the franchisee. If, on the other hand, the franchisor's system-specific assets are more intangible and have a higher impact on the generation of residual income in relation to the franchisee's assets, the franchisor is expected to hold more residual decision rights.

Consequently, by applying property rights reasoning we can formulate the following propositions: (1) If the franchisor's system-specific knowledge assets are more intangible and important for the generation of a network's residual income in relation to those of the local partners (master and multi-unit franchisees), the franchisor's proportion of residual decision rights will be relatively high. (2) If the franchisee's knowledge assets are more intangible and have a higher impact on the residual income of the network compared to those of the franchisor,

[2]Incomplete contractibility is the key assumption of the GHM model (Grossman and Hart 1986; Hart and Moore 1990) which is accepted by the property rights view. Property rights theory sees intangible knowledge as a key asset which determines the ex post bargaining positions in the absence of complete contractibility (Brynjolfsson, 1994).

the franchisee's proportion of residual decision rights will be relatively high. The following hypothesis can thus be derived:

H1a: *The more important the franchisor's intangible knowledge compared to the franchisees' intangible assets for the generation of the residual surplus of the network, the more residual decision rights are allocated to the headquarters.*

How can the intangibility of franchisees' knowledge assets predict the differences about the allocation of decision rights between direct and master franchising? As argued above, due to the strategic decision-making power and the role of the sub-franchisor on the local market, master franchisees hold more residual decision rights than single or multi-unit franchisees. However, the residual income-generating effect depends also on the intangibility of the local market-related knowledge. Therefore, the master franchisee's residual income-generating effect will be higher the less contractible and the more important the local market assets are for the generation of the residual surplus. Consequently, the following hypothesis is derived:

H1b: *Given the franchisor's intangible system-specific assets, the lower the contractibility of local market assets, the higher is the residual income-generation effect of the master franchisee compared to the single/multi-unit franchise and the larger is the master franchisee's proportion of residual decision rights compared to that of the single/multi-unit franchisee.*

3.2 Agency Theory and Allocation of Decision Rights

Agency theory is based on the assumptions that (1) the principal and the agent have conflicting interests, and (2) it is difficult and costly for the principal to monitor the agent's behavior (Jensen and Meckling 1976). The costs of monitoring managers' performance have attracted much attention in the literature (e.g. Brickley and Dark 1987; Mathewson and Winter 1985; Norton 1988). Franchising largely alleviates the principal's monitoring costs by providing franchisees with powerful economic incentives in the form of a claim on residual profits (Norton 1988; Rubin 1978), which represent a very important reason for choosing expansion via franchising over expansion through company-owned units (Brickley and Dark 1987; Mathewson and Winter 1985).

How do agency costs influence the allocation of decision rights? Agency costs represent the costs of aligning the incentives of the principal and the agents (Jensen and Meckling 1976, p 308). In the franchising setting, the franchisor (principal) has the choice of either increasing monitoring to reduce residual loss and prevent agency problems, or allocating more decision rights to increase the franchisee's (agent's) incentives. Furthermore, not having the relevant knowledge about the host market can significantly impair the franchisor's decision-making ability. Brickley et al. (2003) suggest that higher decision-making authority should be allocated to

the local partners when the costs of monitoring due to the greater distance are high, as well as when the specific local market knowledge is essential for the effective operation of the local outlet. By delegating decision-making authority in such settings, principals can achieve optimal decision-making ability of the agents and decrease the need for monitoring. In this respect franchising serves as a mechanism for creating incentives for self-monitoring of franchisees because they bear the costs of shirking and underperforming, which reduce their own residual income.

Empirical findings have shown that monitoring costs influence the allocation of decision rights, yet a greater decentralization of decision rights implies a greater need for monitoring (Brickley et al. 2003). Monitoring costs are particularly high in international settings where both geographical and cultural distances lead to environmental and behavioral uncertainty, thus precluding effective monitoring and raising monitoring costs (Carney and Gedajlovic 1991; Fladmoe-Lindquist and Jacque 1995). Even though technology has rapidly progressed it is still not possible to completely monitor foreign operations. This results in an increased information gap and uncertainty. Based on the agency-theoretical view we can assume that with increasing monitoring costs franchisors will be inclined to allocate higher portions of decision rights to franchisees. Monitoring costs vary with geographic distance and cultural distance.

(1) *Geographic distance* Rubin (1978) argued that larger geographic distance makes monitoring more expensive due to the increased travelling costs of the franchisor's representatives who conduct direct observations.[3] The costs of monitoring will also grow with the number of partners on a foreign market. As Rubin (1978) suggested, this control problem can be resolved if a franchisor has an agent who supervises several stores instead of monitoring store managers for each unit. In line with this argument, it can be expected that franchisors will tend to interact with a smaller number of partners in a geographically distant market, i.e. prefer master over direct franchising. In the situation of high monitoring costs due to the large geographic distance, we can also expect that local franchisees will have more decision-making power. This would provide them with better incentives and prevent agency problems. The following hypotheses can therefore be formulated:

[3]Burton et al. (2000) measured geographic distance in air miles between the headquarters and the capital city of the host country. Fladmoe-Lindquist and Jacque (1995) used the air travel time (minimal flight time plus transfer time) between the corporate headquarters and the country of the unit operations to operationalize the variable of geographic distance. Furthermore, Kalnins and Lafontaine (2004) measured geographic distance as the natural log of the minimum Euclidean distance in miles between the new unit and any of that franchisee's existing units at the time when new unit became available. Moreover, because monitoring activities may be based at headquarters, they also included the natural log of the distance between the franchisee's headquarters and the new unit.

H2a: *The portion of decision rights that a franchisor allocates to the franchisees in the foreign market is positively related with the geographic distance between the franchisor and the local markets.*

H2b: *The higher the geographic distance between the domestic and host market, the higher the tendency of choosing master franchising over direct franchising.*

(2) *Cultural distance* When a foreign market is culturally different from the franchisor's domestic market the monitoring of an agent's behavior is additionally impeded. Cultural differences require various aspects of a business format to be translated and adapted to the local culture. These costly requirements force companies to use lower-cost governance modes (Fladmoe-Lindquist and Jacque 1995). Franchising enables the company to shift responsibility for cultural adaptation to its foreign franchisees, which share the financial risk if the service is not adequately adapted to the cultural context. To successfully monitor and effectively evaluate franchisees in culturally different markets, franchisors must acquire relevant knowledge about the local market (Minkler 1990). However, the adaptation of local knowledge is also costly and difficult. This forces franchisors to allocate more residual decision rights to the local partners since their knowledge of the local culture allows them to make better decisions.

How is the choice between master franchising and multi-unit franchising influenced by the cultural distance? As previously argued cultural distance increases the information asymmetry between the franchisor and the franchisees and requires more intensive communication and adaptation.[4] Master franchising enables the transfer of a substantial part of company tasks to the master franchisor, e.g. negotiation with local entrepreneurs, adaptation of strategies to the local market, monitoring activities, etc., thus increasing revenues and reducing monitoring costs. In the case of large cultural differences, the local partner can even be more competent in making such decisions. Based on these assumptions, the following hypotheses can be formulated:

H2c: *The proportion of residual decision rights that a franchisor allocates to the franchisees in the foreign market is positively related with cultural distance between domestic and host market.*

H2d: *The higher the cultural distance between domestic and host market, the higher the tendency of choosing master franchising over direct franchising.*

[4]A widely used approach for measuring cultural distance was developed by Hofstede (1980). The cultural distance was measured on a large sample by eliciting the perception of four work-related dimensions (subsequently used by Brouthers and Brouthers 2001, Kogut and Singh 1988, Morosini et al. 1998). Another frequently applied framework was developed by Ronen and Shenkar (1985), who defined eight cultural clusters (groups) of countries according to their cultural similarities (applied by Fladmoe-Lindquist and Jacque 1995, Gatingon and Anderson 1988). Taylor et al. (1998) developed a scale of four business-related items to measure cultural distance (applied also by Chen 2007).

3.3 Transaction Cost Theory and Allocation of Decision Rights

Transaction costs (TC) theory has been widely used in the entry mode literature to explain the firm's choice of a foreign market entry mode.[5] This literature differentiates entry modes by the equity stake of the partners and thus also the control level. It identifies three key factors that influence the choice of governance form: asset specificity, environmental uncertainty and behavioral uncertainty (Groenewegen 1996, p 18).

Asset specificity, which primarily influences the choice between equity and non-equity mode, has been widely investigated as an entry mode determinant in the TC-literature (e.g. Erramilli and Rao 1993; Gatignon and Anderson 1988; Palenzuela and Bobillo 1999). Given that this paper investigates master and direct franchising as non-equity modes, asset specificity will not be included as a determinant of the entry mode choice. However, the other two TC-determinants, environmental and behavioral uncertainty, are relevant for the franchisor's decision between master and direct franchising.

(1) *Environmental uncertainty* represents the risks associated with the economic, political and legal unpredictability of a foreign market (Erramilli and Rao 1993; Williamson 1985) and "the extent to which a country's political, legal cultural and economic environment threatens the stability of business operations" (Gatignon and Anderson 1988). Economic uncertainty refers to changes in a country's business or economic environment. Political and legal uncertainty are closely related and refer to the uncertainty in transferring property and funds, as well as in inadequate protection of ownership rights. A market entrant will seek to identify all the characteristics and risks of the target market to choose a governance mode which minimizes transaction costs. Franchisors economize on search, monitoring or service costs at the local market. When environmental instability is high, master franchising enables lower resource commitment by reducing the costs of searching, servicing and monitoring. Burton et al. (2000) describes master franchising as a "hands-off" strategy where the control of a sub-system is relinquished to a local intermediary to a much greater degree than in direct franchising. Master franchising also provides a greater information processing capacity as well as local adaptability in an uncertain environment. Many TC scholars also emphasize flexibility as a necessary factor in an unpredictable market (e.g. Erramilli and Rao 1993; Gatignon and Anderson 1988). Local partners can react to environmental changes if they hold the appropriate decision rights. Therefore, in the case of higher environmental uncertainty we can expect an increased tendency towards choosing master franchising when entering a foreign market.

[5] See e.g. Anderson and Gatignon 1986; Brouthers and Brouthers 2003; Delios and Beamish 1999; Erramilli and Rao 1993; Gatignon and Anderson 1988; Hennart 1991; Klein et al. 1990.

H3a: *The higher the environmental uncertainty, the more residual decision rights are transferred to the local partner, and the higher the tendency of choosing master franchising over single/multi-unit franchising.*

This hypothesis is also consistent with the search cost hypothesis proposed by Minkler (1992), but inconsistent with the original transaction cost hypothesis that suggests a positive relationship between environmental uncertainty and the choice of a higher control modes when entering a foreign market (e.g. Erramilli and Rao 1993; Gatignon and Anderson 1988; Hennart 1991).

(2) *Behavioral uncertainty* results from opportunistic risk due to adverse selection and moral hazard (Williamson 1975). The findings regarding the influence of behavioral uncertainty on the governance mode provide contradictory results depending on whether a firm is a service or a production firm (Brouthers and Brouthers 2003). Empirical studies examining service firms found in the case of increased behavioral uncertainty a higher propensity for choosing lower control modes. On the other hand, studies examining production firms confirmed the tendency to choose wholly-owned (i.e. high control) entry modes as behavioral uncertainty rises (Gatignon and Anderson 1988). Since franchising is in its nature people-oriented, franchisors' choice of franchising mode should be strongly influenced by behavioral uncertainty. When behavioral uncertainty increases, the franchisor has to bear higher costs of monitoring the partner's behavior (Hill et al. 1990), but also higher costs of searching and negotiation, due to the increased difficulty of finding a reliable partner (Burton et al. 2000). In this case, franchisors might prefer to transfer more decision rights to local partners to decrease the risk of opportunism (which rises with the number of partners) as well as search and communication costs. Therefore, the franchisor's likeliness to choose master over multi-unit franchising will be greater in a context of higher behavioral uncertainty.

H3b: *The higher the behavioral uncertainty, the higher the tendency toward choosing master franchising over multi-unit franchising and transferring more decision rights to the local partner.*

This hypothesis is consistent with the discussed agency cost hypothesis and is also supported by empirical evidence on service firms (Erramilli and Rao 1993; Fladmoe-Lindquist and Jacque 1995). The results of these studies have shown that the tendency to use high-control entry modes decreases with rising behavioral uncertainty. However, this hypothesis is not consistent with the original transaction cost hypothesis, which suggests a positive relationship between behavioral uncertainty and higher control modes (Hennart 1991; Williamson 1975).

4 Conclusion

In many large international franchise systems both master franchising and single/multi-unit franchising are used simultaneously within the organisation. However, the existing franchise literature has not explained how franchise firms allocate decision rights between the different international franchise modes. To address this issue we have presented hypotheses from different theoretical viewpoints, such as property rights theory, agency theory and transaction cost theory. Each theoretical view has already been applied separately in a large number of studies dealing with franchising issues, but no study has developed hypotheses to explain the structure of decision rights in the international franchise firm. Such an approach adds a new dimension to the existing franchising research and will provide a deeper understanding of the organization of the international franchise firm.

Because franchising relationships are very complex, we suggest a sequential mixed-method research design to empirically investigate our hypotheses. The sequential combination of separate qualitative and quantitative studies has been the most typical form of combined research in social sciences (Srnka and Koeszegi 2007). In the first stage of the research, a qualitative study will serve as a base for the evaluation and improvement of the conceptual model. Furthermore, an in-depth qualitative study will establish the adequate measurement tools for the subsequent quantitative study. Finally, the understanding of the research problem gained through the qualitative research could also improve the interpretation of the quantitative results.

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Incentives and Control in Company-Owned Versus Franchised Outlets: An Empirical Study at the Chain Level

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Abstract In this article, we investigate the relative performances of company-owned outlets vs. franchised outlets using an original database consisting of 231 units of a French chain. At first glance, the financial and quality performances of company-owned units are better than franchised units. However, the opposite is true when the particular characteristics of each unit are considered in account in the analysis.

1 Introduction

The economic importance of franchising partly explains why this contractual relationship has received considerable attention in the literature on contracting (see Blair and Lafontaine 2006; Lafontaine and Slade 2007, for surveys). In addition, franchising is one of the few types of contractual relationships for which significant amounts of data are available from public sources (Lafontaine and Slade 1997). A surprising stylized fact about franchising as an organizational form is that not all units are franchised. Most franchised chains operate some of their units directly and franchise the others. Thus franchised units and company-owned units can coexist within the same chain generating questions about make-and-buy strategies rather than the classical make-or-buy strategy. This coexistence is known as "plural form" or "dual distribution" in literature (see Bradach and Eccles 1989; Bradach 1997; Blair and Lafontaine 2006).

Whatever the proposed explanations, previous articles can be distinguished by their assumptions about the relative efficiency of franchises vs. company-owned outlets. Some are based on the assumptions that franchises are more efficient because they are residual claimants. Therefore, a chain may not be completely externalized because it is useful to keep company-owned outlets to signal the quality of the trademark (Gallini and Lutz 1992) or to limit network externalities

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due to possible shirking behaviours (Lafontaine and Shaw 2005). Other explanations are based on the assumption that company-owned outlets are more efficient than franchises. Then, a chain may not be completely internalized because there are financial constraints that require the use of external agents. Finally, several explanations focus on the complementarities between franchises and company-owned outlets (Bradach 1997, 1998; Sorenson and Sørensen 2001), emphasizing the correct balance to be obtained between the exploitation of routines by company-owned units and the exploration of new routines by franchised units.

Absent from the franchising literature is a direct test – at the outlet level – of the possible superiority of one governance structure over another. Since many of the previous empirical studies are cross-sectional, this issue cannot be investigated at the unit level and instead. Moreover, since the seminal paper from Kaufmann and Dant (1996), several scholars have pointed out that the empirical picture is much more complex than a simple coexistence between franchised and company-owned outlets, because multi-unit franchised units also exist and are often excluded from the analysis: They provide both empirical evidence (e.g. Kalnins and Lafontaine 2004 showing that multi-owners own 84% of franchised restaurants) and theoretical foundation for the multi-unit franchising (MUF) strategy (Hussain and Windsperger 2010). Nevertheless, although papers increase our knowledge on the interest of MUF or on the kind of strategy chosen by the owner of MUF (Grünhagen and Mittelstaedt 2005), the question of the comparative efficiency of the three governance structures that coexist inside the same chain is still largely unexplored.

In this paper, we investigate the nature and the properties of the diverse governance structures/organizational forms at the unit level – franchise, multi-franchise and company-owned outlets. Going inside the "black box" of the chain, using panel data at the unit level, makes it possible to determine whether one governance structure is more efficient than another and identify how the franchisor can construct its performance and improve it over time through dual distribution.

Very few studies address this question at the unit level. The only exceptions we are aware of are Minkler (1990), on the decision to franchise, and Yin and Zajac (2004). This last paper discusses the performance implications of the diverse governance structure (franchised vs. company-owned units), by considering the diversity of the strategies to be followed. They use return on sales panel data as we do. Nevertheless, they do not have access to data about store characteristics (size in square meters, number of employees, size of repair vs. sales area) and qualitative performance. Our work complements their study by testing the impact of governance structures with multi-franchised units, controlling differences in store characteristics of the financial and qualitative performances. To do so, we use an original panel database consisting of 231 outlets of a French chain (we will call it NET for confidentiality reasons). We investigate the relative performances of company-owned outlets vs. franchised and multi-franchised outlets over two semesters. Our results show at first glance that, in a static framework, performances of company owned-units are better than franchised units. However, the opposite is true when the particular characteristics of each unit are considered – i.e. when franchised units and company-owned units are not randomly chosen.

The article is organized as follows. Section 2 emphasizes the efficiency of the diverse organizational mechanisms in force in the plural form. Section 3 describes the case study from a statistical and qualitative viewpoint. Section 4 deepens the analysis using econometric techniques. Section 5 provides a discussion and conclusions will follow.

2 The Efficiency of the Plural Form

The puzzle of plural forms comes from their combination of governance mechanisms that conform to different logics: company-owned units, franchised units, and multi-unit franchises. Why would a chain combine these different governance mechanisms? For a long time, studies essentially focused on the advantage of the franchise over the company-owned solution, emphasizing that a franchise reduces agency problems in a growth strategy (Shane 1996). The literature has radically changed over these last years, going from a view that focuses on "make or buy" to the evidence of "make and buy" (Bradach and Eccles 1989; Bradach 1997, 1998; Sorenson and Sørensen 2001; Lafontaine and Shaw 2005). In many cases, chains simultaneously and significantly use numerous governance mechanisms, leading Bradach and Eccles (1989) to coin the term "plural form". The co-existence of several organizational forms may come from the fact that none of these forms dominates the others according to the diverse dimensions of performance. However, it can also be argued that synergetic effects take place between the diverse governance mechanisms (Bradach 1997, 1998) leading to the co-existence of efficient and inefficient forms. Specifically, one can wonder if it is necessary to combine owned units and franchised units to obtain efficiency in the diverse contexts.

2.1 Franchised Units: An Efficient Form?

Since the franchisee is the residual claimant of his store, it is frequently assumed that he has more incentives than managers in company-owned units. Even if the franchisee agrees with the franchisor to respect the rules and norms of the franchising agreement (a framework contract), he is still the owner of his store, which results in his ability to maintain some autonomy vis-à-vis the franchisor. Thus, franchisee discretion enables him to better adapt to local circumstances and to use his knowledge of local markets (Minkler 1990). Moreover, one can consider that the franchisee's autonomy enables him to experiment with new practices or rules, to adapt his business to local customers. Hence, the franchisee can adapt more efficiently to a changing environment or his customers' needs. In this sense, one can consider that it would be possible for the franchised unit to explore, i.e. develop new routines (Sorenson and Sørensen 2001). Finally, from the franchisor's point of

view, the increase in franchises enables him to limit the resources needed – and especially his capital investment – due to the creation of new stores. In this sense, franchises (or multi-unit franchises) lead to a more rapid growth of the chain by preventing capital shortage, financial constraints (Caves and Murphy 1976; Lafontaine 1992), and by providing access to entrepreneurial abilities (Norton 1988).

However, the franchisee's autonomy may lead to problems of control (Klein 1980; Brickley and Dark 1987). In some situations, it may be difficult for the franchisor to control the behaviour of the franchisees. If scholars generally stress the franchisees' interest in shirking on quality or more generally, on unobserved dimensions (Pénard et al. 2009), there is also the possible difficulty for the franchisor to change a franchisee's behaviour. In this sense, paradoxically, the franchisor can suffer a loss of control over his organization.

2.2 *Company-Owned Units: The Efficiency of a Hierarchical Form*

Company-owned stores operate in a classical hierarchical mode. A manager is employed for each store and must comply with the franchisor's orders. Generally, as the chain becomes larger, there will be one or more levels of supervisors (area managers) between the headquarters and the store managers. Since store managers are not residual claimants, it is generally assumed that company-owned units are less efficient than franchised units (Lewin Solomons 1998; Rubin 1978). Nevertheless, this is a matter to be discussed. For instance, in their analysis of the connection between organizational learning and the performance of chains, Sorenson and Sørensen (2001) assume that the owned stores are more efficient in exploitation – i.e. in the incremental improvement of existing routines – than franchised stores. In their study, they consider that because the store manager is strictly monitored by the franchisor (See Bradach 1997, 1998), he has a stronger incentive for efficiency in routine operations, as well as a greater tendency to sacrifice exploration activities that are not imposed on him or that are difficult to observe by the franchisor.[1] Moreover, using data from the shops, Yin and Zajac (2004) convincingly discuss the strategy-governance structure ideal for a pizza chain whose shops use either a pure dine-in vs. delivery strategy or a mixed strategy that enables restaurants to offer both dine-in and delivery services. They show that company-owned units are more efficient than franchises in the context of pure strategy but less efficient in the mixed context. Last, the classical argument of franchisee opportunism can lead us to consider that the franchisee does not respect the concept and operating rules of

[1]Notice that in the viewpoint of Holmström and Milgrom (1991) company-owned units are the locus of multi-tasking problems. If some dimensions are not controlled by the franchisor, they will probably be sacrificed. Store managers will have a strong tendency to substitute observable tasks with those difficult to observe.

the franchise: For instance, Manolis et al. (1995) asserts that quality level of franchised units is lower than quality level of company-owned units, which leads the franchisor to integrate some former franchised units. Therefore, one can consider that the comparative efficiency of company-owned versus franchised units is an empirical question.

2.3 The Strange Form: Multi-Unit Franchises

MUF are "chains within chains", as they consist of two or more outlets owned by the same franchisee. In this case, several units (with store managers) comply with the orders of a multi-unit franchise. Therefore, this form is positioned between owned units and franchises. Since the multi-unit franchisee is a residual claimant over his stores' performance, the stores are then managed according to the rules of the (employed) store managers. Hence, multi-unit franchising introduces hierarchies in franchised units, which probably leads to a loss of efficiency for each store.

Nevertheless, one can consider that the hierarchy in multi-unit franchises is reduced as compared to company-owned units because the multi-unit franchisee has fewer units to control, therefore experiencing less "loss of control" than within the hierarchy of owned units.[2] Moreover it can be noted that the MUF simplifies the task of deploying the franchisor policy, as there are fewer franchisees who need to be convinced to change their behaviour, to obtain a change in the franchised store policy. Lastly, the MUF limits the problem of shirking by franchisees: as the Multi-Unit Franchisee has an important stake in the chain, he has an incentive to maintain his reputation.

Therefore, the picture seems complex with no form performing better than the other in every situation. Several parameters or characteristics can affect the interest or limits of MUF, leading us to consider that we need accurate observations to identify the relative efficiency of the franchised, multi-unit franchised and company owned outlets. To do so, we use the data relative to a plural form.

3 The Net Case Study

The investigation reported here consists of data collected on NET, a leading French franchise chain.[3] We have collected qualitative and quantitative data. Qualitative data come from interviews with executives and middle managers of the chain and

[2]Notice that the multi-unit franchisee can own an impressive number of units and is not restricted to possess units in only one chain. But we are neglecting this point, considering only the units he possesses in NET.

[3]Due to confidentiality of the data we must keep the chain anonymous.

the active participation of one co-author in the organizational projects of the chains. This active participation enables us to construct an original database on the 231 outlets of the chain, providing us with extensive information about the characteristics and performance of the stores. By means of this material, we were able to take a complementary approach to the main studies realized in the literature: Instead of using the cross-sectional data on a population of chains, we carry out an in-depth case study covering the 2003 period. Moreover, we think this data are interesting because the case of NET is appropriate to shed light on the debates on franchise about comparative efficiency of governance mechanisms.

After providing general details on the case – and its specificities – we use qualitative material and descriptive statistics to complete the picture of the case study. We use the data to show the diversity of the characteristics and performance of the three governance mechanisms – the franchised unit, the company-owned unit and the multi-unit franchise.

3.1 NET: A Plural Form in a Reform Context

Created in 1972, NET is one of the leading French chains in its activity. In 2003, it realized 735 M€ returns on sales with 6,000 employees and 301 stores. Although the chain was initially founded with company-owned stores, it began creating franchised stores in 1979. Moreover, its executive managers insisted on the strategic necessity of growth by combining the creation of company-owned stores with franchised stores. Beyond the discourse, we nevertheless would have to wait for an M&A operation to take place in 1998 to observe this global distribution of the governance structures in the chain (see Fig. 1). In 1998, NET acquired CAD, a competitive chain comprised of company-owned units, which resulted in NET being comprised of franchised (70%) and company-owned units (30%).[4]

In addition to the global distribution between franchised and company-owned units, we must further distinguish between the franchised units and multi-unit franchises in which the franchisee possesses two or more stores. These three governance structures are present in the NET case, with the multi-unit franchise having a slight predominance over the two other forms (multi-franchised units represent 44% of the entire chain while franchised units represent 23%). We can thus consider that the NET case is particularly interesting to study: with its long history of management of a plural form, NET founded its strategy on this organizational strategy and has proven to be successful when considering its leading position on the French market.

[4]Notice that a second M&A operation took place in 2003, leading to an increase in the proportion of company-owned units (41%). Nevertheless, since the integration of this network is very recent – the operating rules are not entirely deployed – we have excluded these units from our data, limiting our study to 231 units owned before the M&A.

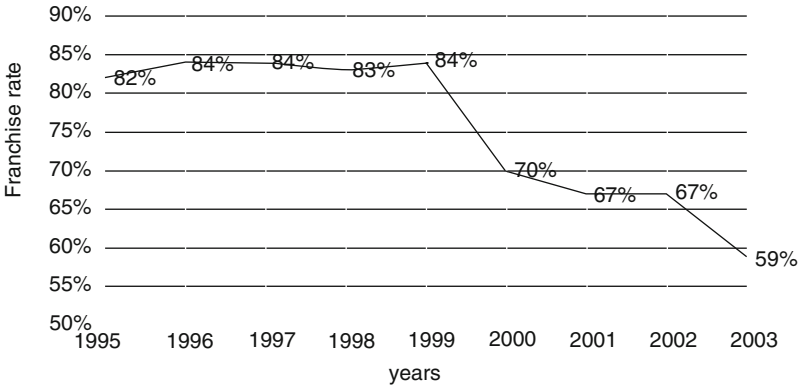

Fig. 1 *Proportion of franchised units of NET*

Table 1 Units' characteristics (whole chain)

Types of centers	Square metres for the shop	Square metres for the help yourself area	Square metres for repairs	Number of boxes	Employees
Franchised units	742.27	366.98	216.81	6.15	11.16
Multi-unit franchises	763.71	375.08	218.65	6.40	12.45
Company-owned units	856.86	434.73	219.62	6.17	15.04
Total	789.03	392.62	218.53	6.27	12.99

As a result of the NET case, we are able to discuss the properties of the diverse governance structures, especially regarding their financial and qualitative performance. To better illustrate these dimensions, we must complete the picture for these two topics.

3.2 Net: A Contrasted Plural Form

NET is composed of a mix of the three governance structures, franchised units, multi-unit franchises and company-owned outlets. We can complete the picture by statistically specifying the characteristics of each governance structure and their performance.

At first glance, we can identify several differences between the governance structures (see Table 1). If we look at the criterion relating to size and the number of employees, we observe that company-owned units are statistically larger than multi-unit franchises and the latter are also statistically larger than simple franchised units. Nevertheless, this global comparison can be shaded by a more precise analysis. Each unit is composed of two distinct activities: a repair area (workshop, which is organized by boxes or work area), and a self-service (or help yourself) area

Table 2 Performance indicators (2003)

	Return on sales (euros)	Satisfaction rate (%)
Franchises	1,664,432	59.97
Multi-unit franchises	1,844,676	48.76
Company-owned units	2,192,918	39.57

for the sale of products and furniture. In this sense, the NET case is interesting as it illustrates a "simple" or pure strategy (Yin and Zajac 2004): even if the units sell a large range of products, they all offer the same kind of products and services. Therefore, the only differentiation factor is the choice of size of the repair and self-service areas. We observe that the size difference among the shops essentially comes from the difference in the self-service areas, the gap between the numbers of boxes being statistically insignificant. Therefore, it seems that the franchisor retains the control of the greatest number of units, with a specialization of the company-owned units in the sales activity, whereas franchises and multi-franchised units are both smaller and specialize in the repair activity.

This differentiation of units is confirmed by an analysis of performance indicators; return on sales and customers satisfaction rate comparisons (see Table 2). The picture is less simple.

Looking at sales, company-owned units are significantly greater than multi-unit and simple franchises. Notice that this turnover indicator is especially important in our context. As royalties are determined in proportion to the return on sales, and as sales are an important management indicator for company-owned stores, it is generally assumed that turnover is a good indicator of the units' efficiency or performance (See Yin and Zajac 2004, p 374 for a discussion).[5]

We can complete the analysis by comparing the data on representative clients: The average expenditure by customer and by observing that the average expenditure of the customers of franchises and multi-unit franchises (56 €) is significantly greater than the customers' expenditures in company-owned units (49 €). If this difference can be viewed as reflecting a gap in commercial efficiency, we must emphasize that this difference is essentially the result of the specialization difference between company-owned vs. franchised units. The company-owned units are more oriented toward the self-service sales activity than franchises and multi-unit franchises and the repair and maintenance costs of a product are generally greater than an average sale.

However when we observe quality indicators, the picture seems to reverse. There is a strong demarcation between franchised vs. company-owned units. In company-owned units, quality is viewed as a facultative activity, as there is no monitoring by NET's top management. Interviews with employees, store managers as well as operators emphasize that they are not concerned with the quality aspect. Their main argument was "the Top Management never asks us to deliver quality". The main preoccupation of store managers (and other employees) is with turnover

[5]Notice, also, that we were not able to obtain the profit data.

objectives, since they have quantitative objectives to reach to) obtain bonuses (connected with several commercial campaigns). The repairs and sales turnovers of the store are, symptomatically, displayed within the store, whereas nothing is mentioned about quality.

Therefore, even if company-owned units generate a greater return on sales, it seems that franchises dominate regarding satisfaction rate of consumers. Last, multi-owned units appear to be between the other two governance mechanisms.

Finally, it can be interesting to connect units' specialization choice with their commercial location (see Table 3).

The units' distribution across the diverse commercial areas leads to further apparent differences between the governance structures. Company-owned units are

Table 3 Locations of units

Location	Kinds of unit	Number	Distribution (%)	Average shop size (square metres)	Employees (average)
1_Main streets	Simple franchise	7	30	686.86	10.71
	Multi unit franchise	12	52	794.5	11.83
	Company-owned	4	17	845	11.75
	Total	23		770.52	11.48
2_downtown	Simple franchise	7	64	903	11
	Multi unit franchise	4	36	848.75	13.25
	Total	11		883.27	11.82
3_CAD Hypermarket	Simple franchise	2	4	552	9
	Multi unit franchise	11	22	773.82	13.64
	Company-owned	38	75	842.49	16.26
	Total	51		816.28	15.41
4_Hypermarket w/park	Simple franchise	15	28	753.71	11.2
	Multi unit franchise	22	42	758.63	12.95
	Company-owned	16	30	900.5	14
	Total	53		800.07	12.77
5_commercial area	Simple franchise	10	36	687.1	9.9
	Multi unit franchise	13	46	727.71	12.5
	Company-owned	5	18	1,019.20	15.6
	Total	28		765.26	12.14
6_commercial area near hyper	Simple franchise	13	21	755.08	12.77
	Multi unit franchise	36	59	756.07	12.17
	Company-owned	12	20	789.42	13.75
	Total	61		762.42	12.61
7_Hypermarket area	Simple franchise	1	17	599	11
	Multi unit franchise	4	67	772.06	9.75
	Company-owned	1	17	749.83	11
	Total	6		739.51	10.17

overrepresented in the areas with high commercial potential, typically the hypermarket or commercial centre areas.[6] Conversely, franchised and multi-franchised units are much more present in the urban areas (main streets and downtown areas).

The observation confirms a relative specialization of the franchised vs. company-owned outlets. NET tends to retain the control of the large units located in high potential commercial areas, whereas it delegates to franchisees the responsibility of urban areas, more oriented toward the repair and maintenance activity.[7]

Therefore, the NET case seems quite interesting, leading us to a better understanding of the plural form of governance, the difference in the performance of their diverse governance structures. The description of the characteristics and the outlets' performances has, essentially, stressed an interest in distinguishing between these three populations of stores, which differ in size, performance, commercial specialization and location.

Nevertheless, if the stylized facts that we emphasize seem stimulating and give sense to the analysis of the plural form, it seems also necessary to complete the picture by using econometrical techniques of analysis, considering the heterogeneity of each store.

4 Econometric Analysis

Our main goal is to assess the relative efficiency of franchises, multi-unit franchises and company-owned units. To do so, we cannot only compare the average levels of our efficiency variables (as we did in the previous section). Such statistics could lead us to inaccurate conclusions because each store differs not only in its governance structures but also by other characteristics (e.g. square metres per unit, a higher number of employees and better location) that might explain their performances. In order to go a step further in our analysis, we collected data about each unit of the Net chain and provide econometrical analysis.

4.1 Explained Variables

To assess the efficiency of the units that comprise the franchise chain, we use two variables. The first is the turnover of each unit (TURNOVER). The second is the satisfaction rate for each unit, resulting from interviews with customers (SATISFACTION RATE). The satisfaction rate is measured through a composite indicator

[6]Notice that the quasi lack of franchised units in the CAD hypermarkets is due to the 1998 M&A: NET acquired the CAD units, which were located in the CAD hypermarkets.

[7]One can wonder if the nature of each activity (repairs vs. sales) better corresponds to each kind of governance structure. One idea could be that (1) the franchisee would prefer activities such as repairs that are less dependent on the warehouse; and (2) the franchisor would prefer to franchise complex activities (repairs) rather than the simpler activities ones (sales) because the sales activity is more difficult to monitor than the repairs. We do not address this issue.

derived from a direct customer survey. It is a 100-point scale coming from the rating by customer of four dimensions: neatness of unit, welcome quality, quality of provided services, and the indication of clear prices of services and products. We monitored the four criteria comprising this global satisfaction rate, and obtained the same results in our estimates.

4.2 Explanatory Variables

4.2.1 Organizational Choices

All our hypotheses are based on the relative efficiency of units in the chain depending on their organizational form. We thus created variables FRANCHISEE, MULTI-FRANCHISEE and COMPANY-OWNED that are dichotomic variables reflecting the actual form of the studied unit.

4.2.2 Unit's Characteristics

As we already pointed out in the previous section, units may differ because of their characteristics. These characteristics as well as the way units are governed reflected by their organizational form, might affect observed performances. Thus, we created variable SQUARE METRES, SQUARE METRES FOR "HELP YOURSELF", and SQUARE METRES FOR REPAIR measuring the size of the unit in square metres of the unit and for each of its activities as well as NUMBER OF BOXES. All these variables reflect the physical investments made by each unit and should positively affect their efficiency.

In addition, we also created NUMBER OF EMPLOYEES, measuring the number of employees in the unit. We considered the LOCATION of the unit (i.e. the fact that it is located in a supermarket or another type of location). Finally, we created EXPERIENCE measuring the number of years the unit has been operating within the NET chain.

Variables used (except LOCATION) are in Table 4, together with descriptive statistics.

4.3 Organizational Choices and Performances: Econometric Results

In order to test our proposition, we estimate the following equation:

Table 4 Descriptive statistics

Variable	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12
1. Turnover 2003	1,921,162	828,418	1.00											
2. Number of employees	13.02	4.91	0.94	1.00										
3. SQ (number of employees)	193.43	178.92	0.92	0.96	1.00									
4. Experience	10.30	5.02	0.00	0.00	−0.02	1.00								
5. M^2 for sales	788.01	218.29	0.55	0.56	0.53	0.01	1.00							
6. M^2 "help yourself"	391.75	107.09	0.49	0.49	0.43	0.03	0.79	1.00						
7. M^2 for repair	218.43	78.26	0.37	0.41	0.41	0.30	0.73	0.44	1.00					
8. Number of boxes	6.26	1.90	0.48	0.51	0.48	0.23	0.66	0.58	0.66	1.00				
9. Multi-franchisee	0.43	0.50	−0.07	−0.09	−0.08	−0.05	0.11	−0.16	0.00	0.06	1.00			
10. Company-owned	0.33	0.47	0.23	0.29	0.24	−0.16	0.22	0.28	0.01	−0.03	−0.61	1.00		
11. Franchisee	0.24	0.43	−0.17	−0.21	−0.17	0.24	−0.12	−0.13	−0.01	−0.03	−0.49	−0.39	1.00	
12. Satisf. rate 2003	48.52	21.38	−0.15	−0.18	−0.16	0.10	−0.15	−0.16	−0.18	−0.09	0.02	−0.29	0.30	1.00

Table 5 Estimated results

Variables	OLS turnover 2003 (1)	OLS satisfaction rate 2003 (2)
Number of employees	1.05×10^5*** (7.071)	−0.222 (−0.210)
SQ (number of employees)	1,408.089*** (3.671)	0.002 (0.080)
Experience	6,994.631 (1.420)	0.589+ (1.687)
Square metres	415.076+ (1.944)	0.035* (2.312)
Square metres for "help yourself"	201.101 (0.619)	−0.035 (−1.502)
Square metres for repair	−931.856* (−2.031)	−0.113*** (-3 .463)
Number of boxes	−6,217.550 (−0.363)	0.320 (0.264)
Multi-franchisee	−9,373.990 (−0.189)	−9.414** (−2.671)
Company-owned	-1.31×10^5* (−2.169)	−18.699*** (−4.380)
Location	Yes	Yes
Constant	1.76×10^5 (0.592)	73.110*** (3.474)
N	231	231
R^2	0.892	0.188

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are standard errors

$$
\begin{aligned}
PERFORMANCEit = {} & \alpha\ MULTI\text{-}FRANCHISEEi + \beta\ COMPANY - OWNEDi \\
& + \gamma\ SQUARE\ METRESi \\
& + \delta\ SQUARE\ METERS\ FOR\ HELP\ "YOURSELF"i \\
& + \zeta\ SQUARE\ METRES\ FOR\ REPAIRi \\
& + \eta\ NUMBER\ OF\ BOXESi \\
& + \theta\ NUMBER\ OF\ EMPLOYEESi \\
& + \varphi\ (NUMBER\ OF\ EMPLOYEES)^2 i + \psi\ EXPERIENCEi \\
& + \Sigma j\ \phi j\ LOCATIONji + \varepsilon i
\end{aligned}
$$

With i the considered unit, t representing time and j the kind of location characterizing unit i. Table 5 presents our results, the distinguishing units' performances depending on the kind of indicator used (financial vs. quality performances).[8]

The first striking results that we obtained concerned the relative efficiency of franchises, multi-unit franchises and company-owned units regarding return on sales. Looking at estimate (1), and contrary to what a simple approach would reveal, we observed that results comparing simple means are not confirmed when controlling for the characteristics of the units. The company-owned unit is no longer the most efficient governance structure. This result does not come as a surprise, when we confront with theoretical propositions from Sect. 2: we observe that franchised units generate significantly better returns on sales than company-owned units, all things being equal. It suggests that because of greater incentives to maximize benefit, franchised units do better as compared to company-owned. Such a result nevertheless contradicts Yin and Zajac (2004) who found that company-owned units performed better in a case of pure strategy (i.e. a simple strategy, with little differentiation

[8]Notice that econometrical treatment compares the MULTI-FRANCHISEE and COMPANY-OWNED with FRANCHISEE, dropping this last variable from the table.

between shops). Following their definition, we can consider our units follow pure strategies. However, company-owned units do not perform any better.

Another interesting result is the fact that franchises and multi-unit franchises seem to be at the same level of efficiency. This result is surprising since multi-unit franchises are often considered as having fewer incentives than franchisees. Our observations suggest that multi-unit franchises are able to control store managers more efficiently than company-owned stores. This observation suggests that the old argument of the span of control, i.e. the number of employees per supervisor, matters. In the case of the multi-unit franchise, we observe that store managers are closer to franchisees (who are residual claimants) than store managers are to their area supervisors (who are employees). This would be one explanation of such a performance. Experience or location does not seem to be a crucial variable in explaining turnovers in units. This is probably because in the franchise chain, all locations are very good.

If we now look at the satisfaction rates as an efficiency indicator for our units, results are slightly different (Estimate 2). Franchised units are clearly the most efficient since the choice of the company-owned unit has an 18.7-point negative impact on the satisfaction rate compared to franchised units, while the multi-unit franchise has a 9-point negative impact. This again does not come as a surprise because company-owned units had no objectives for quality. Nevertheless, what is surprising is that the inferiority of multi-franchised units (compared to franchised units) does not affect their financial results (return on sales) compared to franchised units (Estimate 1). Moreover, we can observe that this result contradicts the study of Manolis et al. (1995) that explained ownership redirection from franchisee to company owned units due to the lower level of quality of franchised units.

5 Conclusion

In this paper, we studied the efficiency of several co-existing governance structures in a franchise chain. Our results confirm that, when controlling for size, location and other aspects of units, franchising is the most efficient organizational choice with regard to returns on sales or satisfaction rate compared to the company-owned units when we look at turnover and satisfaction rate. Nevertheless, if multi-franchised units appear to be less efficient than franchised units according a satisfaction rate criterion, they are not significantly different from a turnover indicator. Last, multi-franchised units are more efficient than company-owned units, whatever the efficiency indicator.

These results are striking because they would lead an observer to conclude that there would be one best way for chains: the franchise solution. Limitations of our focus can explain this puzzling observation. We have to notice that the analysis has been focused on only 1 year (2003), in a static context, where each form is analysed independently from the others. It would be interesting to study the synergistic effects between the three governance forms, as one would argue – following Bradach

– that such synergies would explain the efficiency gap between them. Moreover, in a static context, quality is not the main issue for the chain (i.e. no clear objectives with observable and verifiable indicators). Giving a much more complex picture, and observing what would be the impact of a radical or strategic change on the performance of each governance mechanism, and to observe the respective contributions of franchised, multi-franchised and company-owned units in such a context would perhaps complete the picture. Nevertheless, by providing data on performance of each unit, our observations lead us to go further into the knowledge of the franchising system.

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Plural Form and Franchisor Performance: Early Empirical Findings from Europe

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Abstract This paper deals with the relationships between plural form and performance in franchising networks in Europe. It is proposed that a franchisor's life cycle stage and human capital assets influence the relationship between plural form and performance. The model has been estimated using panel data on 41 publicly listed European franchising networks in the 1998–2007 period. The proportion of network-franchised units to the total number of its units in its distribution system is used as the indicator of its plural form (franchise proportion). Following an instrumental approach, the network performance is measured at the franchisor level by its industry-adjusted Return on Assets (ROA) and a relative stock market valuation measure of intangible human capital is used. The early results show that the impact of franchise proportion on performance is greater for franchisors with high intangible human capital compared to franchisors with low intangible human capital. Overall, results provide support for the contention that the franchisors' performance is contingent on the "fit" between governance structure (franchise proportion) and resources (critical human assets). In contrast, evidence that the governance/performance relationship is contingent on life cycle stage or franchisor's age is not found. However our results suggest that franchisor's age could weaken the relationship between franchise proportion and performance. These results might suggest that younger franchisors with high human capital should increase their franchise proportion to enhance their financial performance.

1 Introduction

The plural form, a combination of both franchised and company-owned units within a same network, is now widely used within franchising networks (Bradach 1997, 1998; Dant and Kaufmann 2003). Although there is no ideal mix between these two

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arrangements,[1] the simultaneous existence of both forms results in synergies at the network level. This article examines the relationship between plural form and performance using the context of franchising in Europe.

In recent years, many studies on plural form have been published (Bürkle and Posselt 2008; Ehrmann and Spranger 2004; Lafontaine and Shaw 2005). However, there are fewer insights into performance implications of the plural form, except using the DEA method in the hotel industry (Botti et al. 2009; Perrigot et al. 2009) or developing relationships between the performance of a franchise chain and the resources provided to outlets and opportunism and knowledge considerations (Barthélemy 2008) or assessing performance through survival analysis (Perrigot 2008; Shane and Foo 1999). As Heide (2003, p 27) notes, "the specific performance implications of plural systems remain unanswered; …establishing a link between particular governance approaches and outcome variables seems an important research priority". In this article, we examine the following research question: how does a franchisor's plural form organization affect its performance? We apply the "critical" assets view of control of Rajan and Zingales (2000), which states that access to critical assets (franchisor's know-how, business format and brand name as well as franchisee's intangible human assets) influences the tendency toward plural form (proportion of franchisee-owned outlets). It is proposed that the impact of plural form on the performance of the network is moderated by the value of intangible human assets and the life cycle stage of the franchisor.

The model is based on panel data from 41 publicly listed European franchising networks in the 1998–2007 period, resulting in 237 observations. The focus is on the European market at a multi-industry level, contrary to previous studies, which have mainly analysed the US market in one specific industry. The proportion of a network's franchised units to the total number of its units in the distribution system is used as the indicator of its plural form (franchise proportion). Following an instrumental approach (Jones 1995) the network's performance at the franchisor level is measured by its industry-adjusted Return on Assets (ROA) using a relative stock market valuation measure of human capital intangibles (Pantzalis and Park 2009). It is assumed that franchising has the same legal definition throughout the European countries because selected companies are all business format franchising oriented. In some countries franchising is defined differently (Dant et al. 2008) and thus international studies should be made cautiously in franchising research.

The article is organized as follows: in the next section, plural form networks and several theories, which propose to assess their financial performance, are defined and the "critical" assets approach of Rajan and Zingales (2000) is proposed. Hence, the hypotheses were developed using this approach. In the subsequent sections, the data and the model estimation procedure are described, and then the results are presented. The article concludes with a discussion of the study's contributions, its limitations, and opportunities for further research.

[1]Even though franchisors can have a desired proportion of franchisees. Lafontaine and Kaufmann (1994) encourage researchers to find an optimal proportion of franchised outlets.

2 Literature Review

After some consideration of plural forms, several theories are described and their capacity to assess the link between this organizational form and its financial performance is examined using agency theory, resource scarcity theory and optimal risk allocation theory. Then, the approach based on the "critical" assets view of Rajan and Zingales is presented.

2.1 Plural Form

The concept of plural form was defined by Bradach and Eccles (1989) and studied by Bradach (1997). It is the combination of both franchised and company-owned units within a network. Although there is no ideal mix, the simultaneous presence of both forms results in synergies at the network level (Bradach 1998). It is widely used within franchising networks in different industries. In this article, we define the proportion of network franchisee-owned units to the total number of units in its distribution system as the indicator of its plural form (franchise proportion).

Researchers from various areas such as economics, marketing, entrepreneurship, and strategic management have enriched the growing franchising literature (Combs et al. 2004). Their theoretical approaches have mostly been grounded in agency theory and resource scarcity theory. According to agency theory, franchising is a governance mechanism to improve the alignment between firm- and unit-level incentives. The resource scarcity theory views franchising as a governance mechanism that mitigates the franchisor's financial and managerial constraints during the development stage of the network. Oxenfeldt and Kelly (1968) explained through their concept of ownership redirection that firms franchise in order to gain access to the scarce financial and managerial resources that are initially needed. Following this thesis, firms should first franchise and then repurchase the most profitable units.

These two main theories are complementary because they argue that a firm must attract resources and align incentives. Recently, Bürkle and Posselt (2008) contributed a new theory, taking into account the franchisor's risk considerations.[2] According to these authors, the costs of risk and controlling franchised units explain the varying proportion of franchisee-owned to total units, and the incentive to franchise decreases with an increasing proportion of franchisee-owned units, as well as with decreasing costs of control. In this article, a novel explanation for the existence of plural form networks based on the governance view of Rajan and Zingales (2000) is presented.

[2]In finance, the term "risk" is used to refer to the variability of uncertain outcomes (the chance of the loss of money or of receiving less than was expected).

2.2 Agency Theory

Agency theory (e.g. Fama and Jensen 1983) is one of the major theories used to explain franchising (Mathewson and Winter 1985; Brickley and Dark 1987; Lafontaine 1992). Potential shirking by the agent is a widely discussed problem in franchise literature (Rubin 1978; Brickley and Dark 1987). Salaried managers may not always put forth their best efforts and therefore may exhibit sub-optimal performance. In order to reduce this moral hazard problem, a non-franchised firm may need to develop a costly monitoring system. Franchising, on the other hand, addresses this problem by providing powerful incentives for the owners/managers of the franchised unit to perform well. For example, owners/managers (i.e., the franchisees) have a direct claim to the residual profits of their units (Knott and McKelvey 1999). Moreover, because the franchisees have put their own capital at risk, they have a powerful incentive to insure the success of their franchised units (Brickley and Dark 1987). Because franchising aligns the interests of the two parties (the franchisor and the franchisee), there is less need for monitoring and a greater probability for high performance by the franchisees (Lafontaine 1992). Better performance by the franchisees should translate into improved performance by the franchisor, as the franchisor's performance depends to a large extent on its franchisees' performance. However, agency theory accounts suggest some disadvantages of plural form as well, including potential underinvestment and free riding by franchisees (Bergen et al. 1992; Martin 1988).

2.3 Resource Scarcity Theory

An alternative theory explains franchising as a solution to the capital, managerial and informational constraints faced by expanding firms (Oxenfeldt and Kelly 1968; Caves and Murphy 1976; Norton 1988; Carney and Gedajlovic 1991; Shane 1996). This theory argues that expanding firms use franchising to get access to scarce capital (the franchisee's capital) in a cost-effective way. A young expanding firm has two options to acquire the capital it needs: equity or franchising. A third option is debt, which may not be a possibility in the early stages of a firm's existence due to the high information asymmetry between the franchisor and external suppliers of capital. Selling franchises may therefore be the more cost-effective and realistic option (Dant and Kaufmann 2003) despite contrary opinion in the literature (Rubin 1978). Furthermore, franchisees may be able to provide capital to the franchisor at a lower cost than passive investors (Combs and Ketchen 1999). In addition to capital, franchising also provides an efficient way to obtain the managerial expertise needed to help the business grow. Because franchisees put a significant amount of their assets and time into their units, they are likely to purchase a franchise only if they are confident in their managerial abilities (Shane 1996). Thus franchising addresses the adverse selection problem of firms hiring managers who may overstate their

qualifications to secure employment. Franchising also allows a firm to leverage the local market knowledge of its franchisees as it expands into new geographic areas (Minkler 1990) even though information from franchisees rarely feed back the franchisor (Bradach 1998). This is one of the reasons why this latter author enhances the role of plural form networks. Low-cost capital, motivated managerial expertise, and better local market knowledge are three key resources that should reduce a franchisor's overall risk and have a significant positive impact on a franchisor's performance.

2.4 Risk-Based Explanation of Plural Form

Bürkle and Posselt (2008) offer a model based on considerations of risk and control costs, which explains the proportion of franchisee-owned outlets in a system. They suggest considering franchising as a mechanism to reduce the franchisor's risk. Although franchising increases the risk costs for the franchisee, the franchisor's saving of risk costs with each franchisee-owned unit may even be larger. As they show, an increasing proportion of franchisee-owned units creates an increasingly weaker incentive to transfer further units to franchisees, because the savings in (marginal) risk costs constantly decline. If a franchisor chooses the optimal proportion of franchisee-owned units then its overall risk should decrease and its financial performance should increase. The model of Blair and Kaserman (1982) is developed differently but it leads to conclusions that are congruent with those of Bürkle and Posselt (2008).

2.5 A "Critical" Asset View of Plural Form

Rajan and Zingales (2000) argue that the greatest governance challenge firms face today is that of the demise of traditional sources of authority. Ownership and investments in physical assets were traditionally considered as having great influence on firm performance (Thomas et al. 1990). As firms become increasingly human capital-intensive and as knowledge-based assets have replaced physical assets, intangible (and inalienable) assets have replaced tangible assets as the firms' main source of value. The enterprise in today's competitive marketplace needs more than ownership of tangible assets to exercise control over critical (valuable) assets.[3] Rajan and Zingales (2001, p 3) state that: "while ownership legally links an inanimate asset to a firm, complementarities economically link some person or unit that cannot be owned to the critical resource at the core of the firm".

[3]Critical assets are those that tie assets of the firm or organization together and are, hence, valuable.

Hence when critical assets are human, the way to exercise authority relies on creating complementary links between a firm and the person or unit that the firm seeks to control. Thus, Rajan and Zingales (2001, p 3) conclude that: "unlike ownership of unique alienable assets, which can be allocated simply by sale, control over other critical [animate] resources has to be built up through a variety of mechanisms such as internal organization, work rules, and incentive schemes. These mechanisms then induce complementarities between a resource and other resources." What Rajan and Zingales call "complementarities" are sources of value creation.[4] Thus the authors argue that when critical assets are animate, only a variety of mechanisms – as opposed to ownership – will create value. We argue below that franchising constitute such a "variety of mechanisms". Hence, according to the critical assets view of control, the more important the intangible human assets are, the more control rights should be transferred to the partners, and the more franchising should be used as governance form.

A number of intangible assets and/or knowledge assets, which are more or less critical to the networks value, are generated and used in franchise networks (Windsperger and Yurdakul 2007). The franchisor offers know-how, business format and brand name whereas the franchisee provides local market knowledge and motivated managerial expertise. When these resources are put together in the network, they induce – more or less depending on their critical nature – complementarities. These complementarities can arise from the generation of information and management resources specific to plural form as shown by Bradach (1998). They can also take the form of a first mover advantage, which in turn increases the brand value (Michael 2003).

Franchising in plural form networks can be viewed as a governance device, which offers control over critical (human) resources through a variety of mechanisms. Powell (1990) presents network forms of organization as "neither market nor hierarchy". Bradach and Eccles (1989) highlight the importance of trust between authority and price, which leads to plural form organizations. These mechanisms, which are specific to plural form networks, can be seen as a means to build complementarities based on the two mechanisms proposed by Rajan and Zingales: (1) granting access to resources and (2) favouring specialization. One form of building complementarities is to give franchisees ("human" assets of the firm) a privileged access to the enterprise's resources (e.g. concept, methods, outlets' results, information) by transferring residual decision and residual income rights. This access is a necessary condition for the investment in human capital at the outlet level. Simultaneously, the franchisor has to strengthen its authority over the use of the critical network resources. Critical assets are the brand name assets and the human capital assets at the local market. Favouring firm-specific specialization for the franchisee can promote the development of local human capital assets and strengthen the franchisor authority. The more the franchisee's investments are

[4]Cf. Rajan and Zingales (2000, p. 19): "More precisely, a complementarity is said to exist when the unit and the firm can together create more value than they can going their own separate ways".

network-specific, the more the franchisee's rent is tied to a continuing relationship with the network. For instance, this network specificity results from the use of the network information system, the socialization in the network (Bradach 1998) and different transaction-specific investments of the franchisees as bonding device (Williamson 1983). Therefore, franchise contracts may offer different arrangements to support investments in critical assets. But, beyond these differences, we can conclude that franchising in a plural form network will be more efficient than company ownership when human intangible assets are valuable assets in the network.

In sum, we derive the following proposition: the more "critical" human and intangible assets are available in the network – that is the more these assets create the value of the network – the more is franchising an efficient governance structure. On the contrary, if human assets (not reported in the balance sheet) represent a small part of the firm's value, company ownership should be preferred as governance structure.

3 Hypotheses

3.1 Plural Form and Critical Assets

Following Rajan and Zingales (2000), it is considered that franchising as a governance form consists of a financial and organizational architecture (Windsperger and Dant 2006) which highlights the importance of human capital as a determinant of the governance structure. As argued above, the more valuable the intangible (human) assets are for the performance of the network, the higher the tendency toward franchisee-owned outlets is. Networks with a high value of intangible human assets should perform better with a high proportion of franchisee-owned units. The following hypothesis is derived:

Hypothesis H1: *The link between the proportion of franchisee-owned units (franchise proportion) and financial performance is greater for franchisors with a high value of intangible human assets than for franchisors with a low value of intangible human assets.*

3.2 Plural Form and Life Cycle Stage

Franchising is traditionally presented as a means to overcome the scarcity of franchisor's financial and managerial resources in the early stage of network development (Caves and Murphy 1976). As franchise networks become mature, they get easier access to resources, and the need for franchising should decrease. In addition, Bürkle and Posselt (2008) argue that, at the beginning of its life cycle, the

franchisor lacks sufficient resources and is poorly diversified and therefore strongly risk averse. Initially outsourcing outlets through franchising provides particularly high savings in terms of risk costs for the franchisor. In contrast, networks that have reached an advanced stage in their life cycle tend to be less risk averse, and the risk costs have less significance for them. Efforts to save risk costs become commensurately low through the increasing proportion of franchisee-owned units. Consequently, a higher proportion of franchisee-owned units should enhance the franchisor's financial performance in early-stage networks. Conversely a negative impact is expected from the proportion of franchisee-owned units on financial performance for larger networks that have reached an advanced stage of their life cycle. The following hypothesis can be formulated:

Hypothesis H2: *In the early (advanced) stages of the network development, the proportion of franchisee-owned units has a positive (negative) impact on a franchisor's financial performance*.

However, as outlined by Srinivasan (2006), when most high potential markets are covered by a firm's existing distribution system and its expansion may be limited to smaller, remote markets, market-based channels could be more efficient. Hence, the effect of life cycle stage on the franchising/performance relationship in advanced stages is unclear. For advanced life cycle stages, the effect of the proportion of franchisee-owned units on performance could be non-linear: it could reverse or become curvilinear.

4 Method

4.1 Data

Franchising networks are expanding in Europe. The latest figures provided by the European Franchise Federation (2008) show that there are no less than 9,750 franchising networks in Europe.

In this study, the focus is on publicly held franchisors in Europe. The initial sample of publicly held franchisors is built on information collected from various organizations (national franchise associations, franchise magazines) via their websites. Whether or not the largest franchisors in Europe (as listed at: http://www.franchiseeurope.com/top500/) were publicly held was also checked. A sample of 80 publicly held franchisors was thus obtained. Some of these franchisors were subsidiaries of publicly held firms. When the franchising activity was a marginal activity in the firm, it was not retained in the sample. Although they are listed on a stock exchange in Europe, some networks are non-European and have only a small part of their activities in European markets; they have been deleted from the database as well. Other data limitations, especially concerning the number of outlets, reduce the final sample to 41 franchisors. The model is estimated using

panel data on 41 publicly listed European franchising networks in the 1998–2007 period, resulting in 237 firm-year observations (41 firms the number of years of observation for each firm). The focus is on the European market at a multi-industry-level, contrary to previous studies, which have mainly analysed the US market in one specific industry. Data were obtained from various sources. Financial and accounting data were obtained from the Worldscope database. The data on the number of units and employees were obtained from the firms' annual reports and several franchising websites. In some cases, franchisors were contacted directly by email and/or by telephone to complete our information. Some firms entered after 1998 or exited before 2007, reducing the number of firm years. The average number of firm years was 5.78 (minimum = 1 year; maximum = 10 years). Most data stem from French franchisors, as there are 151 observations from 29 franchisors in France. There are also 20 observations from three UK franchisors, 17 observations from two German franchisors, 15 observations from three Italian franchisors, 10 observations from Belgium, 9 from the Netherlands, 8 from Spain, and 7 from Denmark (only one firm concerns the latter countries). Industry classification schemes of Datastream were adopted. Firms in the sample are distributed across 13 industries. Clothing is the first, with 67 observations, followed by mass distribution and special retail, with 37 observations each, restaurants, with 31 observations, do-it-yourself stores, 21 observations, and hotels, 10 observations. All other sectors (medical, real estate, travel, financial services, material, audio and video product and education) have less than 10 observations.

4.2 Measurement Scales

It is assumed that franchising has the same legal definition throughout the selected European countries even though in some of them franchising can be defined differently (Dant et al. 2008). The proportion of a network's franchised units to the total number of its units in its distribution system is used as the indicator of its plural form (franchise proportion). This is a continuous measure bounded between 0 (only owned units) and 1 (only franchised units). Following an instrumental approach (Jones 1995), the network's performance is measured at the franchisor level by its industry-adjusted return on assets. Industry-adjusted return on assets is the return on assets of each company in the sample minus the industry's median return on assets.[5]

A relative stock market valuation measure of human capital intangibles proposed by Pantzalis and Park (2009) is used. The excess value of a franchisor's

[5]Datastream database provides, for each firm, related companies for comparison purposes. These related companies are defined according to their industry. For one franchisor in our sample (Bang and Olufsen, audio and video product, group code "CNELE" in Datastream), Datastream does not provide related companies in the EU. For this company, performance and human capital measures are adjusted with the median of the total sample of related companies.

human capital (EVHC) "i" is measured as the natural log of the ratio of firm's market value of common equity (V) per employee (EMP) to the industry's median (m) value of market value of common equity per employee:

$$EVHC_{i,t} = \ln\left[\left(\frac{V}{EMP}\right)_{i,t} \Big/ \left(\frac{V}{EMP}\right)_{m,t}\right]$$

Following Pantzalis and Park (2009), it is assumed that EVHC reflects the market's assessment of the quality of the human capital employed by the franchisor. EVHC is used as a continuous variable, but a dummy variable is also used (EVHC = 1), which takes on the values 1 for high human capital (EVHC above the median) and 0 for low human capital (EVHC below the median).

The life cycle stage has already been used to show the evolution of growth and profitability in franchise systems (Anderson 1984). It is also a key concept concerning cooperative relationships between firms (Jap and Anderson 2007) even though one should be aware of an eventual dark side in relationships that are too close (Anderson and Jap 2005). It is proxied here by both categorical and continuous variables based on the franchisor's age (the number of years since its incorporation). Age is an imperfect proxy of life cycle stage but this variable, which is easily available, is often used in franchising literature regarding franchising rate and/or performance (Barthélemy 2008; Lafontaine and Shaw 2005; Perrigot et al. 2009). The franchisor's age was first used to create dummy variables. The first variable, named cycleage1, takes only two values: 0 for franchisors whose age is below the median, 1 for franchisors whose age is above the median. As the impact of the life cycle could be non-linear, a variable called cycleage2 was also created, which takes three values. Franchisors are thus classified into tertiles (thirds). The variable cycleage2 takes the values 0 for the youngest franchisors in the sample (first tertile), 1 for middle-aged franchisors (second tertile) and 2 for the oldest franchisors (third tertile). Age is also used as a continuous interaction and control variable in the regression analysis.

The control variables are the franchisor's size (natural log of total assets), financial leverage (long-term debt to total assets), and internationalization (number of domestic outlets to total number of outlets). Table 1 contains the descriptive statistics and Table 2 presents the correlations matrix of the measures.

Table 1 Descriptive statistics ($N = 237$)

Variable	Industry-adjusted ROA	Franchise proportion	Size	Financial leverage	International	Age
Mean	−2.5970	0.5021	12.7364	0.1561	0.6777	42
Median	−1.2900	0.4509	12.4823	0.1302	0.7558	36
Maximum	44.7300	0.9990	17.7471	0.5969	1.0000	109
Minimum	−80.7100	0.0000	8.4879	0.0000	0.0000	3
Std. Dev.	10.8500	0.3236	2.0678	0.1208	0.3112	26.0604

Table 2 Correlation matrix ($N = 237$)

Variable (t-stat)	1	2	3	4	5	6	7
1. Industry-adjusted ROA	1.0000						
2. Franchise proportion	0.0269 (0.41)	1.0000					
3. EVHC	0.1812** (2.82)	0.3108** (5.01)	1.0000				
4. Age	0.0099 (0.15)	0.0317 (0.49)	−0.0179 (−0.27)	1.0000			
5. Size	0.0544 (0.83)	0.0485 (0.74)	0.1552* (2.41)	0.3780** (6.26)	1.0000		
6. Financial leverage	0.0026 (0.04)	−0.2654** (−4.22)	−0.1585** (−2.46)	0.1565** (2.42)	0.2284** (3.60)	1.0000	
7. International	−0.0105 (−0.16)	−0.2502** (−3.96)	−0.0398 (−0.61)	−0.1976** (−3.09)	−0.3205** (−5.18)	0.0835 (1.29)	1.0000

*$p < 0.05$; **$p < 0.01$

The correlations are within acceptable limits (highest correlation = 0.378 between size and age). Potential threats from multicollinearity were assessed. The variance inflation factors are lower than 10, suggesting that multicollinearity is not a threat to the validity of the study's findings.

5 Results

We first test the hypotheses considering the impact of franchise proportion on performance using the interaction variables (age and human capital) as dummy variables (Table 3). To check these results, similar models were used, but using continuous variables for age and human capital (Table 4). All the regressions are

Table 3 Results for the model relating a franchisor's plural form to its performance using categorical interaction variables

Variable	Model I	Model II	Model III
Constant	−56.3451* (−1.93)	−73.5134** (−2.48)	−69.1959** (−2.34)
Franchise proportion	6.6269 (1.03)	10.2083 (1.38)	7.1139 (0.95)
AGE	0.8699** (2.87)	0.9378*** (3.06)	0.7669** (2.48)
EVHC	2.2262 (1.47)	0.6220 (0.36)	0.5485 (0.31)
Franchise proportion × EVHC = 1		11.2153** (2.32)	10.0148** (2.15)
Franchise proportion × cycleage1		−10.0670 (−1.50)	
Franchise proportion × cycleage2 = 1			−7.5945 (−1.10)
Franchise proportion × cycleage2 = 2			−1.8786 (−0.23)
Size	1.3138 (0.57)	2.1294 (0.92)	2.3142 (1.00)
Financial leverage	−6.767378 (−0.72)	−3.8662 (−0.41)	−5.3584 (−0.57)
Internationalization	−2.626115 (−0.33)	0.2132 (0.02)	1.5215 (0.19)
N	237	237	237
R-squared	0.3901	0.4090	0.4097
Adjusted R-squared	0.2425	0.2582	0.2551
S.E. of regression	9.4435	9.3451	9.3646
Sum squared resid	16,944.10	16,418.24	16,399.03
Log likelihood	−842.2378	−838.5019	−838.3632
F-statistic	2.64	2.71	2.64
Prob(F-statistic)	0.0000	0.0000	0.0000
Akaike info criterion	7.5041	7.4894	7.4967
Schwarz criterion	8.1919	8.2064	8.2284
Hannan-Quinn criterion	7.7813	7.7785	7.7916
Durbin-Watson stat	1.6206	1.7437	1.6698

Panel data regressions of industry-adjusted Return on Assets on network's franchise proportion, categorical variables regarding human capital and franchisor's age, and control variables. All regressions are estimated including a cross-section fixed effect

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Table 4 Results for the model relating a franchisor's plural form to its performance using continuous interaction variables

Variable	Model IV	Model V
Constant	−59.1311** (−2.06)	−59.4497** (−2.08)
Franchise proportion	29.3677** (2.44)	22.2505*** (2.70)
AGE	1.2738*** (3.69)	1.3561*** (3.83)
EVHC	−3.9829 (−1.52)	−3.7265 (−1.45)
Franchise proportion × EVHC	11.8912*** (2.88)	11.3579*** (2.86)
Franchise proportion × age	−0.4642 (−1.61)	
Franchise proportion × age^2		−0.0054* (−1.90)
Size	−0.0166 (−0.0072)	−0.2596 (−0.11)
Financial leverage	−6.6732 (−0.73)	−6.91 (−0.75)
Internationalization	−3.3123 (−0.42)	−2.9990 (−0.38)
$N =$	237	237
R-squared	0.4171	0.4202
Adjusted R-squared	0.2682	0.2722
S.E. of regression	9.2816	9.2564
Sum squared resid	16195.70	16107.89
Log likelihood	−836.88	−836.24
F-statistic	2.80	2.84
Prob(F-statistic)	0.0000	0.0000
Akaike info criterion	7.4758	7.4704
Schwarz criterion	8.1928	8.1874
Hannan-Quinn criter	7.7648	7.7594
Durbin-Watson stat	1.74	1.75

Panel data regressions of industry-adjusted Return on Assets on network's franchise proportion, continuous variables regarding human capital and franchisor's age, and control variables. All regressions are estimated including a cross-section fixed effect
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

estimated using a cross-section fixed effect, as a redundant fixed effect test showed that this specification was better than time-effect or no fixed effect.

Model I includes only franchise proportion and control variables (Table 3). A direct relationship between the proportion of franchised outlets and performance is not hypothesized, but rather a contingent relationship to human capital value and age. The regression coefficient for franchise proportion is not significant. The only significant variable is age, which positively impacts the franchisor's performance.

Models II and III include the interaction (categorical) variables. They relate the franchisor's performance to the franchise proportion and the interactions between franchise proportion and intangible human capital and between franchise proportion and age. Results show that, for franchisors whose value relies heavily on intangible human assets (EVHC = 1), the impact of franchise proportion is significantly greater. Hence the franchise proportion effect on performance depends on the value of franchisors' human capital, supporting H1. On the contrary, results do not show any differential effect of the franchise proportion on performance depending on the life cycle stage. Results do not corroborate H2. Using Wald tests, the effect of franchise proportion on performance depending on the human capital and stage in the life cycle can be estimated. Results show that, irrespective of the model (II or III),

franchise proportion has a positive impact on performance (at 5% level) for youngest franchisors with high human capital. However, this impact is no longer significant as franchisors mature.[6] Finally, for franchisors with a low human capital value, results do not show any significant effect of franchise proportion on performance.

These first results are completed by testing models with continuous measures of contingent variables (Table 4). Models IV and V are estimated on the same sample as previous models. What is striking at first glance in comparison to previous results is the positive direct effect of franchise proportion on performance. Barthélemy (2008) found a similar result on transversal data. Other results are in line with previous ones. The interaction between franchise proportion and human capital is positive, supporting H1. Moreover, a test for redundancy of the interaction of human capital and franchise proportion variables shows that this variable significantly improves the regression. Hence the effect of franchise proportion on performance is moderated by the franchisor's human capital. The effect of the interaction between franchise proportion and age is negative but insignificant, or weakly significant. In model IV we include these interactions directly (franchise proportion*age), but it is not significant. Different specifications are then tested to take into account that this interaction effect may not be linear as noted above. Only specifications that include square or cubic form of age show (weakly) significant results. Model V, which presents the results with age squared as interaction variable, improves marginally the quality of the regression in comparison with model IV. It seems that the older the franchisor is, the more the franchise proportion negatively impacts the performance. However the significance of the coefficient is quite weak to confidently support H2. It is difficult to conclude that age is a contingent variable in the franchise proportion/performance relationship; results clearly show, like in other models, that age has a direct positive effect on the industry-adjusted performance. This result could be explained by a "survivor bias", i.e. weaker franchisors disappear so that older franchisors are those that outperform their counterparts, and may not reflect causality.

Overall, our early and exploratory results support hypothesis H1 and provide support for the proposition that the performance of franchise chains is contingent on the "fit" between governance structure (franchise proportion) and resources (critical human assets). However, strong evidence that the governance/performance relationship is contingent on life cycle stage or franchisor's age was not found.

6 Discussion and Conclusion

Despite the growing importance of plural form networks in practice, there are few insights into their financial performance implications. This article explores the relationship between plural form and financial performance and concludes with a

[6]This variable is still slightly (at 10% level) positive in Model III but only for the oldest franchisors, not for the middle-aged franchisors.

discussion of the theoretical contributions, managerial implications, and limitations and opportunities for further research.

6.1 Theoretical Contributions

First, by relating plural form to financial performance, this article addresses the call for research on the performance implications of plural governance in general (Heide 2003) with a focus on plural form networks (Bradach 1997). The findings indicate that the impact of franchise proportion on performance is greater for franchisors with high human capital value compared to franchisors with low human capital value. Overall, early results provide support for the contention that the performance of franchise chains is contingent on the "fit" between governance structure (franchise proportion) and resources (critical human assets). In contrast, strong evidence that the governance/performance relationship is contingent on life cycle stage or franchisor's age is not found. However, our results suggest that franchisor's age could weaken the relationship between franchise proportion and performance. These results might suggest that younger franchisors with high human capital should increase their franchise proportion to enhance their financial performance.

Second, as far as currently known, this is the first substantial and empirical study of the plural form on a non-Anglo-Saxon market. Indeed, most of the previous papers dealing with franchising focus on Anglo-Saxon countries and, as far as the plural form networks are concerned, they mainly deal with the USA. Here, the empirical study concerns the European franchising market and compares various industries, mainly in the retail and services sectors.

6.2 Managerial Implications

The study's findings can be of interest for practitioners when the franchisors have to develop and the franchisees have to join a franchising network. From the franchisors' point of view, it seems that young franchisors with high human capital value can improve their performance by increasing their franchise proportion. This is not the case for other franchisors, especially when they are in a later stage of the life cycle. Assuming that this franchisor's performance impact is not due to a wealth transfer between franchisees and franchisors, it could help franchisees to choose their network. Franchise stakeholders will be able to take into account the various advantages of plural form within their choice process: the choice of the organizational form by the franchisor and the choice of the network form by the franchisees which consider the franchise proportion an important issue (Lafontaine 1992). These results reinforce the existence of synergies provided by the coexistence of franchising and company ownership within the same network, and also highlight some of its limits.

6.3 Limitations and Opportunities for Further Research

The study's sample ($N = 41$), though close to the total population of listed franchising networks in Europe, is small. This is detrimental to the significance of the results and it raises questions about the generalizability of the study's findings. Further research on performance in plural form networks with larger sample sizes would represent useful extensions, but some insights may improve quality of the results.

One of the explanatory variables in this study is the franchisor's life cycle stage, as (roughly) measured by age and categories based on franchisor's age. Research extensions using alternative life cycle stage measures, including sales growth, would both complement and extend the study's findings. Moreover, arguments from resource-based and risk-based theories lead to a prediction that franchise proportion will have decreasing (or negative) impacts on performance, as the franchisor matures. Weak evidence is found to support this idea. Hence, in the models using dummy variables, the positive impact of franchise proportion on performance for the franchisors with a high human capital value becomes less significant as the franchise system is in a later stage of the life cycle. In the models using continuous variables, some weak evidence is found regarding a negative impact of age on the franchise proportion/performance relationship.

The critical nature of human capital may vary over time, according to franchisor's age or life cycle stage. The impact of human capital on the franchise proportion/performance relationship may thus vary over time. Although this idea was not developed in this study, a three-way interaction among human capital value, franchise proportion, and age on chain performance (see Barthélemy 2008 with other variables) could be helpful to address this issue. More broadly, the "time-varying" power of existing theories to explain the benefits of franchising in various life cycle phases of the franchisor is an issue to explore.

In this study, plural form in franchising is viewed as a governance mechanism that is more efficient than full ownership when high intangible human capital exists in the networks. Actually, this may not always be the case: there may be some ways to reconcile ownership and decision rights in the network, even if the network exhibits an apparent high franchise proportion. Multi-franchising (ownership of multiple outlets in the network by one or more franchisees) can be such an organizational form, as it confers more power to the franchisee with regard to the franchisor (Kaufmann and Dant 1996) and can hence reconcile decision and ownership rights. Control for variables, such as multi-franchising should be taken into account as they can alter the results. However, this is not publicly available information (at least for a large part of our sample regarding multi-franchising), and including such control variables requires new data collection methods.

Finally, our empirical tests rely on regressions with interaction effects between franchise proportion and life cycle stage or human capital value. Other empirical methodologies would extend the study's results. Srinivasan (2006) uses latent class regression, which organizes the sample's observations into classes and estimates

regression models within each class. This methodology could be used on the sample, using human capital and life cycle stage as variables to constitute the latent classes.

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

Thomas Ehrmann and Brinja Meiseberg

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 study 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. We also find that expansion is better served by following a geographically dispersed cluster-approach, than by growing steadily from a baseline site.

1 Introduction

There is often a large gap between theory and practice...

Furthermore, the gap between theory and practice in practice is much larger than the gap between theory and practice in theory.

Jeff Case, SNPM Research

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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. 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 and Simmons 1987; Park and 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 and Drejer 2005; Ingene and Yu 1982; James et al. 1975; Lee and 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 and Madhavan 2001; Gulati 1999; McEvily and Marcus 2005).

To account for external resources transmitted by self-organization among (more or less) independent entrepreneurs, the RBV has recently been extended using the social network perspective (Lavie 2006). Together, the RBV and the social network approach provide what we call an *inner strength perspective* on interconnected firms, which holds that firms can combine internal and external resources to achieve competitive advantage (Gulati et al. 2000). 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-organization.

From a practitioner standpoint, it is notable that the thrust of academic literature on location strategies continues to focus on largely theoretical, unapplied scenarios in technique development rather than practical usage within the organisational context of the firm (Dasci and Laporte 2005; González-Benito 2002; Sakashita 2000; Wood and Tasker 2008). In practice, many systems rely on intuition guided

by experience and common sense, instead of sophisticated modelling (Hernández and Bennison 2000). Here, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch and Byrom 2004). Clarke et al. (2003) note that despite its importance, researchers ignore the essential role of pragmatic judgement (often organized along the 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 decisions? 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 organize decision-making to enhance outlet success – is central planning or encouraging network self-organization the better route?

To examine these questions and extend the literature on successful expansion strategies in franchising, we combine the literature strands on traditional location factors and the inner strength perspective. Using concepts from social network analysis, we test several hypotheses on two German franchise chains. First, we explore how location decisions are made in practice, i.e. which theoretical perspective prevails, and second, we shed 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 organize expansion to achieve beneficial performance outcomes.

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

2 Theoretical Framework

Management literature emphasizes that franchising facilitates rapid growth (Castrogiovanni and Justis 2002; Dnes 1991; Hall and Dixon 1988). Rapid growth is desirable for franchisors as it yields high outlet share, 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 and Ketchen 2003; Dant et al. 1996; Kaufmann and Dant 1996). Although research has often addressed retail store location strategies, the problem of positioning franchise outlets receives little attention (Kolli and Evans 1999).

From a practitioner standpoint, it is notable that academic literature on location strategies continues to focus on largely theoretical, unapplied scenarios in technique development rather than practical usage within the organisational context of the firm (Dasci and Laporte 2005; González-Benito 2002; Sakashita 2000; Wood and Tasker 2008). 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 and Eiselt 2005; Wood and Tasker 2008). That is, despite the simultaneous advent of low cost computing and increasing availability of data – giving managers the opportunity to take a much more rational approach to decision-making – research on retailers' site assessment procedures reveals that there are many who rely on intuition, guided by experience and *common sense*, instead of sophisticated modelling (Hernández and Bennison 2000).[1] So, "location planning is often undertaken on the basis of subjective rules of thumb" (Pioch and Byrom 2004). While recognizing 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), 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.[2] 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 and McLafferty

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

[2]See Huff's (1964) early contribution, Craig et al. (1984), Ghosh and McLafferty (1987), Jones and Simmons (1990), Kelly et al. (1993), Christensen and Drejer (2005), Park and Khan (2006).

1982; Ingene and Yu 1982; Lee and McCracken 1982; Khan 1999; Park and Khan 2006; Peterson 2003; Simons 1992).

Turning to the *firm perspective*, strategic management research has long used the RBV to explain differences in firm performance (Barney 2001; Peteraf 1993). Rooted in the early contribution of Penrose (1959), the RBV adopts an inward-looking view, conceptualizing firms as heterogeneous entities. These entities are envisioned as bundles of idiosyncratic resources that 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, we use the social network approach as part of the inner strength perspective.

So far, social networks largely represent a sociological concept. But Granovetter (1985) has pointed out early that the "mixing of [economic and non-economic] activities" is the "social embeddedness of 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). 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. Here, we seek 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 behavior. 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).[3] Interfranchisee relationships make up franchisees' connective capital. Connective capital is the stock of human capital that an individual can access

[3]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 2004).

through connections to others and that is developed with the purpose of tapping into the knowledge of co-workers via communication links (Ichniowski et al. 2003). Because knowledge assets are often considered the foundation of competitive advantage, connective capital takes the role of an input to the system's production function. Sydow (1998) argues that franchising has become a means to transfer knowledge across organizational boundaries.

Yet often, knowledge is *sticky* – relying on personal contacts to transfer it (Windsperger 2004). Sharing knowledge then requires time-consuming personal interaction (Nonaka and Takeuchi 1995). Regular face-to-face contacts are easier arranged in proximity. Also, trust as a basis for exchange tends to develop between proximate agents (Bachmann and Lane 1996; Williamson 1999). Thus, access to knowledge resources can be an essential driver of the choice of proximate sites.[4]

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

$\text{cluster\_size}_i = f\ (\text{regional\_economics}_j,\ \text{customer\_accessibility}_j,\ \text{competition}_j,\ \text{costs}_j,\ \text{network\_strength}_i)$, with $\text{network\_strength}_i = g\ (\text{franchisor\_support}_i,\ \text{supraregional\_embeddedness}_i)$, j = cluster index, i = franchisee index.

[4]In a globalized world, where capital and knowledge travel at high speed, we would expect economic activity to spread over space. Yet, a tendency for geographic concentration occurs ("location paradox"). The reason may be that competitive advantage is local: due to frequent interaction opportunities in 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 [...] often of more value than more conventional but less timely forums such as industrial journals" (Enright 2000).

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

$\text{franchisee\_performance}_i = h\ (\text{regional\_economics}_j, \text{customer\_accessibility}_j, \text{competition}_j, \text{costs}_j, \text{network\_strength}_i, \text{subnetwork\_strength}_i)$, with $\text{subnetwork\_strength}_i = m\ (\text{regional\_embeddedness}_i)$.

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

3 Hypotheses

3.1 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 et al. 1976; Ghosh and 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 and 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 et al. 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 and McLafferty 1982). In addition, low levels of competition from firms with a similar product offering, and low costs, can make an area attractive by presenting less threats to outlet performance than highly competitive, high-cost areas. Thus, potentially profitable economic conditions seem attractive for the positioning of many franchise outlets. Then, clusters become large, as such areas lure franchisees in with the promise of high economic performance.

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

3.2 Inner Strength Perspective Criteria

Network Strength: Franchisor Support. Evidence shows that most people 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 and Dark 1987; Lafontaine and Slate 2001; Lal 1990; Michael 2002), 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 does heightened levels of monitoring. Firstly, franchisees who frequently interact realize 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 et al. 2007). While Axelrod (1984) focuses on the evolution of cooperation based on rational self-interest, researchers in the sociology of collective action emphasize affective bonds that develop when parties in a relationship interact. Then, interaction provides a source of motivation that encourages team values and curbs free-riding (Kidwell and Bennett 1993). When free-riding, 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.

Hypothesis 2a (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.

Hypothesis 2b (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 realize 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 preexisting 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. We call the area in which such effects may occur a *supraregional cluster*.

Hypothesis 3a (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 and 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 cannibalization. Then, individual sales may decrease because demand spreads over more outlets. Lower performance, in turn, may reduce franchisee motivation to interact and cooperate. In addition, interaction on a supraregional scale can become costly due to investments in overcoming distance (like transport and communication costs). Information gained through interaction may further be irrelevant as in the supraregional area, franchisees' market environments may be quite different. Also, ties are weaker when individual network investments are spread over more relationships, because each relationship is less intense. Then, motivation to share resources tends to be low and incentives for opportunism tend to be strong. Thus, high supraregional embeddedness may negatively influence performance prospects and thus, location decisions.

Hypothesis 3b (H3b) *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. We term this radius 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 and 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 realizing network benefits.[5]

Hypothesis 4a (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 cannibalization 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.

Hypothesis 4b (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.

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

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

4 Data, Methods and Variables

4.1 Sample

The hypotheses are tested 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%). We select 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 and Garrod 2005; Tinsley and Lynch 2007). We select these chains 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". We distributed self-administered postal questionnaires, a cover letter assuring franchisees of anonymity and a university address for responses, to the apparel business franchisees (system 1) in 2006 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.

4.2 Variables

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

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

By fostering mutual support, cooperation plays a central intervening role in the relation between organizational 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[6] (Collins and Clark 2003; Lee et al. 2001; Park and Luo 2001; Sarkar et al. 2001; Singh and Mitchell 2005; Stuart 2000). Consequently, we have selected this precise, location-specific performance indicator that reflects outlet sustainability and growth.[7]

4.2.2 Independent and Control Variables

Regional Economic Conditions. We assess market potential with a set of demographic and socioeconomic variables (data from the Federal Statistical Office): total population, GDP, number of income tax payers, income tax total, average working

[6]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.

[7]For the first system, we can obtain data on total sales of the previous business year and on franchisee satisfaction with their business performance. We use this data 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. We build a scale that averages the sum of the scores on the four items, using equal weights. Cronbach's alpha is 0.82. Inspections of item-to-total and inter-item correlations also provide support for scale reliability. The inner strength variables show the same significant results for satisfaction as well as for total sales as for growth; there are no significant results for market conditions.

population, and business insolvencies (Ingene and Yu 1982; James et al. 1975; Khan 1999; Lee and McCracken 1982; Park and Khan 2006; Simons 1992). We use data for those counties that are within each franchisee's regional cluster boundaries, as cluster-specific data are unavailable. Factor analysis allows for a reduction in dimensions as all variables load heavily on the factor REC.[8]

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

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

Distance to the Franchisor. Following Brickley and Dark (1987) and Minkler (1990), geographic distance was calculated as the number of kilometers that lie in between a franchised outlet and the chain's 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 (we use double the cluster size radius). The measure corresponds to Minkler's (1990) outlet density, calculated as the number of stores within a certain radius. Following De Nooy et al. (2005), we consider *directed ties* (i.e. degrees are doubled), as in each franchisee pair, there are two potential sources of contact initiation (the two franchisees).

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

Controls. We control 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. We further control for outlet size (Windsperger and Yurdakul 2008), using the number of outlet employees as a proxy (SIZE). We further use 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 1 gives an overview of hypotheses and variables.

[8]The factor solution is robust (>93% explained variance, eigenvalue >1, KMO 0.79, significant Bartlett-test). Cronbach's Alpha (0.73) and the inspection of item-to-total and inter-item correlations provide support for scale reliability. All variables are significant when introduced into Model 0 separately. Over 50% of the sample franchisees joined their system in the last ten years; we suggest that over time, market conditions do not vary dramatically.

Table 1 Overview of hypotheses

Hypotheses		Perspective	Variable
1	Potentially profitable market conditions positively impact (a) cluster size, and (b) franchisee performance	Market	REC, TRAFFIC, COMP, COSTS
2a (b)	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
5a	Criteria that positively impact location decisions of franchise outlets also influence franchisee performance positively		
Age of franchisor–franchisee relationship, outlet size, system dummy			AGE, SIZE, SYSTEM

4.3 Methods

We use a stepwise Ordinary Least Squares Regression (OLS) and control for absence of multicollinearity, for homoscedasticity and normal distribution of disturbance terms, using Variance Inflation Factors (VIFs) and correlations, White-, Newey-West- and Kolmogorov-Smirnov-Tests. VIFs are all lower than two. 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, we use 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: $franchisee\_performance_i = h\ (regional\_economics_j, customer\_accessibility_j, competition_j, franchisor\_support_i, supraregional\_embeddedness_i, regional\_embeddedness_i\text{^})$, where $regional\_embeddedness_i$ ^ is the estimated value from the first regression.

To trace nonresponse bias, we compare early and late responders (Armstrong and Overton 1977) in each system. Late responders completed the questionnaire

over 3 weeks after the first group. As suggested by the high response rates, Mann-Whitney-Tests do not show evidence for nonresponse bias. We also compare the average sampled observation in each system with the average outlet-owner computed from the population of each chain along the dimensions age, number of years in business, and performance. To obtain information on the characteristics of the populations, officials in the chains were contacted. No evidence of nonresponse biases emerged.

5 Results

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

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

To test if cooperative interaction as proposed by the network model is a feature of these systems, franchisees answered several items (Table 3). For example, the availability of others for support provides a latent indicator for cooperative interaction: if perceived availability is low, interaction and access to support should be low

[9]We use costs as an instrument in the first stage of the 2SLS regression to estimate regional embeddedness. We measure costs 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.

[10]Still, we accept that 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.

Table 2 Results

Dependent Variable	Model 0		Model 1		Model 2	
	Cluster Size		Performance		Performance	
	OLS		OLS		2SLS	
C	−17.476	(27.189)	−144,310.878	(2,737,753.501)	10,475.039	(2,772,543.522)
REC	0.674*	(0.289)	2,309.349	(12,863.452)	−1,313.412	(13,748.007)
TRAFFIC	−0.182***	(0.039)	−9,515.990**	(3,540.803)	−7,911.318 *	(3,820.258)
COMP	−0.026†	(0.014)	−246.711	(1,062.424)	59.960	(1,175.375)
COSTS	−0.830***	(0.156)				
DISTSC	0.002*	(0.001)	39.104	(75.838)	29.302	(80.200)
SEM	0.062***	(0.015)	−3,162.720***	(748.902)	−3,589.966***	(1,071.443)
REM			9,040.829***	(2,445.014)	11,898.649*	(5,035.435)
AGE	0.012	(0.014)	109.703	(1,368.552)	14.573	(1,390.271)
SIZE	−0.125*	(0.073)	−2,289.015	(4,584.938)	−1,583.475	(4,826.526)
SYSTEM	−0.812*	(0.463)	219,351.011***	(35,642.940)	229,484.070***	(36,571.007)
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 3 Network interaction and cooperation

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-organized 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 fulfill 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–strongly disagree. The three affirmative answers represent "agreement"

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.[11]

[11]This idea is supported by franchisee statements on their interaction structures. The interaction levels in both systems are high. The items for access to others' support (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).

Table 4 Descriptive statistics

	Mean	St. Dev.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. CLUSTER SIZE	3.503	3.362	1.000										
2. PERFORMANCE	1,148.352	178,324.383	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	1,996.859	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): ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; †$p < 0.1$

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 et al. 1998). The correlation table supports the OLS and 2SLS results. We checked our results in interviews with the franchisor and system franchisees. They support the findings. Interviewees believed that market characteristics strongly affect the attractiveness of a location, that the structure of ties among system members affects social and economic behavior, and that input obtained through interaction enhances success.

6 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, we shed 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.

We find 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.[12] 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.[13] Providing a shield against competitive forces, inner strength renders franchisees relatively independent of market conditions. Whereas independent ventures cannot but take market criteria into consideration when deciding on the *right* location, because inner strength support does not exist here, franchisees who have a stake in deciding on their 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 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 (Hoffman and Preble 1991). On the franchisor level, results suggest that chances for successful expansion are enhanced when focussing on optimizing network configuration. The results show that location planning cannot be reduced to central knowledge and data management by the system centre: Franchising, as a key strategy in 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

[12]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.

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

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) 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 and Preble 1991) by incentivizing cooperative behavior. 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 et al. (1996) conclude that "responsibility lies with franchisors to [. . .] encourage franchisees to 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 et al. (2001) suggest that franchisors open company-owned stores at more profitable locations, while leaving the less profitable ones for franchise outlets. Yet, based on the study results, prior definitions of promising locations might benefit from a re-evaluation.

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Market Saturation or Market Concentration: Evidence on Competition Among U.S. Limited Service Franchise Brands

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Abstract This study uses 1997 and 2002 U.S. Economic Census data for *sales per establishment* measures of performance and examines the effects of market structure and concentration in a cross-sectional analysis of 55 metropolitan areas. The findings challenge traditional perspectives on market concentration, whereas markets with higher concentration ratios based on a brand's outlets and revenue were found to have significantly lower sales per establishment. Conversely, markets with greater variety of franchised and non-franchised restaurants show above average performance.

The results indicate the existence of an institutional submarket within a broader market of limited-service restaurant types, where evidence for competition exists among only the leading franchised formats, with non-franchised formats exhibiting little or no effects on the overall market's sales per establishment. Both franchisors and franchisees considering entry into a new geographic market should continue to evaluate traditional measures of sales per store, and if unavailable, examine the concentration or variety of competitors at the brand level to estimate the potential for new establishments.

1 Introduction

Business format franchising is the predominant mode of organization in the limited-service restaurant (LSR) sector of the U.S. food service industry. In 1997, establishments using the trade name of a franchisor accounted for over 78% of sales with just over 57% of the establishments, [1] with the top eight brands accounting for 49% of the total volume. In 2002, the last date for which U.S. Census data for limited service

[1]Table 7. Establishment Using a Trade Name Authorized by Franchisor for the United States and States: 1997, Miscellaneous Subject Series, Accommodation and Food Services, 1997 Economic Census, December 15, 2000.

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restaurants was available, the eight largest franchised brands increased their number and share of outlets, yet had a slightly declining portion of the sector's sales, dropping from 49 to 48%. Given the dependence of this industry on the strategies of a small number of franchisors, it is appropriate to consider the implications of this concentrated structure given the decline in its performance. The implications may be more severe within local markets, as across these market areas performance will vary while measures of concentration among different sets of competitors may be higher.

The period from 1997 to 2002 may mark an institutional shift away from franchising's dominance in this sector of restaurants. The early success of the franchised format in achieving a dominant share of the LSR sector would, by definition, have come at the expense of non-trade name independent establishments and smaller local chains. However, under current competition, increases in shares appear to come from other once successful franchise systems, such as Little Caesar's and Hardee's, two chains with 1,800 fewer franchisee locations in 2002 than in 1997. Where in the past, the failure of an independent establishment may have been attributable to its inadequacies in food preparation or profitability, today, a shift to smaller volume formats may drop volume at franchised establishments below levels necessary to remain viable.

Given the high concentration among franchised brands and the decline in sales performance, the purpose of this paper is to determine if a relationship exists between the structure of competition in markets and the impact on sales per establishment. This paper reviews the unique aspects of competition in restaurants and franchising with respect to the impact on sales per establishment. Then, an analysis of the effects of competitive structure on performance in the LSR sector using U.S. Economic Census measures of performance is provided, relating these to measures of market structure from on-line directory data on franchised restaurant brands. Implications for franchisors and new market entrants as well as for franchisees with respect to the conversion of outlets are discussed.

2 Restaurant Competition, Concentration, and Franchising

The nature of competition among restaurant types and brands is complicated in that competing units can be so highly differentiated in terms of menus and locations that defining a set of competitors in a market is challenging. From a broader perspective, the function of providing meals away from home places the restaurant into competition with many supermarkets which have started to offer take-out meals in recent years, as well as any nearby households in the market. Further complicating matters, establishments with complementary menus at a single location may increase total demand at that location such that neighboring establishments might be considered mutually beneficial, rather than as competitors. Ingene (1983) illustrated the complexity of restaurant competition in the U.S., examining the effects of the competitive structure in grocery retailing, as well as within the restaurant industry, on sales per restaurant establishment. He showed that concentration in grocery retailing and competition in restaurant retailing *both* were positively related to sales per

establishment in 1977, which would suggest that intertype competition may be more important than intratype competition.

As complicated as restaurant competition may be, if basic competition did not exist, there would be no explanation for how franchised formats have come to define the LSR sector in the U.S. Framed strictly in an anticompetitive perspective, franchising's popularity is attributable to the franchisee's belief that establishments bearing the unique trademarks of the franchisor will face limited intrabrand competition from better locations (e.g., Grünhagen and Dorsch 2003) and will be assured superior revenue and profitability. Though belief in protection from intrabrand competition may be the promise of franchising, research illustrates the conflict arriving from territorial encroachment from the franchisor or competing franchisees (c.f., Kalnins 2004). In markets without franchisor establishments, increased intrabrand competition through an increased number of franchised locations may result in a drop in incremental sales per establishment for the franchisee, but benefit the franchisor with steadily increasing royalties (Stassen and Mittelstaedt 1995).

Due to these aspects of intrabrand competition, the interpretation of a competitive market structure among franchised formats is more difficult than in markets where the competitors operate under uniform ownership. In the traditional industrial organizations framework (Bain 1968), as in grocery stores for example, high market concentration would be associated with higher sales per store, and potentially higher retail prices, among the competing firms. In contrast, in franchised systems, higher shares of sales by brand may be the result of higher intrabrand competition and lower prices. Up to this time, there have been no published studies examining the effects of the competitive structure within franchised formats on performance, despite the significance of franchising in the U.S. economy. This paper aims to fill this gap by providing recent evidence on the structure of competition within the limited-service restaurant sector.

3 Structural Changes in the Limited-Service Restaurant Industry

This study regards franchising in U.S. as in a mature industry phase, whereas a decline in the number of firms places increased emphasis on industry structure and on the performance of its competitors. The major changes in the Limited-Service Restaurant sector in the U.S are illustrated in Table 1, as the changes in the firms, number of establishments, percents of sales, and sales per establishment between the Economic Census years of 1997 and 2002 for this classification (NAICS 722211)[2] and for Trade Name franchising (within 722211) are shown. In terms of industry

[2]This U.S. industry comprises establishments primarily engaged in providing food services (except snack and nonalcoholic beverage bars) where patrons generally order or select items and *pay before eating*.

Table 1 Changes in structure in limited service restaurants in the United States, 1997–2002

	1997					2002				
	Firms	Establishments	(%)	% Sales	$/Est.	Firms	Establishments	(%)	% Sales	$/Est.
NAICS 722211	106,764	174,104	100.0	100.0	544	117,047	186,942	100.0	100.0	623
Single unit	96,348	96,348	55.3	33.1	325	107,524	107,524	57.5	35.8	388
Multiunit	10,416	77,756	44.7	66.9	815	9,523	79,418	42.5	64.2	942
3 or 4 establishments	2,730	9,204	5.3	7.4	764	2,478	8,361	4.5	6.4	898
5 to 9 establishments	1,700	10,727	6.2	8.9	787	1,732	11,120	5.9	9.1	951
10+ establishments	1,041	49,509	28.4	44.4	850	1,236	53,292	28.5	43.7	956
Concentration	4 largest	11,749	6.7	11.6	933		10,718	5.7	10.3	1,115
	8 largest	14,857	8.5	14.9	948		14,059	7.5	13.2	1,090
	20 largest	20,233	11.6	20.4	955		19,418	10.4	18.2	1,092
	50 largest	26,830	15.4	26.0	919		25,786	13.8	23.1	1,043
Trade name (Economic census)	Total	99,560	57.2	78.2	744		93,968	50.3	64.5	800
	Franchisor	42,030	24.1	34.9	787		29,243	15.6	20.6	821
	Franchisee	57,520	33.0	43.3	713		64,725	34.6	43.9	791
Franchise Brands (Technomic)	4 largest	31,262	18.0	36.4	1,103		41,591	22.2	34.9	977
	8 largest	54,922	31.5	49.1	846		61,289	32.8	48.3	918
	20 largest	72,866	41.9	63.0	812		79,020	42.3	62.2	918
	50 largest	85,191	48.9	71.7	797		93,805	50.2	71.4	878

concentration, if measured by the number of firms, the shares of establishments and sales have decreased, suggesting the industry is becoming increasingly competitive. In contrast, in terms of concentration by franchised brands (or trade name franchising), the concentration of establishments has increased, and their importance of trade name franchising to this sector has dropped or at best, remained flat.

3.1 Establishment and Firm Level Data from the Economic Censuses of 1997 and 2002

The number of firms in NAICS 722211 increased from 106,764 to 117,047, with an annualized growth rate of 1.5%, ahead of estimated growth rates for the U.S. population (1.1%). Given this situation, markets would expectedly become more saturated and more competitive. Breaking the 12,838 additional establishments down into single- versus multi-unit firms, net growth in the single unit classification accounts for 11,176 firms/establishments of this growth.

In contrast to expansion in firms and single-unit establishments, the number of multi-unit firms declined from 10,416 to 9,523, with their corresponding growth in units accounting for a relatively modest portion (1,662) of the change. While there has been a corresponding growth in sales with the increased number of establishments, multi-unit firms, overall, account for a slightly declining proportion of the industry's sales, falling from 66.9 to 64.2% in the sector. Sales per establishment increased over time, with larger chains having higher sales per establishment in 1997 and 2002, yet also exhibiting a lower percentage increase (associated with the larger denominator). Using the results of chains with ten or more establishments, these larger chains are operating more establishments, indicative that geographic markets may be becoming less competitive in terms of ownership and that sales per establishment have increased, keeping pace with the growth in sales in the limited service sector.

3.2 Concentration of Sales in Franchise Systems, 1997 and 2002

The evidence from 1997 to 2002 shows a declining concentration of sales within the largest firms. The 4, 8, 20 and 50 largest chains consist predominantly of franchisor-owned systems (i.e., McDonald's owning 2,102 establishments), wholly owned corporate chains, and systems with large multi-unit franchisees. The concentration ratio data show a declining number of establishments within each level of concentration. For example, within the four largest firms, there was a drop of 1,031 units, while simultaneously having the highest sales per unit and increases in sales per unit. The concentration data and the multi-unit data can be reconciled in that the largest chains may be retaining their highest performing establishments, and

transferring operation of their lower performing establishments to franchisees, as evidenced in the increase in sales per establishment of $34 thousand (821–787) being below the $81 thousand (878–797) for the 50 largest.

The December 2005 Miscellaneous Subjects report for franchising in limited service restaurants ("*Establishments Using a Trade Name Authorized by Franchisor*") shows the most significant change within the sector, with a net drop of 5,592 establishments between the years. According to the Economic Census, there has been a decline of 12,787 franchisor-owned establishments. The significance of franchising in the limited-service restaurant sector has declined from 78.2 to 64.5% of sales. Further, the increases in sales per establishment in the Trade Name franchising portion of NAICS 722211, while positive, are the lowest of any within the Economic Census data.

3.3 Restaurant Brands Data from Industry Reports

In contrast to the evidence of declining ownership concentration from the Economic Census, data on franchised *brands* provided by Technomic, Inc., shows that in terms of the largest brands, the top 4, 8, 20, and 50 account for increasing numbers and shares of establishments. Specifically, the top four firms have 10.7% of sales in 2002; but with the top four brands, this percentage is 36.4. Moreover, the number and share of establishments within the four largest brands increased by 10,329 and 5.5%, respectively, over this 5-year period.

While the Economic Census shows a significant decline in the leading firms number (and percentage shares) of establishments, the report by brands shows the opposite with regard to establishments, but agree with respect to the declining importance in terms of sales. In sum, the brand level data shows that while the top 50 brands have added a net 9,486 establishments, the shares of total revenue at the top 4, 8, 25 and 50 brand breaks show modest *declines* at each level over the 5-year span.

Table 2 provides detail regarding the largest limited-service restaurant systems, accounting for the majority of change occurring between 1997 and 2002. Notable in the table is the broad range in sales per establishment within the leading brands. Specifically McDonald's added roughly ¼ the number of units of Subway, but averaging over four times the sales per unit ($1,500 thousand vs. $360 thousand). The addition of 3,356 franchised units by Subway in the 5 years moved them into the Top four brands, creating a subsequent drop of 11.4% in sales per store among the top brands. Further, the table shows those brands moving away from company-owned outlets, increasing their franchised outlets, and the difference in sales per establishment of both types. The far right column in the table provides the difference in sales per outlet of franchisee versus franchisor, and with the exception of Domino's, Sonic, and Hardee's, franchisor-owned establishments have higher sales per outlet than franchisee establishments. With respect to concentration, the major brands are relying on franchised outlets to maintain their share of the market, with a

Table 2 Changes in structure for leading franchised brands in the United States, 1997–2002

	Franchisor-owned establishments				Franchisee establishments				Franchisee vs. franchisor $/N
	Ests. 2002	Ests. vs. 1997	$000/ Est.	$/Est. vs. 1997	N 2002	N vs. 1997	$000/ Est.	$/N vs. 1997	
McDonald's	2,102	304	1,509	0.8%	11,389	807	1,504	10.3%	−0.3%
Burger King	607	93	1,076	-0.2%	7,422	397	1,030	-0.9%	−4.2%
Wendy's	1,183	110	1,310	12.0%	4,366	864	1,208	26.5%	−7.8%
Subway	1	1			14,521	3,356	358	37.9%	
Taco Bell	1,284	−865	1,199	17.2%	4,881	262	746	32.5%	−37.8%
KFC	1,284	−566	1,075	36.7%	4,188	918	832	6.9%	−22.6%
Domino's Pizza	584	−182	582	14.3%	4,227	562	609	6.7%	+4.6%
Arby's	0	0			3,250	325	829	18.3%	
Top 8	7,045	−1,105	1,226	16.9%	54,244	7,491	879	10.2%	−28.3%
Jack in the Box	1,517	543	1,206	16.2%	358	13	1,184	18.8%	−1.8%
Sonic Drive-Ins	460	192	740	23.7%	2,113	656	900	27.1%	+21.6%
Papa John's	585	184	735	17.4%	2,000	884	660	19.4%	−10.2%
Hardee's	730	−133	770	3.9%	1,343	−738	846	−13.9%	+9.9%
Chick-fil-A	889	241	1,470	48.8%	185	72	358	29.1%	−75.6%
Popeye's Chicken	146	27	1,233	51.2%	1,231	406	865	13.9%	−29.8%
Golden Corral	118	−65	2,993	65.9%	352	83	2,282	40.1%	−23.8%
Little Caesars	425	−675	506	−67.6%	2,275	−1,125	413	178.2%	−18.3%
Top 20	13,552	−833	−833	11.3%	65,468	8,336	8,336	13.9%	−25.9%
Next 30	4,119	−193	−193	26.0%	10,666	2,908	2,908	9.7%	−43.7%
Top 50	17,671	−1,026	−1,026	14.1%	76,134	11,244	11,244	12.8%	−27.5%

Source: Technomic Reports, Inc

declining proportion, and in many cases, a declining number of their outlets being company-owned. As shown in the bottom line of the table, the Top 50 shows a net drop of 1,026 of these establishments, while franchisee outlet growth is at 11,244.

While franchise systems account for 60% of the outlets, and between two-thirds and three-fourths of the limited-service restaurant industry's sales, their performance is not indicative of the sector as a whole. The evidence presented between 1997 and 2002 on LSR shows an industry with vigorous growth in the number of firms, establishments, and, importantly, sales per establishment. In comparison, the evidence on franchising within the sector shows (1) increases in franchisee outlets and concentration of outlets by leading brands, (2) dramatic decreases in the number of typically higher-performing franchisor-owned outlets, and (3) a significant decline in the share of revenue by the franchising sector, its leading firms and its leading brands. Collectively, given these changes in structure, performance in terms of sales per establishment would, by mathematical necessity, trail that of alternative chains operating under unified ownership. An appropriate question is then, are these changes in share or sales per store attributable to gains made in non-franchised format competition, or to the competition among franchised competitors themselves?

To examine the effects of the changes in structure on industry performance, a cross-sectional analysis of the central urban districts of metropolitan areas is presented. While the largest restaurant systems in the U.S. are national entities, they compete within metropolitan consumer markets, with each market providing a unique combination of structure and shares among the competitors. As such, an

analysis of the correlations of these components can show the magnitude and significant associations, providing insight to the probable causes of franchising's changing importance in this sector.

4 Methodology

The measures used in the cross-market analysis are from two different sources. First, frequencies for the number of establishments and sales for each metropolitan market are from the Economic Censuses of 1997 and 2002, permitting calculation of restaurant density and sales per store. Second, an audit conducted on the leading restaurant brands in 2002 from on-line directories and store-locaters at the restaurant systems' web-pages provided the number of establishments for the markets, permitting measures of density, variety, and concentration.

4.1 Directory Data on Limited-Service Restaurant Chains

Fifty-five Metropolitan Statistical Areas (MSAs) including every U.S. state were selected on the basis that each could represent a market within its governmental boundaries. These MSAs were selected to be those smaller in population, comprised a single county, and would not overlap state lines. Comparison of the measures from the sample areas were made to the remaining 405 U.S. metropolitan areas to check for substantial market differences affecting the analysis and none were evident.

The measures of density, variety, and concentration were calculated based on an audit conducted through an online directory (Yahoo Yellow Pages), where the counts of stores for top limited service restaurant chains (Technomic Reports 2004) were compiled. The central city (place) of the MSA provided the starting point for the count for the stores by chain, with the stopping point being the outermost location of the chain with the most units (McDonald's or Subway) where a significant break in distance was found from that location to the next closest. The following measures for limited-service restaurants were calculated from the audit:

Restaurant Density: To measure the degree that the market was overstored, or saturated, the total number of limited service franchised restaurant locations from the directory was divided by the population within the market. Trade area software (Spectra) was used to determine the population within the circular trade area determined by distance from the market center for most frequently occurring chains. For markets where the trade area population was less than the population for the Census geographic area (trade area was within the geographic area), an average of the two measures was used.

Restaurant Variety: The number of national chains found within the market provided an indication of the variety of restaurant formats. Dividing this by the total number of national chain establishments (used in the density measure) created a standardized measure, more useful across varying sized markets, of the likelihood of encountering a different format in the metro area. The closer the ratio was to 1.0, the greater the uniqueness of the next location.

Restaurant Concentration: For each market, the proportion of total national chain establishments within that market's four and eight largest brands was used to measure market concentration within the category, with the brands within the top four (and eight) changing across markets. The average sales per unit for each chain reported by Technomic was multiplied by the respective number of outlets to form an estimate of revenue by brand, allowing for concentration measures based on share of locations and sales revenue for each market.

4.2 Economic Census and Census of Population Data

The measures for performance for this study are from the 1997 and 2002 U.S. Economic Census Geographic Area Series for Accommodation and Food Services, specifically, "Limited-Service Eating Places" (NAICS 7222) and "Limited-Service Restaurants" (NAICS 722211). These reports provide the number of establishments and revenue for the geographic area. When both 7222 and 722211 were provided for an area, reports for the more specific classification, i.e., 722211, were used. Similarly, in the majority of markets, data for central cities ("places") was used, rather than the MSA, as it provided a closer match to estimated revenue and geography of the online data collection for the chains. In cases where small numbers of firms and disclosure of performance made the data for the "place" unavailable for either 1997 or 2002, data for the MSA was used.

Sales per establishment provided the chief measure of performance. The difference over the 5-year period (2002–1997) provided a change in sales per establishment, or an indicator of the changing "health" of the market's restaurants. Last, the change in number of establishments, and percent change were also calculated.

Table 3 provides descriptive statistics for the 55 selected markets in the study. In comparison to the other metropolitan areas not in the study, the 55 selected markets had somewhat lower sales per unit for both periods ($546.8 vs. 586.6 in 1997; $637.4 vs. 691.8 in 2002) and as such, lower increases mean in sales per unit). However, when the selected markets are compared to U.S. averages, the mean average sale per establishment for the selected markets ($637.4 thousand) is closer to the national average ($623 thousand) than was the mean for the unselected group ($692 thousand) of metropolitan areas. The two groups were more similar in the number and changes in number of establishments over the period.

Since the markets used in the analysis were purposely selected to meet criteria for a definable geographic market, additional measures were included to assess the effects of other factors on this sample's performance measures. In addition to the

Table 3 Descriptive statistics for sample markets

		Minimum	Maximum	Mean	Standard deviation
Economic census 1997, 2002					
Sales per establishment 1997		237.2	761.9	546.8	107.1
Sales per establishment 2002		270.7	862.4	637.4	116.1
Change in sales per establishment, 2002–1997		-33.1	237.8	90.5	58.4
Number, limited-service restaurants 2002		20	564	101.3	107.6
Change in number of establishments		-50	52	4.8	15.9
Percent change in number of establishments		-23.1%	36.7%	5.0%	12.6%
2000 Census of population					
Population		30,706	735,503	122,249	144,264
Establishments per thousand persons		0.36	1.80	0.94	0.26
Proportion of population commuting by car, truck or van		0.29	0.50	0.41	0.05
Proportion working outside home with commute under 30 min		0.65	0.94	0.83	0.07
Median household income		24,409	55,546	35,701	7,098
Per capita income		13,882	26,017	18,809	3,027
2002 Online audit					
Number of establishments		21	466	75.4	84.2
Density: establishments per thousand persons		0.16	0.85	0.48	0.15
Number of brands as a share of establishments		4.9%	26.5%	15.7%	4.8%
Share of establishments in leading brands	Top 4	33.3%	76.8%	46.2%	8.4%
	Top 8	52.4%	88.4%	68.8%	8.5%
Estimated share of revenue in leading brands	Top 4	30.2%	77.1%	47.0%	10.1%
	Top 8	42.8%	91.3%	65.9%	11.7%

measures from the Economic Census, measures from the Census of Population and Housing on mobility and income, comparable to those used by Ingene (1983), were included. Given the importance of drive-through windows as a means of increasing sales at LSR restaurants, the proportion of those working outside the home *commuting by car, truck, or van (CTV)* would expectedly increase sales per establishment. Similarly, a short commute (less than 30 min) can be expected to increase sales in the market, and sales per establishment. Ingene showed income to be positively related to sales of restaurants, and as such, *per capita income* and *median household income* were included. The selected markets differed in that they had higher proportions with shorter commutes and lower mean levels of income than was found in those markets not included in the study.

The table also includes the ranges for the measures taken from the on-line census of brands within the markets, and showed comparable counts to those in the Economic Census with a slight difference attributable to the differences in market areas. The concentration measures were based on the rank of firms in each market,

and cannot be compared to the shares in the national market in Table 1 except that concentration within the selected markets far exceeds that found across markets.

5 Results

5.1 Analysis Within Economic Census Measures

Table 4 provides the correlation coefficients of the measures from the Economic Census and the Census of Population and Housing. The results provide a first indication of competition within the limited service restaurant sector, with the magnitude of the correlations providing little or no evidence of a highly competitive market structure. Specifically, correlations of the ratio measure *sales per establishment* (1997 and 2002) and *change in sales per establishment* would be expected to be more negatively correlated with its denominator, the *number of establishments* (in 2002). The results show these correlations to be significant, but of low magnitude, accounting for, at best, only 3% of shared variance (-0.17^2). Conversely, the *change in number of establishments*, and *percent change in establishments*, is more closely associated with sales per establishment in 1997. In terms of saturation effects, none are evident as the *number of establishments per person* shows no significant negative effect on (1) *sales per establishment*, (2) the *number of establishments* or (3) the *changes in number of establishments*.

Three differences where a significant relationship was evident in the sample group in comparison to markets not in the study are attributable to the geographic criteria used for their selection as markets. First, the sample group shows a significant negative correlation (-0.37) between the *percent change in the number of establishments* and the *change in sales per establishment*, consistent with what would be expected in definable restaurant markets. In larger metropolitan areas not in the study, the correlation was not significant (-0.08).

Second, the two mobility measures (*proportion commuting by CTV* and *commute under 30 min*) are positively correlated to *change in sales per establishment* (0.35 and 0.34). In the markets not studied, they are near zero, consistent with what might be expected in geographic markets with demand overlapping with adjacent areas. Related to this the correlations between the *number of restaurants* and *population* was near unity in both groups (0.95/0.96), indicating both serve as measures of market size. In the sample group, both measures are negatively correlated with the *proportion with commutes under 30 min*, (-0.48 and -0.54, respectively), whereas in the broader group of markets not in the study, the correlations with these measures were near zero (0.08 and -0.02). In other words, within a sample of more isolated markets, increases in market size enables a significant negative effect of size on the proportion with a shorter commuting time to be seen.

Last, although near identical when interpreted as measures of size, the *number of restaurants* and *population* exhibited distinct differences with respect to the

Table 4. Correlation coefficients in sample markets

	Sales per establishment			Number of establishments			Population	Commuting		Income	
	1997	2002	2002–1997	2002	2002–1997	%2002–1997		%CTV	%30min	Media HH	Per Capita
Sales per establishment 2002	0.87***	1.00									
Change in sales per est.	−0.11	0.40***	1.00								
No, of establishments 2002	0.04	0.03	0.00	1.00							
Change in number of ests.	0.10	0.01	−0.18	0.23*	1.00						
%Change in number of ests.	0.02	−0.16	−0.37***	0.05	0.68***	1.00					
Population	0.03	0.00	−0.05	0.96***	0.24*	0.08	1.00				
% Commuting by	0.19	0.35***	0.35***	0.17	0.04	0.00	0.14	1.00			
% Commute under 30 mins.	0.06	0.22	0.34**	−0.48***	−0.15	−0.17	−0.54***	0.09	1.00		
Median household income	−0.01	0.04	0.09	0.27**	0.27**	0.16	0.34**	0.65***	−0.28**	1.00	
Per capita income	−0.03	0.03	0.12	0.26*	0.18	0.07	0.22	0.63***	−0.15	0.80***	1.00
Establishments per person	0.11	0.10	0.00	−0.19	−0.13	0.00	−0.38***	0.01	0.44***	−0.35***	0.06

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

measures of income (*median household income* and *per capita income)* in the selected group. In the table, the relationships are positive, 0.27 and 0.26, respectively. In metropolitan areas not in the study, the relation was significant and negative (−0.24 and −0.12) markets. Though demand for limited service restaurants would not be expected to be highly correlated with income, demand for the offerings of the U.S.'s largest and most successful franchised restaurants would not be expected to be negative either. In summary, the more purposeful selection of metropolitan areas with respect to isolation permits an analysis that can view that as distinct markets, such that the structure of brands and the variety within the markets on the performance of units can be examined.

5.2 *Analysis of Economic Census Measures with Franchised Format Audit*

Table 5 provides the correlation coefficients between the market characteristics from the directory data on specific franchise systems with the performance and change statistics from the Economic Census. Two rows of coefficients in the table are provided to show the main sample group (n = 55) and a sub-group with populations below 100,000 (n = 29). Included in the table is the number of limited service restaurant establishments in 2002 (*Number of establishments*) to serve as an indicator of the size of the restaurant market.

The positive correlations for the national chain density measure (number of establishments of national chains to market population) shows that markets with

Table 5 Relationship of economic census performance measures to structural measures of leading limited-service brands. Correlation coefficients from complete sample and smaller market subsample

	N	Measures from 2002 online directory audit of top limited-service national restaurant chains					
		Density: establishments per person	Variety of brands as a proportion of establishments	Proportion of establishments in		Estimated proportion of revenue in	
				Top 4 brands	Top 8 brands	Top 4 brands	Top 8 brands
Sales per establishment 1997	55	0.28**	−0.04	−0.15	−0.15	−0.40***	−0.44***
	29	0.09	−0.30	−0.08	−0.11	−0.33*	−0.36*
Sales per establishment 2002	55	0.43***	0.08	−0.25*	−0.25*	−0.53***	−0.55***
	29	0.23	−0.18	−0.21	−0.22	−0.50***	−0.51***
Change in sales per establishment, 2002–1997	55	0.34**	0.23*	−0.21**	−0.22**	−0.31**	−0.29**
	29	0.27	0.21	−0.24	−0.21	−0.32*	−0.28
Number of establishments, 2002	55	−0.09	−0.59***	−0.28**	−0.32**	−0.30**	−0.32**
	29	0.52***	−0.27	−0.48**	−0.56**	−0.59***	−0.60***
Change in number of establishments	55	−0.11	−0.12	−0.22	−0.26*	−0.19	−0.23*
	29	0.14	0.11	−0.37**	−0.36*	−0.22	−0.29
Change in number of establishments (%)	55	−0.03	0.02	−0.11	−0.18	−0.03	−0.10
	29	0.13	0.13	−0.32*	−0.33*	−0.16	−0.25

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

higher densities have higher sales per establishment (for the years 1997 and 2002) and a higher change in sales per store, as a sharp contrast to what is shown in Table 4. The correlation for the 2002 Economic Census data is higher in magnitude (0.43 vs. 0.28) suggesting that recent performance in these markets supports the higher restaurant densities. It should also be noted that this density measure is not significantly correlated with the number of limited service restaurants of the overall sample (−0.09), and tracks more closely (0.52) with the smaller market sub-group.

The *variety* measure (the number of different national chains to the total number of national chain establishments) is not significantly correlated with either of the 2 years' sales per establishment, but does show a correlation of low significance (0.23) with the change in sales per unit. The highly significant negative correlation of this measure with the *number of LSR establishments* for the entire sample versus the smaller market subgroup (−0.59 vs. −0.27) illustrates the effect of multiple units on a market's variety. Stated differently, examining this phenomenon within only the smallest MSAs would not illustrate the counterintuitive effect market size on variety within limited-service restaurant chains.

The correlations of the largest magnitude in Table 5 are those between the concentration measures on revenue and the *sales per establishment* in 2002, with lower magnitude correlations for these measures from 1997, showing within-year correspondence between structure and performance not shown in Table 4, which is noteworthy since the measures were from the same source with identical geographic definitions. Similarly, the concentration measures based on the share of establishments have a higher correlation with the *number of establishments* in 2002.

The significant negative correlation coefficients of all four measures of concentration with the *number of establishments*, viewed here as a measure of market size, and higher magnitude coefficients in the smaller market subgroup, show concentration to be higher in smaller markets. Referring back to Table 4, no relationship was shown between the *percent change in number of establishments* and the *number of establishments* in the selected group. The results show that market size and concentration interact to negatively affect the *change* (and *percent change*) *in number of establishments*, such that smaller markets with higher brand concentration attracted significantly fewer new establishments.

6 Discussion and Implications

Business format franchising agreements provide the franchisee with the rights to use the trademarks of the franchisor and territorial exclusivity. Both rights are designed to provide protection from competition, and promise superior sales revenues as well as higher sales per store than could be realized from a non-franchised format. Recent U.S. Economic Census statistics for the franchise industry indicate increasing sales competition in the limited-service restaurant (LSR) sector. Since 1997, franchising has shown minimal growth in overall revenue, relatively low

growth in sales per establishment, and a decline in share from 82 to 67% of overall limited-service restaurant revenues.

The analysis presented in this study shows that while franchising is lagging behind other competitive forms of LSR in growth in sales per store, it also shows it to be responsible for the dramatic increases in the number of franchised establishments between 1997 and 2002. This growth in the number of outlets among the leading brands has led to the differences in market concentration found in the markets selected for analysis in this paper.

The results of this study indicate the existence of an institutional submarket within a broader market of limited-service restaurant types, where evidence for competition exists among only the leading franchised formats, with non-franchised formats exhibiting little or no effects on the overall market's sales per establishment. Specifically, the results show that brand concentration in the franchised sector is an indicator of sales per establishment, where markets with above average concentration have below average restaurant performance. What makes this finding even more interesting is that the *number of establishments per person*, a traditional indicator of restaurant saturation, exhibits a positive relationship with the market's sales per establishment, in contrast to an expected negative relationship for a mature market or the independence shown in the analysis conducted solely with Economic Census measures (Table 4). In short, a market with many franchised establishments "competing" has superior performance compared to a concentrated market where the top brands constitute a majority of sales and establishments.

The results are not a definitive indication of encroachment, as sales per establishment provided in the Economic Census constitute a market average of franchised and non-franchised competitors, not average sales per store of franchised establishments. However, the significant correlations between sales per establishment and the measures of concentrations provide compelling evidence that high brand concentration is not only indicative of competition, but also most likely indicative of the saturation of markets. In addition, the results show that 2002 concentration is more closely linked to 2002 performance than to 1997 performance. This can be contrasted to the evidence in Table 4, indicating performance in 1997 led to the change in establishments shown over the 5 years. Hence, summarizing across the two sets of results, markets with higher sales per establishment in 1997 had above average growth, but markets where growth resulted in above average concentration of franchised formats had below average performance in 2002. Clearly, potential entrants to a geographic market would benefit from evaluating the concentration of establishments among the leading formats, avoiding those with higher concentration, and be less discouraged by the number of restaurants, franchised or non-franchised, in the market.

In the franchise literature, the difference in franchisor versus franchisee sales performance has provided one explanation as to why more successful franchisee establishments may eventually be converted, or re-directed, into franchisor establishments (Oxenfeldt and Kelly 1968; Dant et al. 1992). Conversely, this study's evidence that growth in sales per establishment at all trade name LSRs lags behind other restaurant classifications, may provide an explanation for the sharp drop in the

proportion of franchisor-owned establishments from 1997 to 2002. If concentration effects are reducing sales per establishment, those markets with the highest concentration of brands may also be the ones with sharpest re-conversion of franchisor to franchisee establishments.

The results also show that the franchisor practice of increasing its share of outlets in a market may not only provide an increase in royalties, but serve as a deterrent to new entrants by reducing the anticipated sales per establishment. As such, the results are consistent with those in the lodging industry where concentration is associated with overcapacity, deterring new entrants (Conlin and Kadiyali 2006). The practice can be effective if the franchisor is satisfied with the current number of franchisees and the franchisees can remain profitable at lower sales per establishment. Franchisors claiming to be experiencing a "shortage" of new franchisees need to examine the industry's practices that have created the fading differential advantages to becoming a franchisee.

The wide acceptance of Michael Porter's (1980) application of industrial organization economics to market strategy makes it appealing to extend its "five forces" approach to geographic markets for consumer goods and services. In his perspective, less competitive, more concentrated markets should be more "attractive" as they are more profitable. This analysis has shown that in terms of brand concentration, the complete opposite is true. Though the results for the variety measure used in the analysis are disappointing in this study, the concentration ratios would appear to be the overwhelming effect accounting for lower sales per unit. In this regard, there appears to be a limit to the size of a market that Porter's perspective can be applied. Though the "*bargaining power of customers*" remains very low in markets for limited service restaurants, their collective incentive to eat outside the home is dulled by an impression that there is too much repetition of the same offerings in the market.

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A Model of Optimal International Market Expansion: The Case of US Hotel Chains Expansion into China

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Abstract A comprehensive model of international expansion is outlined and applied to determine the optimal country to be targeted for entry by a US hotel firm and the optimal entry mode to be used. Using a strategic, sequential process, the model performs three levels of assessment: a macro assessment that identifies the major external environmental variables in order to determine the risks and opportunities of international expansion; a micro assessment where environmental variables capturing the countries' local market conditions and the firm's specific characteristics are utilized to estimate potential profitability and net present value; and an assessment of the market entry strategy that would be optimal for the target market under consideration.

To illustrate how this international expansion assessment model can be used, the three levels of assessment are sequentially applied to a hypothetical US-based hotel company that is representative of major US hotel firms. Though only 12th in the ranking of the top desirable expansion destinations from a macro opportunity/risk perspective, China moves to the top after the micro (country/industry/firm) assessment. For a US-based hotel company, it is determined that expansion into the China mid-market segment through management contracts would provide the optimal value for this firm.

By helping managers to quickly identify the optimal country in which to expand from a universe of close to 200 potential targets, the model illustrated here can significantly reduce the time and cost to develop and implement a firm's international expansion strategy and reduce potential risks of failure and loss.

This study highlights the need for a strategic approach to international expansion decisions and the central role that risk assessment and risk management can play in these decisions. It also underscores the importance of country-specific macro-environmental and micro-environmental factors.

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1 Introduction

Increasingly, US-based franchise firms see expansion into foreign markets as a key strategy in their quest for growth, profits and shareholder value creation. From 1971 to 1985, US-based franchise firms increased their overseas units at a 17% annual rate (Justis and Judd 2003). More US firms venture overseas than ever before. Fifty-two percent of the US-based members of the International Franchise Association reported that they had units overseas in 2006 versus only 34% in 1989 (Schlentrich and Aliouche 2006).

The main pull of international expansion for US-based franchise firms is the large potential pool of customers available overseas. Although the US is a large market with a population of over 300 million people, it accounts for less than 5% of the world population. Therefore, expansion into foreign markets can vastly increase the number of potential customers for US franchise firms. However, this increased market opportunity does not come without risk. Foreign markets are in general much riskier than US markets for a US-based franchise firm, with a larger possibility of loss and failure (Han and Diekmann 2001). It is imperative, therefore, that franchise firms take into account both potential opportunities and risks in their international expansion plans.

A three-phase international franchise expansion model that explicitly takes into account opportunities and risks was proposed in Aliouche and Schlentrich (2009a). This model can serve as a guide for franchise firms in their quest for expansion opportunities in foreign markets. That study focused mainly on Phase One of the model (macro assessment). The present paper expands on this research by further developing Phase Two (micro assessment) and Phase Three (market entry mode) and illustrating how they can be used by a hypothetical US-based hotel firm to identify the optimal international market to target for entry or further expansion, and the optimal mode of entry/expansion into this market.

The rest of this paper is organized as follows. Section 2 summarizes the proposed model of international expansion assessment and its three major sections (macro assessment, micro assessment, and market entry mode). Section 3 presents an application of the model to illustrate how a hypothetical US-based hotel firm may use it to identify its top international expansion target markets and the optimal mode of entry into these markets. In this chapter, profiles of the optimal expansion country, its hotel industry, and the hypothetical US-based hotel firm are presented. Section 4 summarizes the findings of this study and reaffirms the attractiveness of the China market for strong multinational firms. It also presents some implications as well as some limitations.

2 The International Expansion Assessment Model

Three conceptual frameworks have been influential in internationalization research: the Uppsala model, the eclectic model, and the transaction cost analysis model. The Uppsala model (Johanson and Vahlne 1977) asserts that firms prefer to expand

initially to psychically close countries and they use low resource commitment modes of entry into new foreign markets (such as exporting and licensing). As they acquire more experience in foreign markets, firms gradually expand to more psychically distant ones. According to the Uppsala model then, the risk that comes with psychic distance is a major determinant of the foreign expansion targets and modes of entry.

The eclectic model of internationalization (Dunning 1988) implies that firms decide on internationalization and foreign entry modes based on three sets of advantages: ownership advantages (advantages specific to the owner); internalization advantages (advantages resulting from the transfer of ownership advantages overseas); and location advantages (advantages resulting from the characteristics of specific locations). According to this paradigm then, country-specific factors are major determinants of internationalization decisions and entry mode selection.

Grounded in transaction cost economics (Williamson 1975), the third dominant influential theoretical framework, transaction cost analysis (Anderson and Gatignon 1986), suggests that the most efficient foreign market entry mode is dependent on the tradeoff between control and the cost of resource commitment. A more integrated structure of the firm and its operations (higher control) may reduce transaction costs, but may come with higher internal organizational costs. Asset specificity – the condition of assets being specialized to specific uses or users – plays a key role in resolving this tradeoff. According to the transaction cost analysis model, firms will choose higher control modes of entry (such as direct investment) when asset specificity is high, and lower control modes of entry (such as franchising or licensing) when asset specificity is lower. The initial model was extended by a number of important studies. Hill et al. (1990) extended the model by integrating environmental and strategic factors; Erramilli and Rao (1993) adapted the model to the service industries; and Brouthers (2002) incorporated institutional and cultural factors.

Taking their inspiration from one or a combination of these models, a number of empirical studies on international franchising have been undertaken. Most of these empirical studies have focused on the motivation of franchise firms to expand internationally and the modes of entry into foreign markets. These studies have helped identify the main determinants of international franchising and choice of foreign entry mode. Because it is a key determinant of the demand for a firm's products and services and the resulting financial returns, the size of the foreign market is a critical element in a firm's international franchising decisions (Agrawal and Ramaswami 1992; Ekeledo and Sivakumar 1998; Lafontaine and Leibsohn 2005). Market size indicators such as GDP, population, and purchasing power have been found to be important factors in international franchising decisions (Lafontaine and Leibsohn 2005). Due to their large populations, China and India may be attractive to US-based firms despite their large risks.

A number of risk factors have also been found to be important determinants of international franchising decisions. Several empirical studies have concluded that political and economic factors are crucial for the success of international expansion initiatives. These studies include Eroglu (1992); Ayden and Kacker (1990); Huszagh et al. (1992); Alon (2006); and Fladmoe-Linquist and Jacque (1995). Government

decisions may impact tax policy, international trade, foreign exchange changes, property ownership, and wage and price policies, leading to losses for the foreign franchisor. Political and economic instability, including armed conflicts, strikes, boycotts, etc. can lead to severe losses as well.

Legal and regulatory risks have also been documented as important factors in international franchising decisions (Shane 1996; Fladmoe-Lindquist 1996; Boczko 2005; Lafontaine and Liebsohn 2005). For franchise firms, enforcement of contractual agreements and intellectual property laws are especially important as some of their most valuable intangible assets (brand names, trademarks, patents,. . .) can be abused by local opportunistic franchisees (Shane 1996; Fladmoe-Lindquist 1996). Restrictions on ownership and control of corporate property, obstacles to repatriation of profits, discriminatory pricing and tax policies are also some of the legal and regulatory risks facing foreign franchisors (Fladmoe-Lindquist 1996; Boczko 2005). For example, China is well known for its lax enforcement of intellectual property laws.

Cultural and geographic distances are also risk factors identified by international franchising researchers. Culture plays a major role in contract negotiations with prospective franchisees, operational business practices, and personnel management practices (Eroglu 1992; Fladmoe-Lindquist 1996; Alon and McKee 2006). Physical distance is also important in international franchising decisions (Alon 2006; Lafontaine and Leibsohn 2005; Fladmoe-Lindquist 1996; Husagh et al. 1992). For example, US franchisors would prefer to do business in Canada and the United Kingdom than in the distant (culturally and geographically) Asian countries.

Firm-specific and industry-specific factors also play significant roles in international franchising decisions. These factors include firm size, firm experience, product category, asset specificity, firm strategy, brand image, firm logistical capabilities, transaction costs, competition, and market demand (see Table 1)

The review of academic literature helps identify the main determinants of international franchising. Unfortunately, it does not provide a way to measure the relative importance of each one of these factors in international franchising decisions. A survey of franchise executives helps fill this gap (Aliouche and Schlentrich 2009b). One hundred and four US-based franchise firms, representing over 115,000 units located in the United States and over 165,000 units globally, participated in this survey. Sixty two percent of the respondents with international franchise experience gave an equal weight to opportunity and risk, while 78% of them assigned a similar significance to each of the various risks (political, economic, legal, regulatory, distance).

Based on the findings from academic research and the input from the franchise executives, Aliouche and Schlentrich (2009b) developed an integrated three-phase model of international expansion assessment that provided a ranking of countries according to their attractiveness as franchise expansion targets. Taking a strategic approach to international expansion, this model explicitly takes into account the major elements needed to develop an optimal international franchise expansion initiative. These include a macro-environmental assessment (Phase One), a micro-environmental assessment (Phase Two), and a determination of the optimal market

Table 1 Firm and industry determinants of international franchising

Determinant	Studies
Firm size	Gatignon and Anderson (1988), Agarwal and Ramaswami (1992), Erramilli and Rao (1993), Ekeledo and Sivakumar (1998)
Firm experience	Anderson and Gatignon (1986), Dunning (1988), Kogut and Singh (1988), Agarwal and Ramaswami (1992), Erramilli and Rao (1993), Fladmoe-Lindquist and Jacque (1995), Ekeledo and Sivakumar (1998)
Product	Anderson and Gatignon (1986), Agarwal and Ramaswami (1992), Erramilli and Rao (1993)
Asset specificity	Anderson and Gatignon (1986), Hill et al. (1990), Erramilli and Rao (1993), Fladmoe- Lindquist and Jacque (1995), Ekeledo and Sivakumar (1998)
Firm strategy	Dunning (1988), Kogut and Singh (1988), Hill et al. (1990), Contractor and Kundu (1998a, b)
Brand image	Anderson and Gatignon (1986), Anderson and Coughlan (1987), Ekeledo and Sivakumar (1998)
Logistical capabilities	Buckley and Casson (1998), Davis et al. (2000)
Transaction costs	Anderson and Gatignon (1986), Gatignon and Anderson (1988), Erramilli and Rao (1993)
Competition	Anderson and Coughlin (1988), Dunning (1988), Hill et al. (1990), Buckley and Casson (1998), Ekeledo and Sivakumar (1998)
Market demand	Hill et al. (1990), Buckley and Casson (1998)

entry mode(s) (Phase Three). These phases are summarized below and further developed in Sect 3.

2.1 Macro-environmental Assessment (Phase One)

There may be close to 200 potential countries or territories that could be targets for expansion for a US-based franchise firm planning to expand overseas. Even the most resource-rich franchise firms do not have the financial, human, and logistical resources needed to enter a large number of international markets simultaneously. Franchise firms need to strategically select priority countries/markets on which to focus their expansion efforts and resources. In order to maximize profit and shareholder value, firms should prioritize target countries initially according to their opportunity/risk profiles. Selecting countries with high potential market opportunities and low market risks at the outset enhances the potential for high revenues, profits and shareholder value, while reducing the risks of failure and loss.

As proposed in Aliouche and Schlentrich (2009a) and further developed in Aliouche and Schlentrich (2009b), a given country's market opportunity (or potential) is measured as a weighted average of its market size, purchasing power, and real GDP growth. Risk is measured as a weighted average of political, economic, legal and regulatory risks; and distance (cultural and geographic). Table 2 below displays the Top 25 countries ranked in order of attractiveness for US-based

Table 2 Macro assessment – top 25 countries (2007)

Country	Market potential	Market risks	Distance	Score	Overall rank
Weight	50%	40%	10%		
United States	2	3	1	2.3	
United Kingdom	5	5	3	4.8	1
Canada	12	9	2	9.8	2
Japan	8	15	27	12.7	3
France	9	19	9	13.0	4
Germany	10	17	13	13.1	5
Saudi Arabia	4	20	55	15.5	6
Australia	16	12	33	16.1	7
Spain	20	21	18	20.2	8
Netherlands	36	14	11	24.7	9
Korea, South	6	26	135	26.9	10
Mexico	17	41	24	27.3	11
China	3	49	63	27.4	12
Hong Kong	33	13	68	28.5	13
Taiwan	15	35	71	28.6	14
Italy	29	33	16	29.3	15
Sweden	51	7	23	30.6	16
Belgium	46	18	12	31.4	17
United Arab Emirates	19	42	57	32.0	18
Chile	28	32	54	32.2	19
Kuwait	34	28	42	32.4	20
Malaysia	14	30	152	34.2	21
Russia	1	63	94	35.1	22
Switzerland	62	8	10	35.2	23
Turkey	24	50	37	35.7	24
Poland	21	46	76	36.5	25

franchise firms. Once a ranking based on macro-environmental assessment is obtained, a micro-environmental assessment is performed on these 25 countries[1] in order to assess the country-specific, industry-specific and firm-specific factors relevant to successful international market expansion (Phase Two).

2.2 Micro-environmental Assessment (Phase Two)

As for most other operational and strategic initiatives, a firm's expansion into a foreign market should ultimately enhance its long term shareholder value. In accordance with standard financial theory, shareholder value is enhanced by

[1]More or less countries may be included in the analysis depending on a firm's resources and goals.

engaging in projects and initiatives that create value as measured by a positive net present value.[2]

NPV is a function of four variables:

$$\text{NPV} = \text{f}\left(\text{OCF}_\text{t},\ \text{k}_\text{A},\text{I}_0,\ \text{n}\right)$$

The weighted average cost of capital approach to NPV is used for the computations. This can be represented as follows:

$$NPV = \sum_{t=1}^{n} OCFt/(1+kA)^t - I_0$$

where OCF_t = Operating Cash Flows (operating revenues less operating expenses) generated by the project at time t, k_A = weighted average cost of capital (with capital being a mix of debt and equity), I_0 = total investment, and n is the length in years of the venture. An international expansion initiative may require an initial cost I_0, may need to be financed through debt and/or equity at a cost k_A, and may generate cash flows OCF_t over the life (n years) of the venture. The value created by the international expansion venture is then a function of:

- The magnitude of the future cash flows generated in the new market: everything else being equal, the larger the future cash flows, the more value will be created (this is captured by the OCF term)
- The timing of the future cash flows generated by the new venture: everything else being equal, the sooner the cash flows are received, the more value will be created (due to the time value of money)
- The riskiness of the future cash flows generated by the new venture: everything else being equal, the more certain future cash flows are, the more value is created (this is captured by the cost of capital k_A)
- The magnitude of the initial investment necessary to deploy the new venture: everything else being equal, the less the initial cost, the more value is created. This is captured by I_0.

Cash flows and value creation from a foreign venture are determined to a certain extent by the industry and firm-specific factors identified by prior research (Table 1). However, country-specific microeconomic factors also play a determining role in cash flow generation and value creation. These include availability, quality and cost of labor; cost of real estate; cost of capital; cost of ingredients; quality of supply chain; etc. Microeconomic factors have not received as much attention from

[2]In situations where costs and benefits occur at approximately the same time, the well known rule of setting "Marginal Benefit = Marginal Cost" can be used to make resource allocation decisions. However, in many situations (for example, projects involving capital expenditures), costs occur immediately while benefits materialize over a number of future time periods. In these situations, Net Present Value is the appropriate criterion for decision making.

international franchising researchers as other factors. This is unfortunate as the profitability, and cash flow and value creation of a business unit is obviously largely determined by microeconomic drivers of revenues and costs. For example, real estate costs may be so high in a certain country that there may not be any prospect of ever making a profit (or positive cash flow and positive value creation) there, making expansion into this country undesirable.

All country (macro and micro)-, industry-, and firm-specific factors that can impact the magnitude, timeliness, and riskiness of the future cash flows generated in the new markets are therefore important in decisions to enter into and/or expand in a new market. Taking all these factors into account, a given firm, within a given industry, can assess its value generation potential from the 25 top countries identified in Phase One. Depending on its goals and available resources, a firm could focus on one to five of the top countries identified in Phase Two that would generate the most value for this firm and should therefore be its priority expansion markets.

2.3 Market Entry Mode (Phase Three)

Once firms have identified a country to target for entry and/or expansion, they must determine what organizational structure and management strategy will best help them maintain their competitive advantage and maximize their value creation. The interplay between the characteristics of the host country, the industry, and the firm itself (as discussed above) will determine the entry mode that is optimal for a particular firm planning to enter a particular country. There are a large number of possible market entry modes, including direct ownership, franchising (in its various forms – multi-unit franchising, master franchising, area development, plural form, etc.), management contracts, and a variety of combinations of these basic modes. Here, we focus on the three basic market entry modes most common in the hotel industry (the subject of this study): equity (ownership), franchising, and management contracts.

In equity projects, the owner of the property is the operator. Franchising and management contracts, on the other hand, do not require ownership of the property in order to generate revenues. Franchising consists of a continuing commercial relationship between a firm with a proven business system (the franchise company) and a third party (the franchisee), whereby the franchise company (the franchisor) grants rights to the franchisee for a given period of time to operate their business system using a common brand and common format for promoting, managing, and administering this business. In a management contract, the management company agrees to manage the hotel on behalf of the owner in exchange for management fees. The owner provides the property (land, building, and equipment) and, in most cases, working capital, while the management company provides the professional expertise to build, market and operate the hotel. A major distinction between management contracts and franchising is that the management company operates

the hotel itself, whereas the franchise company relies on an independent franchisee to manage the property.

The macro and micro factors discussed above determine to a large extent the mode of entry that is optimal for a particular firm into a particular country.

2.3.1 Country Characteristics and Entry Mode

Macro level country characteristics have been recognized as important in foreign entry mode selection by all three theoretical frameworks discussed earlier. The perceived level of political and economic risks has long been documented as having an important impact on the choice of entry mode (Anderson and Gatignon 1986; Contractor and Kundu 1998a, 1998b; Erramilli 1990; Erramilli and Rao 1993; Gatignon and Anderson 1988). Generally, when political and economic risks are perceived to be large, non-equity forms of market entry would be seen as less risky and would be favored by new foreign entrants, especially if asset specificity is present. Likewise, perceived legal and regulatory risks have important effects on a firm's choice of entry mode. For example, a country's slack enforcement of intellectual property laws discourages firms from using franchising as an entry mode into this country (Chekitan et al. 2002; Zhu et al. 2009). Large cultural distance between host country and home country imply a higher risk of failure and would incent a firm to select a non-equity mode of entry, such as franchising or management contracts (Contractor and Kundu 1998b; Tse et al. 1997; Pine et al. 2000; Zhu et al. 2009).

Inadequate availability of managerial skills discourages the entry of foreign firms through franchising, while a lack of qualified and reliable local investment partners discourages the use of management contracts as a way to enter the country (Chekitan et al. 2002). More generally, franchising is a more appropriate mode of entry into developed countries (such as the US and European countries) than into developing countries (such as most Asian, Latin American and African countries) due to the differences in the levels of development of the respective legal, financial, social, and educational capabilities (Chekitan et al. 2002; Contractor and Kundu 1998a, b; Chen and Dimou 2005).

2.3.2 Industry Sector Characteristics and Entry Mode

Industry sector characteristics also play an important role in the choice of market entry. Industries that are capital intensive (such as the hotel industry) try to reduce their financial exposure by favoring non-equity forms of market entry. In the hotel industry, franchising is a more appropriate mode of entry for budget and midscale hotels that involve only basic services than for luxury hotels that require a high level of quality and service (Chekitan et al. 2002; Chen and Dimou 2005). Everything else being the same, a firm providing a non-separable service (a service whose production and consumption happen at the same place and at the same time, such

as restaurants and hotels) would prefer an equity mode of entry (Ekeledo and Sivakumar 2004).

2.3.3 Firm Characteristics and Entry Mode

Firm size, brand name, competitive advantage, international experience and culture are some of the major characteristics of a firm that influence its choice of entry mode(s) into a foreign market. Everything else being the same, larger firms would prefer franchising, while smaller firms would likely rely more on equity and management contracts to expand (Gallini and Lutz 1992; Chen and Dimou 2005). When the firm's brand name has a high value, the entry modes with more control will be more efficient because of the potential for free riding (Anderson and Gatignon 1986). A firm with a competitive advantage obtained through the possession of proprietary resources and capabilities would most likely select management contracts over franchising as an entry mode (Chekitan et al. 2002). For example, a hotel firm with superior customer service and quality skills (such as firms in the luxury hotel industry) would favor management contracts (Chen and Dimou 2005). International experience of the expanding firm significantly impacts its choice of market entry. Firms with international experience tend to prefer entering new markets through full ownership or management contracts (Anderson and Gatignon 1986; Agarwal and Ramaswani 1992; Herrmann and Datta 2002). Some studies confirm that multinational corporations (MNCs) with more experience in a particular host country tend to expand by means of the full control mode (Agarwal and Ramaswani 1992).

Culture also plays a role in the choice of market entry mode. Tse et al. (1997) conclude that two cultural dimensions (power distance and uncertainty avoidance) greatly affect the choice of market entry modes. They state that firms with a more distant culture prefer an equity-based entry mode while firms from countries with a lower uncertainty avoidance culture are more likely to choose a low cost entry mode to avoid risks. Everything else being the same, firms originating from Anglo-Saxon countries are more likely to use franchising as a foreign entry mode than firms from Latin-European countries (Chen and Dimou 2005).

2.3.4 In Summary

The proposed sequential model may be used by a franchise firm to develop its international franchise expansion strategy as follows. In Phase One, the macro-environments of close to 200 potential countries that may be targets for international expansion are evaluated according to their Market Opportunity, Market Risks and Distance profiles (from the perspective of the franchise firm), and the top 25 countries for expansion are identified.

In Phase Two, the micro-environments of the top 25 countries are evaluated according to the attributes of the industry sector of the franchise firm, and the

potential revenues, profits, and net present value generated in each country are projected. Depending on the goals and resources of the franchise firm, one to five optimal countries for expansion are identified.

In Phase Three, the top one to five countries are evaluated according to the characteristics of the franchise firm (size, competitive advantage, international experience and culture), and the optimal entry mode of expansion for the franchise firm is determined.

In the rest of this paper, we apply the model outlined above to the case of a hypothetical US-based hotel company's quest for international expansion opportunities. This international expansion assessment model can assist this firm to identify its optimal expansion target country or countries from a universe of close to 200 countries and territories. For this particular US-based hotel firm, it is determined that China is the optimal country for expansion. For the sake of brevity, only the country ultimately determined to be the optimal target (China) is discussed in the rest of the paper.

3 Application of Model to US Hotel Chain Entry into China

3.1 Country Profile: China

China, the largest country in the world with 1.3 billion people, has become an economic powerhouse since the onset of its Open-door Policy in 1979. It is now the second largest economy in the world with an $8.3 trillion GDP (at purchasing power parity) (CIA World Factbook, June 2009) and continues to grow at the fastest rate among major world economies. A further boost to China's economy came when China joined the World Trade Organization in 2001. This facilitated China's exports to the rest of the world. It also opened China to more foreign investment. With tremendous economic growth came far-reaching improvements in China's basic infrastructure (telecommunications, airports, railroads, highways, education, etc.). The 2008 Beijing Olympics provided further stimulus for modernizing China's (and especially Beijing's) infrastructure as Beijing was required to "improve its infrastructure, build modern communication facilities and modern sporting venues, modernize its tourist accommodations, and invest money in alternative energy" (ChinaOrbit 2009).

One sector that has greatly benefited from these developments is the tourism industry. According to a report by the World Travel and Tourism Council, China now has the third largest travel and tourism demand in the world, and is projected to move to number two (behind the United States) by 2019. Between 2009 and 2019, the amount of travel and tourism in China will go from $526.6 billion to $1,880.5 billion, growing at the second fastest rate in the world (behind tiny Sao Tome and Principe) (World Trade & Tourism Council 2009). Another report estimates that by 2020, China will be the world's top tourist destination, with 130 million arrivals

annually (World Tourism Organization 2009). As China's economy grows, the number of wealthy Chinese and the size of its middle class also grow, giving a big boost to internal tourism. From 1994 to 2006, the per capita total domestic tourism expenditures increased by 129% (National Bureau of Statistics of China 2009).

While the economy grew rapidly, China's political, legal, and regulatory systems did not, as dramatically shown by the Tiananmen Square events in 1989. To be sure, notable improvements to the business environment faced by foreign firms have taken place, especially since China's entry into the World Trade Organization in 2001. However, China remains a relatively risky country for foreign firms to do business in with high political, legal, and regulatory risks, in addition to large cultural and geographic distances. This fact will be detailed further below.

3.2 Profile of China's Hotel Industry

The changes in China since 1979 have had a profound impact on its hotel industry. The number of hotels in China grew from 1,987 in 1990 to 10,481 in 2000. Over the same period, the number of rooms increased from less than 293,827 in 1990 to 948,185 in 2000 (China National Tourism Administration 2002).

China's hotel industry is characterized by a variety of ownership structures, with state ownership representing 57% of the country's hotels in 2002. Non-government collective enterprises owned 10%; investors from Hong Kong, Macau, and Taiwan owned 4.6%; and Chinese partnerships, private owners, and strategic alliances controlled about 25%. Foreign investors controlled only about 3% of the market. In 2002, about half of China's tourism hotels were two-star properties and one third were three-star. Five-star and four-star hotels made up only 2% and 7.2%, respectively, while one-star hotels represented 9% of the total tourism hotels (Yu and Huiman 2005).

Compared with foreign multinational hotel firms, China's domestic hotel companies are relatively small and immature, and the performance of many of them lags behind that of internationally managed operations. Domestic hotel firms, especially state-owned ones, have difficulties effectively running their properties. Management of their properties is often deficient due to bureaucratic controls, lack of fiscal discipline, low operating efficiency, and lack of innovation (Pine 2002; Yu and Huimin 2005). For example, a hotel industry survey of 248 hotels in China found that the four- and five-star hotels operated by foreign hotel firms significantly outperformed similar hotels operated by Chinese independently managed hotels. RevPAR (revenue per available room) for four-star hotels operated by domestic independent operators was on average 23% lower than that of four-star hotels managed by foreign firms. Also, the EBITDA (earnings before interest, taxes, depreciation, and amortization – a measure of operating profits) of domestic four-star hotels operated by domestic hotels companies was on average 13.5% of revenue, while it was 23.3% for similar hotels managed by international firms (Yu and Huimin 2005). Foreign firms were much better at generating revenue

and controlling operating costs, making it very challenging for domestic firms to compete with them.

International hotel companies have aggressively expanded their operations into China, and now most of the major international chains have established their presence there, including InterContinental Hotels, Marriott International, Accor, Starwood Hotels and Resorts, Best Western International, Hilton International and Hyatt Corporation. International hotel firms typically manage five- and four-star hotels. Recently, encouraged by the government, some Chinese domestic hotel firms have emerged to compete with the global firms, including the Jinjiang International Hotel Management Corporation, Jianguo Hotels International, and Rujia Hemei Hotel Management Group. Because of the fast growth in the hotel industry in general, competition for competent management talent is fierce, especially in some critical areas such as strategic development, asset management, yield management, and brand management.

The top priority of the tourism industry for many years was to build hotels that met international standards. China's prodigious economic growth, the government's restructuring of the hotel industry, and its encouragement of foreign investment and entry of foreign-based hotel companies drove a boom in hotel construction to the point where hotel supply exceeded demand of high end luxury hotels (Pine 2002). The supply/demand imbalance was further exacerbated by the frenzied construction related to the 2008 Beijing Olympic Games. Oversupply of high end hotels continues to be a major risk for hotel firms in China.

A particular cultural trait that plays a critical role in China's business environment is"*guanxi*," a practice based on personal relationships and networks. This practice makes it almost impossible for a foreign hotel firm to be successful without the assistance of a well connected Chinese partner (Pine 2002) in order to obtain necessary paperwork such as building permits and operating licenses.

3.3 Firm-Specific Characteristics

In order to illustrate how the proposed international expansion assessment model can be used as a guide by a US-based hotel company, we develop the profile of a hypothetical hotel firm (the USH Company) that is representative of major US hotel firms. The model can be adapted to fit any firm.

The USH Company is a large US-based hotel firm owning multiple brands catering to every segment of the hotel industry. It owns, develops, operates, and franchises a variety of hotel properties in a number of countries, although most of its properties are located in the United States. It has deep managerial talent and is recognized as a leader in the US hotel industry. Its flagship brand name is well established and well respected. It has a number of other competitive advantages, including a proprietary reservation system; alliances with travel-related businesses such as airlines, car rental agencies and travel wholesalers; and a strong culture of

customer service, quality, and innovation. In addition, it has extensive experience managing its properties under a variety of business arrangements such as franchising, management contracts, joint ventures, and direct ownership. Although it has large financial resources, it also has a large debt load that it is attempting to reduce. The USH Company has extensive international experience. Its flagship brand name is well known in China where it has operated luxury hotels under management contracts for many years. However, its mid-market and economy brands are not known in China.

Overall, the USH Company management's objective is to maximize shareholder value by strengthening the company's position as one of the leading global hotel firms, efficiently taking advantage of business opportunities, and delivering superior service and value to its customers.

From a Market Opportunity perspective, China is very attractive for foreign firms, having the largest potential number of customers (# 1 in total population), and having a very high expected economic growth rate (# 4 in expected Real GDP growth). However, China has a low per capita income, ranking at # 82. Overall, it ranks # 3 in Market Opportunity, behind the US and Russia (see Table 2). China is still considered to be a high risk place to conduct business for a US-based firm (ranking # 49) and a culturally and geographically distant place (ranking # 63). Balancing risks and opportunity (i.e., assigning 50% weight to opportunity and 50% to risks and distance) in assessing China's attractiveness as an expansion market, China would rank # 12 among close to 200 countries and territories in the world. When risks and distance are disregarded and only Market Opportunity is taken into account, China moves up to # 3 in country rankings (see Table 3).

Table 3 China – summary of macro assessment (2007)

Macro indicators		
• GDP (US$), 2007	3,250.83 billion	
• Inflation rate	4.75%	
• Currency	Chinese Yuan (1 US$ = 6.8985 CNY)	
• National language	Mandarin	
	Value	*Country rank*
Market opportunity	34	3
• Total population, 2007	1,322 million	1
• Per capital GDP (US$, PPP), 2007	$5,300	82
• 5-year (2007–2012) annual growth of real GDP	9.85%	4
Market risks	54	49
• Economic/political risk	60.48	44
• Legal/regulatory risk	83	64
Distance	77.75	63
• Cultural	5.12	70
• Geographic	85.5	79
Expansion strategy		
• Balanced (50/50)		12
• Aggressive (70/30)		9
• Risky (100/0)		3

3.4 Macro Assessment: Conclusions

Though China has opened up to the rest of the world, it remains a risky and distant place for US-based firms. Table 3 below presents a profile of China based on the macro-environmental assessment (Phase One) presented earlier.

3.5 Micro Assessment: Conclusions

From the micro assessment (Phase Two), it is evident that the high end (luxury) hotel market in China is saturated and presents high risks with limited potential for growth. On the other hand, it is also apparent that the mid-market segment (two- and three-star hotels) presents the best opportunities for future expansion as a result of the expected future growth in internal tourism, the development of second-tier and third-tier cities away from the Eastern coast, and the shift by many businesses to less costly hotels as businesses try to rein in costs in the face of a slowdown in business. Even though the USH Company has no experience operating mid-market hotels in China, it can leverage its well known and well regarded luxury brand, its networks of local partners, and its experience in China to launch and expand its mid-market brand in China.

Having decided that the best opportunity for value creation in China is through the expansion of its mid-market operations, the USH Company estimates the potential value to be created over the life of the venture. Detailed financial and economic data are collected (construction costs, interest rates, pricing, wage rates, inflation rate, food costs, real estate costs, etc.) and the net present value resulting from this potential venture is projected.

The USH Company performs a similar analysis for each of the 25 top countries identified in Phase One (macro assessment). The countries are then ranked according to estimated net present value. Relative to the other top countries, China presents the following characteristics:

- Larger market size
- Lower labor costs
- Relatively lower construction costs
- Average RevPAR that is close to other countries'
- Higher anticipated occupancy rates
- Higher financing costs (due to higher perceived risks)

These characteristics lead to a higher NPV in China than in any of the other 25 countries. Over a 20 year period, it is estimated that operating a mid-market hotel in China would generate more value than in any of the other top countries. China, then, is identified as the priority country to expand into. The remaining question relates to what mode of entry would be optimal.

3.6 Entry Mode: Conclusions

The optimal entry mode selected would be the one that maximizes the potential value generated in China while minimizing the risks to this value creation opportunity. The potential entry modes considered are ownership, management contracts, and franchising.

By the time the country, industry, and firm analyses are completed, in most cases, the optimal market entry mode becomes generally evident. Relevant factors influencing the entry mode choice by the USH Company into the mid-market hotel segment in China include:

- High potential value creation opportunity
- Relatively high political and legal risks
- Scarce high quality managerial talent
- Large cultural and geographic distance
- Large capital required for ownership (though lower for mid-market than for luxury hotels)
- USH Company's extensive experience operating management contracts in China.

Based on the above factors and a detailed financial analysis, it is concluded that initially, management contracting would be the optimal way to expand into the China mid-market segment at this time. As China further strengthens its legal and financial systems and more managerial talent becomes available, the USH Company may consider further expansion in China through franchising, especially in the budget hotel sector which requires less managerial expertise.

4 Conclusions

Using a strategic approach, this study has attempted to develop and illustrate a process that can assist franchise managers in the formulation of their international expansion strategies and plans. The comprehensive model of international expansion outlined here explicitly takes into account the variables that are critical in international expansion decisions, and provides managers with a time-efficient and cost-effective way of identifying their optimal expansion targets when faced with a large number of potential target markets. These key variables include market opportunity as measured by market size, market growth and market participants' purchasing power; and market risks that comprise political, economic, legal, and regulatory risks, as well as cultural and geographic distances. Often, international expansion was motivated mainly by market size while market risks were neglected, leading to disastrous results in some cases (Hilton exiting Iran as a result of the 1979 revolution; the Marriott hotel terrorist bombing in Indonesia in 2003; and Danone's lengthy battle with its Chinese joint venture partner). To minimize

failures, a strategic approach to international expansion is needed. The model proposed in this study provides such an approach.

The current study expands the model proposed in Aliouche and Schlentrich (2009a, 2009b) by developing a micro-environmental assessment (Phase Two) and the identification of optimal market entry mode (Phase Three), and providing an application of the full model to the expansion of a hypothetical US-based hotel firm into a foreign market. It is concluded that, given the relative market opportunity and risks of the potential target countries, the situation of the hotel industries in these countries, and the characteristics of this US-based hotel firm, the most value-creating international expansion venture for this firm would be to expand its mid-market brands into China via management contracts.

This study reinforces the thesis that China is an attractive market for well known, internationally experienced, and financially strong multinational firms to expand into. These firms have the appropriate resources, experience, and ability to overcome the high risks and challenges of doing business in China. However, in most cases, China should not be the first, or one of the first, international markets a US-based firm tries to enter. The level of risk, the time required, and the resources needed to succeed in China are too high for a small firm or a new international player.

An important implication of this study is that risk should be seriously and explicitly taken into account in international franchise expansion decisions. The level of political, economic, legal, and regulatory risks in a given target country; the level of risk aversion of the expanding firm, and its ability to mitigate risks and overcome challenges all play an important role in the determination of the optimal international expansion targets. For countries that desire to attract foreign firms, reduction of the riskiness of their country should be a priority.

Another implication of this study is that, given that particular countries' internal situations can change sometimes drastically, the attractiveness of certain countries as expansion markets may also change over time, making periodic reassessments necessary and managerial flexibility crucial. For example, due to the many changes currently taking place in China, franchising may become at some point a preferred mode of entry and expansion for foreign-based hotel firms.

The model proposed here has implications for international franchising research as well. International franchising research has been focused to a large part on issues related to the motivation to expand internationally (*why* expand) and mode of foreign market entry (*how* to expand). Limited attention has been paid in the literature to the question of *where* to expand. More research focus on *where* to expand may lead to further insights into the challenges of international franchising. As host country conditions can play a considerable role in determining the optimal entry mode, more research on host country characteristics, including both macro-environmental and micro-environmental factors may enhance our understanding of what foreign markets and entry modes are optimal under different circumstances.

This study has also reaffirmed the importance of a firm's risk aversion characteristics on its decision to enter a foreign market. Firms willing to take more risks will be more willing to expand into a risky country with large opportunities, such as China.

A limitation of this study is that it is focused on US-based franchise firms only. It would be worthwhile to extend this line of study to franchisors from other countries. A comparative study of different industries (hotels, restaurants, business services,. . .) may also shed more light on the importance of industry-specific factors on country selection and entry mode choice decisions. A further limitation of this study is that it does not provide an empirical test of the model proposed. The authors are currently collecting data on the international expansion experiences of US franchise firms with the objective of comparing the predictions of the proposed model with the actual experiences of US-based franchise firms. It is hoped that such a comparison will provide a test of the predictive ability of the proposed model.

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Is the Theory of Entrepreneurship Applicable to Franchising?

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Abstract This essay takes an entrepreneurship viewpoint toward franchising. The applicability of the general theory of entrepreneurship presented by Shane ("A general theory of entrepreneurship. The individual-opportunity nexus". Edward Elgar, Cheltenham, 2003) is explored in the franchising context. Shane introduced a model of the entrepreneurial process in response to the failure of prior research to provide one. According to Shane, prior research has tended to look at only part of the entrepreneurial process, with the result that no general theory of entrepreneurship has been developed. Studies that consider franchising as a form of entrepreneurship are rare, as are studies on the entrepreneurial process of a franchisee. This conceptual study examines whether Shane's framework is applicable to franchising research, and why. The proposals put forward here have implications for franchising researchers, franchisors, people interested in becoming franchisees, and for organisations planning to franchise their business.

1 Introduction

The research traditions of both franchising and entrepreneurship are fairly brief. Their foundations are multidisciplinary and their theoretical frameworks still developing. Franchising has largely been looked at from the point of view of marketing, i.e. as a retail distribution channel solution and a form of international market entry; from a management point of view, i.e. as a form of organisation, strategy, and cooperation between enterprises; and from a business law point of view, as a form of contractual relationship (see e.g. Hoy et al. 2000; Combs et al. 2004; Tuunanen and Hoy 2007). Furthermore, earlier franchising studies were to a large extent isolated, insufficiently integrated, and overly reliant on the viewpoint

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of the franchisor (see e.g. Elango and Fried 1997; Stanworth and Curran 1999; Tuunanen and Hoy 2007; Dant 2008).

Since the early work on franchising at the end of the 1960s, studies have emerged from time to time of the question of whether franchisors and franchisees are to be considered entrepreneurs. However, these have been few in number compared to other topics and points of view related to franchising (see e.g. Elango and Fried ; Young et al. 2000; Dant 2008). Some studies have discussed topics closely related to entrepreneurship, for example independence and innovation in the franchising context, but have not specifically analysed franchising as a form of entrepreneurship. Analyses on the relationship between franchising and entrepreneurship have for the most part emerged more recently, particularly during the last decade, and they have mainly been conceptual studies.

One reason why few entrepreneurship or franchising scholars have applied the tenets of entrepreneurship to franchising research may be the historical lack of a general theory of entrepreneurship (cf. for example Shane and Hoy 1996). Shane (2003) introduced the framework of *a general theory of entrepreneurship* in response to the failure of prior entrepreneurship research to provide such a theory. Shane mentioned franchising as one option for exploiting an entrepreneurial opportunity; hence he saw franchising as a form of entrepreneurship. Nevertheless, he included very few franchising investigations among the studies he introduced. Despite the progress made in recent years in creating a general theory of entrepreneurship, franchising studies have not on the whole been included. It can therefore be said that franchising is not widely accepted or discussed as a form of entrepreneurship, and that there is room for further studies on this subject.

In this essay, franchising is seen as belonging to the field of entrepreneurship, i.e. franchising is understood as a form of starting up and growing new ventures and organisational forms, and as a mechanism for introducing new products and services to expanding markets.[1] The essay looks at the process of becoming an entrepreneur and franchisee, utilising the framework provided by Shane (2003). The objective is to examine whether Shane's framework is applicable to franchising research, and why. Fig. 1 presents Shane's notion of the direction of the entrepreneurial process.

Below some essential background issues that will help in understanding the context of this conceptual study are presented. First of all, regarding the study, it is essential to recognise the differences between two forms of franchising, namely

[1]In *New Venture Strategies* from 1980, Karl Vesper saw franchising as one of the main strategic forms of competitive advantage, the so-called "entry wedge", with the aid of which a new enterprise can be founded, giving rise to new entrepreneurship amid existing market competition, without special innovation (Vesper 1980, pp 192–194, 217–224). Vesper's view is in line with that of Baumol (1986). According to Baumol (1986), entrepreneurs can be divided into two groups on the basis of the nature of the business idea of the enterprise founded: initiative (i.e. innovative), and imitative entrepreneurs. Franchisors could therefore be seen as being initiative, and franchisees as imitative entrepreneurs. In franchising, a business concept and operation that is already working and possibly successful, is reproduced in a new market area. In this way franchising contributes to the efficient dissemination of innovations.

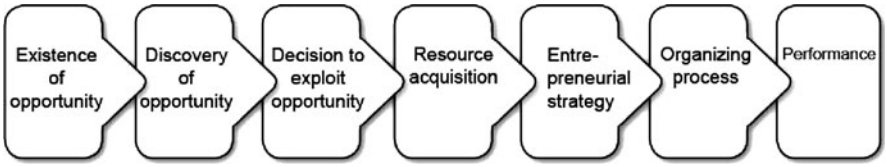

Fig. 1 The direction of the entrepreneurial process (Shane 2003)

trade name-product distribution franchising and business format franchising. The former is a supplier-dealer relationship in which the franchisee acts under the principal's brand and as a distributor of its products. In the latter case, cooperation between the parties is closer and more extensive, involving the transfer of the entire business operation concept for the utilisation of the franchisee (Tuunanen 2005). Hence, in discussing franchising in this essay, only business format franchising will be considered, on the grounds that it provides the franchisee with an opportunity to set up and run an entire business.

Secondly, the term entrepreneur does not refer here to a highly creative venture based on a new and novel product and service. Instead, it is used in a more everyday sense, and is meant to be interchangeable with the term self-employed or small businessman/-woman (cf. Stanworth 1995).[2] This is consistent with Shane (2003). Nevertheless, many entrepreneurship researchers have not seen the terms as interchangeable, and indeed, there has been a debate on the differences in the meaning of the terms.[3] Shane provided one solution to the discussion by extending the meaning of the term entrepreneurship. By founding a new business Shane (2003) meant the formation of a business venture or not-for-profit organisation that had not previously existed. As self-employment he defined the performance of work for personal profit rather than for wages paid by others. Furthermore, he added that depending on the situation, a self-employed person may incorporate a business and employ others. Shane also assumed that being entrepreneurial does not require the

[2]Entrepreneurship and entrepreneurial in the English language are often normative statements concerning people who take care of their firms in a certain way. There are other languages, such as Finnish, where no other terms or synonyms (with connotations of growth orientation or self-employment) for entrepreneur exist. International comparisons are difficult, because the core term, entrepreneurship, is very culturally oriented (Huuskonen 1992, 194; see also Gibb 2002).

[3]Carland et al. (1984) raised a discussion on definitions of entrepreneur and small business owner and their differences. The discussion was commented on by Gartner (1988) and again by Carland et al. (1988), and has continued among entrepreneurship researchers ever since (see e.g. Cunningham and Lischeron 1991; Gibb 2002; McKenzie et al. 2007). When entrepreneurship researchers have defined entrepreneur and entrepreneurial venture, the central issues in the discussion have been, for instance, the personality traits and characteristics of the owner/founder of the company; the innovativeness, newness, and creativity of the owner/founder and the company; purpose of establishing and managing the company; and profitability and growth goals of the owner/founder and the company. On the other hand, many researchers have not provided any definitions at all, which has also led to heterogeneous selection in sampling. Thus, the comparability of the studies has been problematic.

creation of a new firm, and that an entrepreneur can use market mechanisms, such as licensing or franchising, to exploit entrepreneurial opportunities. In addition, innovation is seen as a key part of the wider meaning of entrepreneurship. According to Shane, the entrepreneurial process requires some form of innovation, but it can be much milder than the Schumpeterian (1934) innovation. What is needed is a recombination of resources into a new form. This type of milder innovation is often associated with the Kirznerian (1997) perspective. Innovation has also been discussed in franchising studies (see e.g. Stanworth et al. 1996; Kaufmann and Dant 1999; Clarkin and Rosa 2005; Tuunanen and Hoy 2007; Dada et al. 2009).

Finally, the approach applied in this study is to consider franchisees as entrepreneurs, despite the fact that over recent years, several scholars have taken a contrary view (see e.g. Rubin 1978; Norton 1988; Anderson et al. 1992).

This essay is organised as follows: first of all, it will review prior research on franchising as a form of entrepreneurship and on becoming a franchisee entrepreneur; secondly, it will describe the key features of *the general theory of entrepreneurship* introduced by Shane (2003), with discussion of whether Shane's framework is applicable to franchising research; finally, it will present recommendations for future research.

2 Franchising and Entrepreneurship

2.1 Franchising from the Viewpoint of Entrepreneurship

Franchising, like entrepreneurship, is a multifaceted phenomenon that cuts across many disciplines. Theories from disciplines such as law, economics, sociology, and psychology have been applied to franchising since it became a subject of academic research in the late 1960s. Each disciplinary study has focused on specific elements of franchising (see e.g. Hoy ; Kaufmann and Dant 1999; Hoy and Stanworth 2003a; Combs et al. 2004). Starting from the early studies, some researchers have seen franchising as a form of entrepreneurship, and franchisors and franchisees as entrepreneurs. Yet to some, franchising has been the antithesis of entrepreneurship, with franchisees regarded as utterly distinct from entrepreneurs (see e.g. Rubin 1978; Knight 1984; Hoy and Shane 1998; Hoy et al. 2000). Despite the contradictory views, franchising scholars have seen the phenomenon as worth studying, and in the last decade it has gained further attention from entrepreneurship scholars. Withane (1991) saw franchising as one of the most understudied areas of entrepreneurship, and Hoy (1994) noted that a theory of entrepreneurship would offer a more encompassing perspective on franchising research. However, as Hoy (1994) also noted, the lack of universally accepted definitions and a general theory of entrepreneurship has had an effect on entrepreneurship research. This may have been part of the reason why scholars have applied theories from other disciplines to franchising research. Furthermore, problems in regarding franchisees

as entrepreneurs also stem from the fact that many definitions of entrepreneur are derived from classical views of entrepreneurship, and are not seen as directly applicable to franchisees. Related to this, Hoy and Shane (1998) observed that the emphasis in classical views of entrepreneurship from the theory of the firm and the organisation theory literature has tended to be on equilibrium and profit maximisation, and on organisational design and maintenance; hence the classic frameworks would have only limited application to current entrepreneurship research. This view was later supported by Hoy et al. (2000), who noted that the franchise relationship is a major example of new forms of market and interorganisational relations. One should thus not attempt to explain it with theories developed to explain older forms (e.g. the classic market relations of the conventional competitive economy).

The interrelation of franchising and entrepreneurship can be justified, for instance, on the basis of Shane and Hoy's (1996) notion of the franchise as an entrepreneurial venture.[4] In addition, the argument of Shane and Hoy (1996) regarding the franchise agreement as a cooperative arrangement between two sets of entrepreneurs, franchisors and franchisees, captured the close relationship between franchising and entrepreneurship. The act of a franchisor (i.e. creating a franchise network) and the act of a franchisee (i.e. becoming a business owner through franchising and conducting business within the franchise chain) are both entrepreneurial in nature (Shane and Hoy 1996; Tuunanen and Hoy 2007). Hoy and Shane (1998) also presented seven research streams within entrepreneurship that intertwine franchising and entrepreneurship.[5]

Nonetheless, arguments have been presented against franchising as an entrepreneurial act (see e.g. Stanworth et al. 1984, 1996; Brannen 1986; Hoy et al. 2000). First of all, it has been asked whether the franchise structure is a permanent and unique form of organisation or merely a stage in corporate evolution. Secondly, the question has been raised whether the franchisee is an independent venture owner or a quasi-employee of the franchisor. Thirdly, it has been argued that franchising does not require innovativeness and thus, that franchisees cannot be called entrepreneurs. Furthermore, there is a view that persons who opt to buy a franchise do so because they cannot bear the risks of "real" independent business ownership. The following paragraphs will take up the points mentioned above.

[4]According to Hoy and Shane (1998; see also Hoy 1995) a venture is an entity distinct from the individual entrepreneur. It involves the process or organising but may not result in an organisation. Furthermore, it may be a business firm, but may also be some other type of non-economic organisation. The concept of venture in entrepreneurship literature depicts an entity with features distinct from traditional views of the firm or organisation. Hoy and Shane (1998) concluded that venture studies address value creation through start-up and acquisition, but can also include entrepreneurial activities both prior to and subsequent to the point of creation.

[5]The seven research streams are: *incubator organizations, business plans, investment criteria, success factors, corridor principle, corporate culture, and life cycle models* (Hoy and Shane 1998).

Many scholars[6] have addressed the issue of whether franchising is a stable form of business organisation, or merely a temporary stage in the development of a business that will eventually be converted into a conventional form. Thus, as summarized by Dant and Kaufmann (2003), signalling theory predicts that franchise systems will move toward a greater reliance on franchised outlets as systems mature, whereas resource acquisition (or ownership redirection) theory predicts a tendency in the opposite direction. In addition, plural form perspective suggests a tendency toward maintaining a steady state of mixed distribution. Castrogiovanni et al. (2006) argued that the proportion of franchised outlets in franchise chains depends on the age of the franchisor: increasing at first, then decreasing and eventually increasing again. Hence, even though there appears to be some evidence of a tendency to convert franchised outlets to company-owned outlets in some business sectors (see e.g. Dant and Kaufmann 2003), it can be said that the view of Hoy et al. (2000) still holds: no clear and widespread pattern of franchisor repurchases can be discerned. Stage or life-cycle patterns seem to be contingent rather than necessary forms of organisational change.

Hoy et al. (2000) noted that independence from external control has long been regarded as a basic characteristic separating small business activity from the corporate activity of a larger enterprise. Nonetheless, the independence of a conventional small business owner is always less than total, and is often difficult to assess in practice. No small business owner, whatever the form of the business, is entirely independent. Local, national, and international (e.g. European Union) governments, financial institutions, other businesses, and particularly larger firms all reduce the real-level autonomy of small business owners. Hoy et al. considered it useful to distinct between formal and operational levels of the franchisor–franchisee relationship, on the grounds that franchisee autonomy at either level may vary independently of the other (see also Stanworth et al. 1984). At the formal level, the franchise contract is drawn up by the franchisor and offered to franchisees on a take-it-or-leave-it basis. In addition, the contract typically favours the franchisor.[7] However, the franchise outlet legally belongs to the franchisee, and the law may, from time to time, attach overall importance to this point, countering the normal balance of power at the formal level. Stanworth et al. (1984) showed that the independence experienced by franchisees in everyday operational relations can depart substantially from the formal contract, due to the fact that everyday operational autonomy is much more evenly spread between franchisors and franchisees

[6]see e.g. Oxenfeldt and Kelly 1969; Hunt 1972, 1973, 1977; Lillis et al. 1976; Dant et al. 1992, 1996; Lafontaine and Kaufmann 1994; Dant and Kaufmann 2003; Castrogiovanni et al. 2006; Bürkle and Posselt 2008.

[7]Recent research on franchise contracts utilises property rights theory, which provides a view of a more balanced relationship between the two business parties (see e.g. Windsperger and Yurdakul 2007).

than would be suggested by the formal level (see also Phan, Butler and Lee 1996; Dant and Gundlach 1999).[8]

The question of the franchisee's innovation and creativity has frequently been linked to discussion concerning franchisee autonomy. The franchisor's initial innovative effort in adopting franchising as an organisational form is recognised, but the franchisee's role in innovation is often questioned. Nevertheless, according to Stanworth et al. (1996) the franchise system's survival in a fast-changing market and industry requires innovative change. The franchisee's position in innovation can be crucial, since the franchisee is the one who is close to the customer (see also Bürkle and Posselt 2008). Moreover, the franchisee's role as an entrepreneurial partner is to introduce the franchisor's concept to a new and untried market, and to develop ways to market and operate that concept in a particular location (Kaufmann and Dant 1999). Such a role calls for innovation. According to Stanworth et al. (1996) franchisee autonomy can have a major impact on rates of franchise system innovation. The way the franchisor manages the franchise relationship and motivates franchisees to innovate and develop ideas for new products, processes, and services influences how well the franchise system is able to respond to the challenges of the markets. In line with this, Dandridge and Falbe 1994; see also (Stanworth et al. 1996; Phan et al. 1996) noted that management of innovation requires the actual nurturing of entrepreneurship within the franchise system.

A further important aspect (related also to the discussion on franchisee independence, see above) is the notion of risk. Previous franchising investigations have discovered that people who choose to become franchisees are more risk-averse than people who opt for becoming stand-alone small business owners (e.g. Williams 1999). It has also been argued that franchisees are more risk-averse than franchisors (see. e.g. Lafontaine 1992; Williams 1999; Bürkle and Posselt 2008). Interestingly, according to Williams (1999) the implication that franchisees are more risk-averse than franchisors follows from the logic that franchisees are more risk-averse than independent business owners, and that franchisors are indeed independent business owners. Nevertheless, the risk faced by franchisees and stand-alone small business owners may be very different, and may not even be comparable in every case. For instance, the franchisee accepts the risk of introducing the franchisor's concept to a new and untried market, in addition to facing risk from the actions of other franchisees and the franchisor (Kaufmann and Dant 1999). On the other hand, the franchisor's risk is spread over the entire franchise network, whereas the franchisee's capital is tied up in the franchise. Thus, the franchisee's risk can be seen as proportionally far greater than the franchisor's risk (see e.g. Bennett et al. 2009). Ultimately, franchisees are entrepreneurs and they bear the business risk just like

[8]In line with Stanworth et al. (1984), Pizanti and Lerner (2003) suggested that in the relationship between franchisor and franchisee, control and autonomy should be perceived as dialectically coexisting rather than as dichotomous concepts.

any other entrepreneur (see Bird 1989).[9] Tuunanen and Torikka (2008) studied franchisees and stand-alone small business owners; they found that the franchisees' risk of bankruptcy and discontinuance was smaller, but that the initial investment was higher than for stand-alone small business owners. Spinelli (1994) suggested that a person who is pondering whether to become a franchisee or to start a stand-alone business should weigh up whether the risk is sufficiently mitigated by the trademark value, the operating system, economies of scale, and the support process of the franchise in order to justify a sharing of equity with the franchisor vis-à-vis the franchise fees.[10] On the other hand, the brand name has a risk-reducing effect, and the franchise arrangement reduces the risk exposure of both parties, since the franchisee and the franchisor share the risks. According to Williams (1999), franchisors supply more franchise opportunities in relatively high-risk industries where the marginal benefits of risk-sharing and risk-reduction through brand name effects are greatest (see also e.g. Lafontaine 1992).

Like Hoy (1994), Kaufmann and Dant (1999) noted the lack of universally accepted definitions in entrepreneurship research. They further took note of conceptual developments in entrepreneurship research, i.e. the extension of definitions of entrepreneurship and entrepreneur,[11] and the implications of these changes for the traditional demarcation between ownership, professional management, and entrepreneurship. Related to that, Kaufmann and Dant (1999) observed that conceptualisations and discussions of entrepreneurship have traditionally been rooted within the manufacturing model, whereas franchising and particularly business format franchising concentrates on the retail and service sectors. Kaufmann and Dant (1999) saw franchising as a form of entrepreneurship, and suggested features of franchising (e.g. entrepreneurial partnership, the franchisee decision-making process, and multi-unit franchisees) as unique topics worthy of investigation within the entrepreneurship research domain.

Hoy and Shane (1998) proposed that franchising and entrepreneurship are distinct domains, but that they overlap on seven dimensions (see footnote 5). Hoy and Stanworth (2003b) discussed whether franchising warrants its own body of literature or whether the practices of franchisors and franchisees could be explained via theories from other fields of study. They presented a division of franchising literature involving three schools of thought. The first school sees franchising as the

[9]Risk is a multifaceted concept. Entrepreneurs face risk in five areas: (1) financial, (2) social and familial, (3) emotional and physical, (4) career or future employability, and (5) organisational (Bird 1989, p 85).

[10]This was later supported by, for instance, Bürkle and Posselt (2008).

[11]For instance, people working in non-commercial endeavours (e.g. charitable and other not-for-profit organisations) can be called entrepreneurs. Similarly, being called an entrepreneur does not necessitate the creation of a new and innovative enterprise. Moreover, entrepreneurship may also happen in a corporate setting: the construct of corporate entrepreneurship means the entrepreneur-like activities or traits of ongoing firms. The term intrapreneur is often used in this context (see Pinchot 1986).

functional activity of existing business, and a phenomenon that can be studied by applying the models and theories of the functions in question. According to the second school of thought, franchising is a unique phenomenon, but one that can be explained through existing theoretical models. The third school sees franchising as a phenomenon that can only be understood through models and theories that have been specifically applied to its practice. Hoy and Stanworth further stated that the second school proceeds from the first, and the third from the second, and that this type of progression could be expected in the development of a field of study.

To conclude, recent developments in entrepreneurship theory include extension of the key concepts entrepreneur, venture, entrepreneurship, and innovation. On account of these, contemporary entrepreneurship theory is applicable in explaining new forms of market and interorganisational relations and entrepreneurship, including franchising. Franchising overlaps with many disciplines such as economics, marketing, and law. However, in the current essay it is seen as a form of entrepreneurship and as falling within the domain of entrepreneurship research. Moreover, franchising is interdisciplinary and multidisciplinary in nature; it can be described and explained both by applying theories from other fields and by developing franchise-specific theories (cf. Hoy and Stanworth 2003b).

2.2 The Process of Becoming a Franchisee

There have been many investigations on motivations to franchise from the franchisor's perspective, but relatively few studies on the process of becoming a franchisee. Similarly, a wide variety of examinations on subjects related to the decision-making process of a potential franchisee have been conducted from the franchisor's viewpoint, but few have presented the franchisee's standpoint. Subjects related to the entrepreneurial process of a prospective franchisee include: selection of franchise and franchisor (see e.g. Tatham et al. 1972; Baucus et al. 1993; Johns et al. 2004; see also Wattel 1968–1969 for self-selection); advantages and disadvantages of franchising, and the motivations of franchisees (see e.g. Peterson and Dant 1990; Withane 1991; Hoy 1994; Kaufmann and Stanworth 1995; Macmillan 1996; Tuunanen and Hyrsky 2001; Gauzente 2002); and research on franchisee characteristics (see e.g. Brannen 1986; Withane 1991; Bennett et al. 2009). In the following paragraphs, key findings from studies on the decision-making process of becoming a franchisee will be presented.

Bradach and Kaufmann (1988) investigated individuals in the process of deciding whether to open an independent or a franchised retail business. They found that the choice of business type and organisational form (franchise or independent) are part of the same decision process. They also discovered that in franchising, less risk appealed to independent businesspeople, whereas more autonomy attracted managers. Furthermore, they found that people who had previously owned a business were more likely than non-owners to choose the organisational form prior to the

type of business. From these findings, Bradach and Kaufmann deduced that former owners appear to be searching for a less risky means of operating a business.[12] They concluded with a plea for more research on the subject. In addition, they emphasised the value of using the relationship between the traditional entrepreneur and the franchisee as a prism through which to understand the process by which people become franchisees.

Spinelli (1994) saw becoming a franchisee as one option for establishing a business and discussed the choice between becoming a franchisee and starting a stand-alone business. He thus supported a notion gained from prior research: that the decision regarding organisational form is part of the general process of becoming an entrepreneur. According to Spinelli, the choice of a franchise versus a stand-alone start-up is a question of due diligence, of evaluating the competitive advantages offered by the franchise. Those advantages must exist in sufficient quantity to justify the cost in franchise fees, royalties, and management encumbrances.

Like Bradach and Kaufmann (1988), Kaufmann and Stanworth (1995) studied prospective franchisees and found support for previous research findings indicating that the decision to purchase a franchise is part of the general decision to become self-employed. Kaufmann and Stanworth further discovered that the decision on the organisational form is subordinate to the choice of industry category. However, contrary to the results of the study by Bradach and Kaufmann (1988), a prior self-employment history was not found to increase the likelihood that one would determine the category of the business before the organisational form. In support of e.g. the Bradach and Kaufmann study, Kaufmann and Stanworth observed that a person's employment history is predictive of the perceived benefits of franchising and of the intent to purchase a franchise. According to this view, the relative independence offered by owning a franchise is most attractive to salaried employees; in contrast, those features of franchising that are more associated with its competitive advantage over independent small businesses are most attractive to the previously self-employed (cf. Peterson and Dant 1990; Tuunanen and Hyrsky 2001). In addition, persons with a history of self-employment will be more interested in becoming franchisees than persons without such a history. On the other hand, the desire to leave a business to one's heirs was found to be negatively related to the intention to purchase a franchise. Kaufmann and Stanworth concluded by asserting that they had the advantage of studying people who were currently in the process of becoming franchisees, i.e. people whose motivations had not yet been affected by the realization of their goals, as would be the case with the existing franchisees. It should of course be borne in mind that intention does not necessarily predict action.

Stanworth and Kaufmann (1996) studied potential franchisees in the UK and the US and compared the two samples. In line with prior research, they found that the experience of independent self-employment (current or past) was a key variable indicating those most likely to consider the purchase of a franchise both in the UK

[12]Cf. for example, Peterson and Dant 1990; Tuunanen and Hyrsky 2001, on perceptions of previous business owners and non-owners on the advantages and disadvantages of franchising.

and the US. Furthermore, more than three respondents out of four in both countries were found to decide on the business sector before the legal form of the business (i.e. a franchise vs. a fully independent business). From this, Stanworth and Kaufmann deduced that taking up a franchise or setting up a small independent business are both part of the same decision-making process. This also confirms the results of prior studies. Interestingly, over half of the respondents of the study in both countries further indicated that they would prefer a franchise outside their own previous experience. As an exception to many other studies on potential franchisees, Stanworth and Kaufmann collected data on the current businesses of the respondents. The majority of the businesses in both countries employed staff, and in fact, the respondents owning a business at the time of the study were the best placed financially among all the respondents. Support to previous research also came from the findings of Stanworth and Kaufmann on motivations to buy a franchise. Respondents without prior self-employment experience saw "independence" as their main motivation. On the other hand, self-employed persons and respondents with previous self-employment and salaried job status at the time of the study opted first of all for a "proven business system". Stanworth and Kaufmann saw a need for further research on franchisee motivations.

Price (1997) discussed the process of becoming a franchisee, and the factors influencing the franchise purchase decision. He observed that prior research on the motives of an individual in becoming a franchisee had been inherently limited. According to Price, such research had been characterised by the use of an action frame of reference and by consumer decision-making approaches, but it had not encompassed a sufficiently broad array of antecedent variables, i.e. variables with the capacity to influence employment choice. Moreover, prior research had tended to see potential franchisees as choosing between differing franchises rather than between differing career alternatives. Price further adduced that the decision to become a franchisee is affected by the perceptions of the benefits of franchising. To fill in the gaps in prior literature, as he saw it, Price put forward a career's approach to franchise purchase decisions. According to Price, the decision to become a franchisee is dependent on three sets of inter-related variables; these would include one's social network, one's life stage, and prior employment practices. Within these sets, what motivates a person to become a franchisee versus some other form of self-employment is the function of a variety of factors such as ethnicity, gender, commitment, career stage, age, and education. He added that these variables are culturally embedded; hence, culture ultimately differentiates who becomes a franchisee. By a person's "cultural capital" Price meant beliefs in outcome or attitudes to behaviour, normative beliefs and the motivation to comply with a network culture, and beliefs concerning opportunities and resources (for instance, access to finance and level of support offered). Price also argued that there are varying degrees of intentionality in the decision to become a franchisee, and that the choice process comprises different phases (an argument consistent with Shane 2003). The length of time within each phase is a function of intentionality and self-efficacy: individuals who intend to become a franchisee spend less time on each phase than persons who are unconscious and unintended. This view is consistent

with many findings in entrepreneurship literature. Nevertheless, in his discussion, Price emphasised that his arguments were lacking in empirical proof.

Williams (1999) investigated the decision process of entrepreneurs[13] as potential franchisees. He studied both independent businesses and franchisees i.e. after the entrepreneurs had chosen the organisational form. Williams conceptualised the decision process as sequential, and assumed that the decision between fixed-wage employment and self-employment precedes the organisational choice. His assumption was in line with prior literature. He found that the greater the industry risk and the greater the financial capital available at start-up, the more likely it is that entrepreneurs will franchise rather than start an independent, solely-owned business. Moreover, entrepreneurs with more education, more salaried work experience, and management experience in salaried employment are more likely to enter franchising. However, contrary to many other research findings, Williams discovered that prior business owners are less likely to enter into franchising. He further examined the profitability of franchised and independently-owned businesses, and found that franchisees could be expected to be unsuccessful independent business owners, due to having lower skills than independent business owners.

Kaufmann (1999) explored the process of becoming a franchisee and proposed a process model. In line with prior research results, he found that the decision to become a franchisee is embedded in a series of related decisions and is contingent on the more general decision to become self-employed.[14] According to Kaufmann, the process involves decisions on whether to go into business for oneself, and whether to start a business from scratch or purchase an existing business; there must also be decisions on the type of business, the organisational form, and finally, the franchise system. He argued that some of the factors associated in the literature with the purchase of a franchise could be more properly thought of as belonging to the more general decision to become self-employed. Such factors would include independence and personal involvement in running a business. His study produced several findings, some of which were surprising and contrary to many previous results. Thus, he found that the more important personal benefits such as independence and control are for a person, the more likely it is that he/she will become self-employed. He also discovered that the more important the financial and business benefits of franchising are to a person, the more likely it is that he/she will purchase a franchise. In addition, he found that franchisees are more likely than independent small-business owners to open businesses in sectors where they have no previous work experience. However, Kaufmann also observed that the sequencing of the organisational form/industry sector decisions had an important impact on the relationship. When organisational form was chosen first, none of the respondents ended up working in a sector where they had previous work experience. When the

[13]In his study, Williams considered the term entrepreneur to be a synonym for self-employed person. Moreover, by independent ownership he referred to solely-owned businesses. He excluded jointly-owned businesses from his analysis.

[14]Kaufmann emphasised that self-employment is not the equivalent of entrepreneurship, yet he did not define the two terms more specifically.

industry sector was chosen first, half of the respondents ended up working in a sector where they had previous work experience. In contradiction to the findings of many other franchising and entrepreneurship studies, Kaufmann found that a history in business ownership or parental business ownership does not predict the future intention to become a business owner. This finding was consistent with the findings of Williams (1999). Kaufmann emphasised the importance of examining the franchise purchase decision within the general context of the decision to become self-employed, and of incorporating the dynamics of the decision process within studies of the topic.

Guilloux et al. (2004) also examined the decision-making process of potential franchisees and compared the process with franchisors' perceptions. Unlike the studies mentioned above, Guilloux et al. included also trade name franchising in their study; hence their results are not fully comparable with these other studies. In conducting their research they reviewed aspects of the following: search for information, decision-making sequence, choosing the legal format of the franchising, choosing the franchise system, likelihood of opening/intention, and expected time span for opening. Guilloux et al. found that the majority of respondents consulted existing franchisees before investment. Moreover, they discovered that franchisee applicants first chose the sector, then the brand name of the franchise, and then the legal format of the franchising. Regarding the choice of the legal format of the franchising and the selection of the franchise, Guilloux et al. found provision of training, established name, and possibility of development of the franchise brand asset to be the most important factors employed in selecting franchisors. They emphasised that applicants care not only about the franchisor's brand name but also about the efforts made in order to maintain and develop the franchise brand asset. According to Guilloux et al., this finding shows that many potential franchisees develop a real strategic vision for their business, and hence, that in recruiting franchisees, franchisors should highlight the long-term and strategic perspectives of the franchise network. In addition, Guilloux et al. compared their results to previous research; they pointed out that franchisees' criteria for choosing a franchise evolve over time, and that this aspect should be taken into account in future research.

In most investigations of the process of becoming a franchisee, the decision to opt for franchising is considered to be part of the general process of becoming an entrepreneur (see e.g. Bradach and Kaufmann 1988; Spinelli 1994; Kaufmann and Stanworth 1995; Stanworth and Kaufmann 1996; Price 1997; Williams 1999; Kaufmann 1999; see also Guilloux et al. 2004; Bennett et al. 2009). It is noteworthy that there are few entrepreneurship studies supporting this viewpoint. For instance, Shane (2003) saw franchising as an option for exploiting an entrepreneurial opportunity, and Usbasaran et al. (2001) regarded franchising as a form of organisation. Beyond that consensus, there is some agreement that for example a person's employment history and/or prior business ownership history are predictive of the perceived benefits of franchising, and of the intent to purchase a franchise. Nevertheless, contradictory results also exist, regarding for example, whether a person's history in business ownership predicts his/her future intention to enter into franchising (see e.g. Williams 1999; Kaufmann 1999).

Investigations into franchising have often been conducted at a time when respondents were in the process of deciding whether or not become franchisees. It should thus be borne in mind that intention does not necessarily predict action. On the other hand, in cases where respondents are studied after the decision has been made, one must remember that their perceptions of their motivations and of the factors influencing their decisions could have been influenced by the extent to which their goals have actually been realised.

3 Shane's Model of the Entrepreneurial Process

3.1 The Individual-Opportunity Nexus Framework

The study of entrepreneurship spans a wide range of fields including decision sciences, economics, management, sociology, psychology, and history. Because of this, approaches from different disciplines have been applied to entrepreneurs, their behaviour, and the companies they operate. However, no consensus has been reached regarding definitions of entrepreneurship, the process of becoming an entrepreneur, or the factors influencing the process (see e.g. Cunningham and Lischeron 1991; Gibb 2002; McKenzie et al. 2007). Shane (2003) presented a conceptual framework for entrepreneurship in response to the failure of prior research to provide one. According to Shane, prior research has tended to look at only part of the entrepreneurial process, without creating solid links to other parts of the process. He regarded previous entrepreneurship studies as fragmented and isolated, and saw this as a reason why no general theory on entrepreneurship had been formulated. His individual-opportunity nexus framework examines the characteristics of opportunities, the individuals who discover and exploit them, the processes of resource acquisition and organising, and the strategies used to exploit and protect the profits gained by entrepreneurs through these efforts.

Some of the key assumptions of the Shane's framework are as follows: entrepreneurship is a process (see also e.g. Bird 1989; Huuskonen 1992; Hoy and Shane 1998; Bygrave 2004)[15]; entrepreneurial opportunities are objective and exist independently of the actors within a system[16]; specific individuals are required for the discovery and exploitation of entrepreneurial opportunities, since opportunities themselves lack agency.

As viewed by Shane, the entrepreneurial process involves the identification and evaluation of an opportunity, the decision on whether or not to exploit the

[15]Entrepreneurship has also been seen as a *career*, for instance by Bird 1989; Katz 1994; Dyer 1994; Henderson and Robertson 1999; Feldman and Bolino 2000; Carter et al. 2003.

[16]The view represented by Shane is called *discovery view* of entrepreneurship and it is in marked contrast to an alternate *creative view*, according to which opportunities do not exist in any objective form, but are merely a social construction (Venkataraman 2003, p xi).

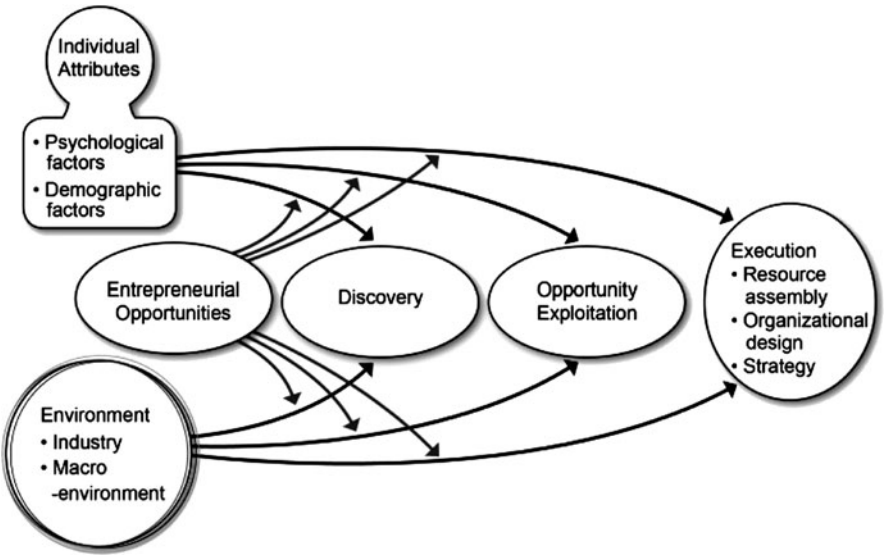

Fig. 2 A model of the entrepreneurial process (Shane 2003)

opportunity, efforts to obtain resources, a process for organising those resources into a new combination, and the development of a strategy for the new venture. In addition, he saw all the different activities of the process as being influenced by individual- (psychological and demographic) and environmental- (industry and macro-environment) factors. The process is illustrated in Fig. 2. The framework proposed by Shane assumes that the entrepreneurial activity is directional and ordered, but it accepts the possibility of feedback loops and non-linearity.[17]

3.2 Key Postulates of the Individual-Opportunity Nexus Framework

Shane (2003) reviewed both theoretical and empirical research on entrepreneurship and presented both conceptual and operational definitions of entrepreneurship. He set out a conceptual definition of *entrepreneurship* as follows: *an activity involving the discovery, evaluation, and exploitation of opportunities to introduce new goods and services, ways of organising, markets, processes, and raw materials, through*

[17]Previous to but similar to Shane's assumptions was Huuskonen (1992) notion that if a person abandons the intention to become an entrepreneur, the negative decision may not be permanent. The decision is linked to background, personal and environmental factors, and the process may start again later. The findings of Huuskonen are by and large congruent with those of Bird (1989).

organising efforts that previously had not existed. The operational measures he adduced were the formation of a new firm, and self-employment. By the *founding of a new business* Shane meant the forming of a business venture or not-for-profit organisation that previously was not in existence. As *self-employment* he defined performing work for personal profit rather than for wages paid by others. Furthermore, Shane indicated that depending on the situation, a self-employed person may incorporate a business and employ others.

In his examination of the entrepreneurial process, Shane looked at studies on business operations and performance and introduced four operational measures of performance: *survival* (continuation of the entrepreneurial effort), *growth* (an increase in the new venture's employment and sales), *profitability/income* (the surplus of revenues over costs), and *experiencing an initial public offering* (the sale of stock to the public).

Shane's model set out what *entrepreneurship requires, namely* (1) the existence of opportunities or situations in which people believe that they can use new means-ends frameworks to recombine resources in order to generate profit; (2) differences between people. (People differ in their access to or ability to recognise information about opportunities. Furthermore, entrepreneurship requires that a person should act upon an opportunity. Hence, people vary in their ability and willingness to recognise and act upon opportunities, and this influences the entrepreneurial process.); (3) risk bearing, since the exploitation of opportunity is uncertain; (4) organising, i.e. creating a new way of exploiting the opportunity that did not previously exist; (5) some form of innovation, meaning the recombination of resources into a new form, according to the judgment of the entrepreneur.

Essential in Shane's model is the definition of *innovation*. In his view, the entrepreneurial process requires some form of innovation, but it can be much milder than the Schumpeterian (1934) notion of innovation, i.e. something resulting in new combinations that will speed up creative destruction. All that is needed is a recombination of resources into a new form. This type of milder innovation is often associated with the Kirznerian (1997) perspective. It is worth noting that none of the perspectives mentioned here guarantees success or growth.

Shane (2003, p 18) defined an *entrepreneurial opportunity* as a situation in which a person can create a new means-ends framework for recombining resources which the entrepreneur believes will yield a profit. He added that the main difference between an entrepreneurial opportunity and many other situations in which people seek profit is that an entrepreneurial opportunity requires the creation of a new means-ends framework rather than mere optimisation within an old framework. Furthermore, according to Shane (2003, p 39) *entrepreneurial decision-making*[18] involves making non-optimised decisions through the formation of new means-ends frameworks. At the same time, the creation of new means-ends framework involves judgmental decision-making. In this connection, because the exercise of

[18]Entrepreneurial decision-making has also been called judgemental decision-making (Casson 1982, 1995) and effectuation (Sarasvathy 2001).

judgment involves making decisions not made by others, an entrepreneur must either possess information not possessed by others or interpret the same information differently. All this implies that entrepreneurial decision-making involves creativity.

A concept often applied in studies examining the entrepreneurial decision-making process is that of intentions. Shane (2003) noted that intentions serve entrepreneurial opportunity recognition. Bird (1988) defined entrepreneurial intentions as entrepreneurial states of mind which direct attention, experience, and action toward a business concept, and which set the form and direction of organisations at their inception. She added that organisational outcomes such as survival, development, growth, and change are based on entrepreneurs' intentions. In discussing intentions, Huuskonen (1992) presented selection paths related to becoming an entrepreneur. At the first level there is the general public, and at the second level those who are interested in becoming entrepreneurs; then come those considering entrepreneurship, next those who intend to become entrepreneurs, and finally, those who actually become entrepreneurs.

4 Conclusions and Implications

Since franchising can be approached via many different disciplines, franchising studies have in the past tended to be isolated and insufficiently integrated. They have also been overly reliant on the viewpoint of the franchisor. Some scholars have suggested that a theory of entrepreneurship would provide a more encompassing perspective on franchising research. Nevertheless, studies on franchising as a form of entrepreneurship have been very limited in number and entrepreneurship theories have rarely been applied to franchising. A fundamental reason for this might be that until recently, no general theory of entrepreneurship existed.

This essay proposes that Shane's (2003) *general theory of entrepreneurship* forms a basis for analysing franchising as a form of entrepreneurship, and franchisees as entrepreneurs. It is suggested that *the general theory of entrepreneurship* provides a more modern and inclusive view of entrepreneurship than any hitherto proposed, and that Shane's framework is well-suited to explaining new forms of market and interorganisational relations such as franchising. Bound up with this view is the fact that older models of the conventional competitive economy were rooted within manufacturing whereas franchising concentrates on the retail and service sectors.

Shane's *general theory of entrepreneurship* breaks away from previous, rather rigid, detailed definitions of entrepreneurship and trait theoretical perspective, and provides a holistic, process-based view. For example, different terms for entrepreneurs, i.e. people who own and run businesses (such as self-employed person, small businessman/-woman/-owner) are seen as being essentially interchangeable; they no longer have connotations of being "more" or "less" entrepreneurial in nature. Furthermore, entrepreneurship is no longer bound to a certain period of time. Instead, it is seen as a process that can have feedback loops and be non-linear.

Moreover, although the entrepreneurial process requires innovation, a recombination of resources into a new form is sufficient to fulfil this requirement, and Schumpeterian creative destruction is not demanded. Another relevant aspect is that entrepreneurship does not always require the creation of a new firm, since intrapreneurship and organisational entrepreneurship also function as entrepreneurial manifestations. It is also notable that for Shane, even non-profit organisations can be entrepreneurial.

Overall, franchisees fit well with the requirements set for entrepreneurs by the Shane's model. For instance, franchisees will use new means-ends frameworks, and their knowledge and skills, to introduce the franchisor's concept to local markets. In so doing the franchisee is performing a Kirznerian-type innovation. Furthermore, even though the franchisee receives a ready-made business concept and a known brand, s/he will bear the risk consequent on operating the business in a particular local market, plus the risk deriving from the operations of fellow franchisees and the franchisor. It is clear that as the owner of the venture, the franchisee will eventually bear the risk of failure alone. To be able to operate the business in the particular local market successfully, the franchisee has to find new ways of exploiting the opportunity. This calls for entrepreneurial decision-making, entrepreneurial intentions, and creativity. It also implies that franchisees have innovative potential. This aspect is important for the competitiveness and development of the franchise and thus, useful for the franchisor.

Unlike many other franchising studies, this essay looks at matters from the franchisee's point of view. Franchisees are seen as entrepreneurs, and the focus is on the beginning of the entrepreneurial process of the franchisee operation. The franchisor–franchisee relationship is contract-based and frequently has a fixed term, which means that a franchisee's entrepreneurship may also be limited to a definite period. However, it is essential to note that franchise contracts are fairly long, on average more than 10 years in the US. This is in fact a longer period than the survival time on many stand-alone small businesses. On the other hand, many franchisees see their entrepreneurship as a career path that they wish to follow for as long as possible. Hence, after the initial franchise contract expires, they may well wish to renew the contract. In addition, the franchised business can be transferred to the next generation of franchisees within the same family. Franchising may also be a form of habitual entrepreneurship, existing on both a serial and a portfolio basis[19] (see e.g. Westhead and Wright 1998; Carland et al. 2000; Usbasaran et al. 2003). One essential aspect should also be mentioned. Franchising appears to be particularly favourable in creating business opportunities for women, bearing in mind that women face obstacles to entrepreneurship that may differ from those encountered by men.

[19]One third (even up to one half) of the franchisees have previous entrepreneurial experience (see e.g. Stanworth and Curran 1999). This clearly supports the notion of serial entrepreneurship in relation to franchising. In addition, some franchisees that decide to discontinue their franchised business and exit the franchise relationship may start a stand-alone business. Investment-type franchise opportunities relate to portfolio entrepreneurship.

Quite a large proportion of franchisees view the franchise relationship as the cornerstone of their entrepreneurship, placing value on the brand and on the franchisor's knowledge and support. This is shown by previous franchising studies on the motivations of potential franchisees, and especially people with previous entrepreneurship experience. In addition, many franchisees see their franchised business as a long-term investment, one that they wish to nurture, and in so doing apply their ideas, knowledge, and skills. They want to grow their business and to be actively involved in development work concerning the whole franchise (cf. multi-unit owners, area and master franchisees). In view of this, entrepreneurial franchisees can be a valuable resource to the franchisor, for instance, in the development of products and services, operations in different areas and countries, and even in strategic planning concerning the business operations of the franchise.

Hoy and Stanworth (2003b) presented a division of franchising literature involving three schools of thought and this essay discusses that division. According to Hoy and Stanworth, the second school sees franchising as a unique phenomenon that can be explained through existing theoretical models. On the other hand, the third school sees franchising as a unique phenomenon that can only be understood through models and theories that have been specifically developed for it. In this essay, however, franchising is considered to be a form of entrepreneurship that can be explained by applying recent entrepreneurship theories such as Shane's *general theory of entrepreneurship*. At the same time, it is recognised that franchising is a form of entrepreneurship with unique features that can be of interest to scholars of many disciplines. These specific features call for more open, wide-ranging, and in-depthdiscussion, and for franchising-specific theory development.

This study invites franchising and entrepreneurship scholars to apply recent views and definitions of entrepreneurship to franchising research. In addition, it calls for studies on franchisees as entrepreneurs. Entrepreneurship is a process and a career, and therefore longitudinal, empirical research is required in order to obtain a more profound and extensive picture of the phenomenon, and the factors influencing it. In relation to entrepreneurship as a career, a topic that has recently gained increasing attention in entrepreneurship research is habitual entrepreneurship. As mentioned previously, franchising, too, is linked to habitual entrepreneurship, and hence, future franchising studies could usefully investigate entrepreneurial careers. In addition, comparative studies on franchisees and stand-alone small business owners would be a fruitful avenue for future investigations, enabling franchising and entrepreneurship researchers to get a clearer picture of these different types of entrepreneurs.

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Regulating the Franchise Relationship: Franchisor Opportunism, Commercial Morality and Good Faith

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Abstract As franchising increases its influence internationally, regulators increasingly face the challenge of the appropriate manner of its regulation. A recent Australian report has focussed attention on an obligation of good faith as an appropriate regulatory strategy to address opportunistic conduct and has concluded that while the prior disclosure obligations of Australia's regulatory instrument for franchising (the *Franchising Code of Conduct*) are for the most part adequately addressed, there remain concerns because of the 'continuing absence of an explicit overarching standard of conduct for parties entering a franchise agreement'. The *Opportunity not opportunism* report of the Parliamentary Joint Committee on Corporations and Financial Services (December 2008) recommended that the optimal way to provide a deterrent against opportunistic conduct in the franchising sector was 'to explicitly incorporate, in its simplest form, the existing and widely accepted implied duty of parties to a franchise agreement to act in good faith'. In November 2009 the Australian Government rejected this recommendation on the basis that it would 'increase uncertainty in franchising'. This paper explores the challenges faced in grafting the civil law concept of good faith onto a common law system. It suggests that in Australia and other common law jurisdictions – and even in civil law jurisdictions – good faith is more an elusive ideal than a well settled commercial standard and that issues of definition, scope and application may frustrate its intended application in the franchising context.

1 Introduction

In 1998 Australia joined the then small group of countries which regulated their franchise sectors under specific franchise laws rather than simply relying on underlying commercial laws of general application to all business enterprises, albeit supplemented in many cases by voluntary self regulatory codes of practice (Terry

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2006). The influential 1997 Fair Trading Report, Finding a Balance – Towards Fair Trading in Australia catalogued a litany of inappropriate conduct in relation to small business in general and franchising in particular that left the government little option but to act. The *Franchising Code of Conduct* which mandates prior disclosure, regulates aspects of the relationship, and requires mediation as a prerequisite to arbitration or litigation (prescribed as a Regulation under the *Trade Practices Act* 1974 (Cth)) and the introduction of a business unconscionability provision (under section 51AC of the *Trade Practices Act*) was the legislative response (Giles et al. 1998). These initiatives, in combination with the general prohibition of misleading and deceptive conduct (under s 52 of the *Trade Practices Act*) extend to Australian franchisees arguably the world's most comprehensive regulatory safety net.

Despite the concerns of UK franchising specialist Martin Mendelsohn (1999) that 'the new Australian regulation makes Australia the least desirable destination in the world for franchise systems' and his advice that 'franchisors should avoid Australia until they had nowhere else to go, and even then it would be a close call', the Australian experience has been positive. The Australian franchising sector has been prepared to accept regulatory measures to protect the image and credibility of the sector (Franchising Policy Council 2000) and the Franchise Council of Australia, the peak industry body, acknowledges that there is 'overwhelming support for the *Code*' which has had a 'beneficial effect on the franchising sector' since its introduction (Franchise Council of Australia 2000).

Despite the strong regulatory regime in Australia, the pressure for further and better protection continues. The *Fair Trading Report* referred to over twenty previous reports at regular intervals since 1976 – only a few years after the first golden arches were erected in Australia providing the catalyst for the development of domestic franchising – addressing business conduct issues either generally or in the specific context of franchising. In 2008 alone, there were three parliamentary inquiries – Western Australia (April 2008) and South Australia (May 2008) and Federal. The latest and most influential report – *Opportunity not opportunism: improving conduct in Australian Franchising* – of the Federal Parliamentary Joint Committee on Corporations and Financial Services (December 2008) concluded that while the *Code's* prior disclosure obligations are 'for the most part adequately addressed' there remain concerns because of the 'continuing absence of an explicit overarching standard of conduct for parties entering a franchise agreement'. The Committee commented that

> . . . the interdependent nature of the franchise relationship leaves the parties to the agreement vulnerable to opportunistic conduct by either franchisors or franchisees. Franchisee opportunism may take the form of free riding, unauthorised use of franchisors' intellectual property rights, under-performance, or failure to accurately disclose income. However, the franchisor's control over the provisions in the contract enables franchisors to address opportunistic behaviour of this kind by enforcing the terms of the franchise agreements.

Franchisor opportunism was described as 'predatory conduct and strong arm tactics by franchisors' involving the exploitation of a pre-existing power

relationship between the franchising parties, which makes the franchisee 'vulnerable or economically captive to the demands of the franchisor'. There is an inherent and necessary imbalance of power in franchise agreements in favour of the franchisor, but abuse of this power can lead to opportunistic practices including encroachment, kickbacks, churning, non-renewal, transfer, termination at will, and unreasonable unilateral variations to the agreement.

The Committee concluded that the optimal way to provide a deterrent against opportunistic conduct in the franchising sector was 'to explicitly incorporate, in its simplest form, the existing and widely accepted implied duty of parties to a franchise agreement to act in good faith'. It recommended that the following new clause be inserted into the *Franchising Code of Conduct*:

Standard of Conduct

> Franchisors, franchisees and prospective franchisees shall act in good faith in relation to all aspects of a franchise agreement.

This paper assesses this recommendation which, although superficially attractive, is not the panacea its proponents expect it to be.

This paper is organised as follows: Section 2 examines the nature of the franchise relationship and the challenges its relational and standard form elements pose for regulators. Section 3 addresses the potential role of a good faith obligation to meet these challenges. Section 4 addresses the challenges in formulating a concept of good faith and Sect. 5 examines international precedents. The paper concludes that good faith is more an elusive ideal than a well settled commercial standard and that issues of definition, scope and application may frustrate its intended application. Such considerations were influential in the Government's rejection of the recommendation for a stand alone and overarching good faith obligation in the *Code* on the basis that '[t]he extra uncertainty created by the inclusion in the Franchising Code of a general, undefined good-faith obligation could be expected to have adverse commercial consequences for franchisees' (Additional Information on Franchising Code and Unconscionable Conduct Reforms 2009).

2 Not an Ordinary Commercial Contract

In *Dymocks Franchise Systems (NSW) Pty Ltd v Todd* (2002) the Privy Council acknowledged that franchise agreements were 'not ordinary commercial contracts'. The *Dymocks* case provided the first opportunity in Anglo-Australasian jurisdictions for a superior court to explore the jurisprudential nature of franchising, and the reason why franchising agreements were not ordinary contracts. Unfortunately this opportunity was not taken up and the academic literature addressing this issue was not referred to by the Privy Council. The nature of the franchisor/franchisee relationship and the contract which enshrines it are nevertheless attracting increasing attention (Terry 2005; Dixon 2005, 2007; Paterson 2001; Terry and Di Lernia

2009), and there is increasing recognition, academic if not judicial, that franchising is a *relational* contract, which Dr Elizabeth Spencer (2008) has described as follows:

> Relational contracts are defined by features of incompleteness and longevity. Relational contracts must be flexible, sometimes to the point of being vague. There is often a high level of discretion accorded to the parties, and such contracts therefore rely heavily on reciprocity and on trust that develops over time between the contracting parties.

Franchising exists in a world of 'contractual incompleteness and relational complexity' in which

> . . . the parties are not strangers; much of their interaction takes place "off the contact", mediated not by visible terms enforceable by a court, but by a particular balance of cooperation and coercion, communication and strategy (Hadfield 1990).

These characteristics pose a challenge to regulators. The extra-legal norms which explain relational contracting in the context of contracting equals – where self interest generally leads to acceptable outcomes – are nevertheless not as compelling in the context of the typical business format franchise which is characterised by both an *information* and a *power* imbalance (Spencer 2006).

The *information imbalance* which characterises the typical business format franchising relationship is typically redressed by prior disclosure. The case for legislation remedying the information imbalance by mandating prior disclosure is widely accepted today. Prior disclosure obligations are not regarded as a restriction on business but as a 'common sense and firm basis for doing business within the peculiarly close relationship of a franchise and in accordance with normal business practice' (Trade Practices Consultative Committee 1979).

The *power imbalance* raises more sensitive issues. The case for legislation addressing the power imbalance has less support as it raises difficult questions of fairness and the appropriate allocation of risk in entrepreneurial activities. UNIDROIT's *Model Franchise Disclosure Law* 2002 for example deliberately deals exclusively with prior disclosure issues and does not trespass into the area of appropriate conduct within the relationship. It can be argued that prior disclosure is the key to franchise reform and that it is the function of the disclosure statement to warn potential franchisees not to enter into agreements that they regard as potentially imposing unduly onerous obligations. There is nevertheless increasing regulatory attention to standards of conduct and relationship issues arising out of the power imbalance and greater acceptance that unduly onerous obligations and opportunistic conduct need to be addressed as part of a regulatory scheme to overcome the limitations of classical contract law in accommodating the realities of the relational franchise model.

3 Good Faith and the Franchise Relationship

The concept of good faith plays an important role in most legal systems. It is a concept familiar to the civil law in which under the Civil Codes it provides the ultimate point of reference for contractual obligations. The common law however

has not evolved any general requirement of good faith. As noted by Brereton J in the NSW Supreme Court in *Hunter Valley Skydiving Centre Pty Ltd v Central Coast Aero Club Ltd* (2008), good faith does not 'neatly fit into the structure of Australian contract law' or for that matter, the common law more generally. However, it does not follow that the common law is 'the hard headed Dickensian ogre that this would at first sight lead one to believe'(Whittaker and Zimmerman 2000), for the common law has developed specific solutions to particular problems said to arise by virtue of the nature of classical contract law. A range of general and legislative provisions make provision for specific matters addressing specific contractual fairness issues. Indeed, it has been stated that the 'mistrust of Anglo-Saxon jurists for the general concept of good faith is equalled only by the imagination which they put towards multiplying particular concepts which lead to the same results' (Michel 1998).

The 'device' increasingly looked to modify the inflexibility of traditional, classical common law contract theory in relational settings such as the franchise relationship is good faith. Hadfield argues that 'the doctrinal tool relied on to bring 'the resolution of franchise contract disputes into line with the realities of the franchise relation[ship]' (Hadfield 1990) is invariably the implied term of good faith. However, as noted above, an overarching good faith obligation sits uneasily in the common law and judicial support for this proposition is scant. In Anglo-Australasian jurisdictions the proposition of a New Zealand judge, Thomas J, in a dissenting judgment in *Bobux Marketing Ltd v Raynor Marketing Ltd* (2002), stands virtually in splendid isolation:

> The norms of the ongoing relationship, of necessity, tend to supplement the express contractual obligations. Good faith is required to ensure that the requisite communication, co-operation, and predictable performance occurs to the advantage of both parties. In short, the obligation seeks to hold the parties to the promise implicit in the continuing relational commercial transaction.

Outside legislative direction, an obligation of good faith can arise in a franchise agreement in three ways – as an express term of the contract, as a term implied in fact on an *ad hoc* basis to give business efficacy to the contract, or as a term implied in law as a necessary incident of the contract. A fourth possibility – that the obligation of good faith is a principle of construction which is 'inherent in all common law contract principles' – would mean that the implication of independent terms requiring good faith is an 'unnecessary and retrograde step' (Carter et al. 2007) and has little judicial support.

The implication in law of a term of good faith as a necessary incident of the contract is not widely supported throughout the common law world. The recent decision of Singapore's Court of Appeal in *NG Giap Hon v Westcomb Securities Pte Ltd* (2009), which raised 'important issues of principle centring around the inherently problematic doctrine of the implied term of good faith', is broadly typical of the common law's less than enthusiastic attitude. The Court of Appeal noted that this issue had given rise to 'significant controversy' in other common law jurisdictions and was raised in the present appeal for the first time in Singapore.

The Court held that a term of good faith should not be implied in law in an agency agreement:

> The doctrine of good faith is very much a fledgling doctrine in English and (most certainly) Singapore contract law. Indeed, a cursory survey of the relevant law in other Commonwealth jurisdictions appears to suggest a similar situation. This is, perhaps, not surprising in view of the fact that, even in the academic literature (which has witnessed the most discussion as well as analysis of the doctrine), there are differing views as to what the doctrine of good faith means as well as how it is to be applied. Indeed, the copiousness as well as the variety of (and, perhaps more importantly, the debates in) the academic literature (coupled with the relative dearth of case law) suggest that the doctrine of good faith is far from settled. The case law itself appears to be in a state of flux.

Among the common law jurisdictions, Australia has generated most discussion. There is wide, albeit not unanimous support for the 1999 proposition of Finkelstein J in the Federal Court in *Garry Rogers Motors (Aust) Pty Ltd v Subaru (Aust) Pty Ltd* (1999) that 'in appropriate contracts, perhaps even in all commercial contracts, such a term will ordinarily be implied: not as an ad hoc term (based on the presumed intention of the parties) but as a legal incident of the relationship'. In *Esso Australia Resources Pty Ltd v Southern Pacific Petroleum NL* (2005) the Victorian Court of Appeal was reluctant to endorse the implication of a term of good faith as a legal incident of commercial contracts. The Court expressed a preference for '*ad hoc* implication. . . rather than implication as a matter of law creating a legal incident of contracts of a certain type'. The Court nevertheless qualified its reservation and was. . .

> . . . reluctant to conclude that commercial contracts are a class of contracts carrying an implied term of good faith as a legal incident, so that an obligation of good faith applies indiscriminately to all the rights and powers conferred by a commercial contract. It may, however, be appropriate in a particular case to import such an obligation to protect a vulnerable party from exploitative conduct which subverts the original purpose for which the contract was made.

4 Formulating a Concept of Good Faith

Judicial acceptance within the common law world that an implied term of good faith is a necessary incident of a franchise contract is only the beginning. The real challenge is to be found in formulating the concept precisely enough not to cause havoc in the law. The difficulty in defining what has been described as a 'contextual standard' and a 'generalisation of universal application' (*Hughes Aircraft Systems International v Airservices Australia* (1997)) is identifying its precise boundaries. At present, the scope of the duty remains elusive. Although there is an increasing body of case law most judgments advocating recognition of the concept 'appear incoherent and contain little legal principle' (Peden 2003). In *Council of the City of Sydney v Goldspar Australia Pty Limited* (2006) Gyles J described the variety of opinions in both the authorities and the commentaries as 'bewildering' and noted

that approaches vary from the 'cautious' to the 'adventurous'. Paterson argues that 'Australian case law has relied on synonyms or isolated examples to explain the duty, an approach which leaves much unanswered' (Paterson 2001). Such an approach impacts negatively on legal certainty and does not help in setting a standard for franchisees and franchisors to aspire to in their dealings.

4.1 The Meaning of Good Faith

Perhaps the best known approach to understanding the potential content of a good faith obligation is Summers' *excluder* doctrine advanced in his seminal Virginia Law Review article (Summers 1968). Professor Summers saw good faith as a phrase which 'has no general meaning or meanings of its own, but which serves to exclude many heterogeneous forms of bad faith'. However, this approach fails to provide a clear idea of what observance of the standard would actually require:

> [I]t seems tantamount to saying that the good faith duty is breached whenever a judge decides that it has been breached... [which] hardly advances the cause of intellectual inquiry and provides absolutely no guide as to the disposition of future cases except to the extent that they may be on all fours with a decided case (Bridge 1984).

The excluder approach does not appear able to provide any real guidance to courts or contracting parties as to whether the supposed duty might be breached by particular actions. This leads to an undesirable lack of certainty in commercial arrangements.

Two more comprehensive formulations which have some support are provided by two distinguished judges writing extra-judicially. Lord Steyn incorporates a subjective element, a 'threshold requirement . . . that the party must act honestly', as well as an objective element requiring the 'observance of reasonable commercial standards of fair dealing in the conclusion and performance of the transaction concerned' (Steyn 1997). Sir Anthony Mason (2000) states that

> . . . the concept embraces no less than three related notions: (1) an obligation on the parties to co-operate in achieving the contractual objects (loyalty to the promise itself); (2) compliance with honest standards of conduct; and (3) compliance with standards of conduct which are reasonable having regard to the interests of the parties.

The duty to cooperate to achieve contractual objects is an accepted legal duty for all contracts under the common law. In the words of Griffith CJ in *Butt v M'Donald* (1896), 'It is a general rule applicable to every contract that each party agrees, by implication, to do all such things as are necessary on his part to enable the other to have the benefit of the contract'. The idea that good faith requires parties to act honestly, and therefore that acting dishonestly connotes bad faith conduct, is uncontroversial. A standard of "honesty" nevertheless poses an evidentiary challenge to a franchisee and will not catch many forms of behaviour which although characterised by honest conduct will impact negatively and significantly upon the interests of the contractual counterparty.

Lord Steyn's objective element, and Sir Anthony Mason's third requirement, relating to reasonable commercial standards pose more serious difficulties. In relation to the exercise of a termination clause by a franchisor there is judicial support in Australia for the proposition that 'provide the party exercising the power acts reasonably in all the circumstances, the duty to act fairly and in good faith will ordinarily be satisfied' (see *Garry Rogers Motors (Aust) Pty Ltd v Subaru (Aust) Pty Ltd* (1999)). While reasonableness provides a platform from which to explore the content of the supposed good faith obligation, this approach has been criticised as being 'more confusing than instructive':

> There is no precise meaning given, but rather a repetition of well-worn phrases and quotes, without explanation of how and why they fit together. There is, furthermore, no explanation of why "reasonableness" is a justified inclusion in the meaning of good faith, and why it is considered identical to "good faith" (Peden 2003).

In *Renard Constructions (ME) Pty Ltd v Minister for Public Works* (1992) it was noted that 'in ordinary English usage there has been constant association between the words fair and reasonable. Similarly there is a close association of ideas between the terms unreasonableness, lack of good faith and unconscionability'. This is of great import to any definition of good faith involving reasonableness, for it can be argued that 'a requirement to satisfy a standard of reasonable behaviour is more demanding than the requirement of good faith' (Stapleton 1999). In any event as Bowen LJ cautioned over a century ago in *Mogul Steamship Co. v McGregor, Gow & Co.* (1889):

> I should deem it to be a misfortune to attempt to adopt some standard of judicial "reasonableness" to which commercial adventurers were bound to conform.

The caution of Bowen LJ still retains much of its original force.

The quest for a more specific formulation to accommodate the underlying need for certainty in franchise relationships has led to the idea that good faith should preclude opportunistic conduct or the use of contractual terms for purposes antithetical to the contract. In *Far Horizons Pty Ltd v McDonald's Australia Ltd* (2000), Byrne J stated that good faith would oblige 'each party to exercise the powers conferred upon it by the agreement in good faith and reasonably, and not capriciously or for some extraneous purpose'. In fleshing out such a conception however, as stated by Barrett J in *Overlook v Foxtel* (2002) 'it becomes necessary to enquire about the extent to which selflessness is required'. While franchise contracts do not embody any sort of fiduciary relationship, Barrett J stated that good faith requires a party to 'recognise and to have due regard to the legitimate interests of both the parties in the enjoyment of the fruits of the contract as delineated by its terms', although the interests of the other party are not paramount (see *Mason v. Freedman* (1958), cited in *Shelanu Inc. v. Print Three Franchising Corp.* (2003)). If this be the case, the logical question which follows concerns the divining of "legitimate interests". Would such interests be inferred from the contract alone or would exogenous sources of information such as extra-contractual norms developed as part of the ongoing

relationship play a role in determining whether legitimate interests had been controverted?

Should the former approach be taken, the weight of the standard form contract drafted in the interests of the stronger franchisor would not assist the franchisee except in cases of obvious abuse, such as in *Australian Competition and Consumer Commission v Simply No-Knead (Franchising) Pty Ltd* (2000), where the statutory unconscionability provisions provided relief. Hadfield (1990) argues that consideration should be given to the continuing relationship and the expectations engendered therein. This suggests another approach to good faith which is to consider the "reasonable expectations" of parties to a contract. Under this approach a court may be able to take a more balanced approach to franchising disputes by allowing franchisees, who might have had their legitimate expectations of contractual performance frustrated and are not otherwise able to make a case in situations where they do not possess formal "legitimate interests" as specified in a written contract, a valid avenue for redress they otherwise would not have had. However, as noted by Professor Summers (1968), '[i]n most cases the party acting in bad faith frustrates the justified expectations of another [and] the ways in which he may do this are numerous and radically diverse'. Possibly for this reason, the reasonable expectations approach has received little judicial attention.

An important consideration in the use of the reasonable expectations approach as noted by Iglesias (2004) is that 'what a party can reasonably expect must be determined not on subjective hopes, but on economic reality'. Even the good faith sceptic, Professor Michael Bridge (1984), suggests that the reasonable expectations approach might just fit the necessary requirements for a standard of good faith stating that reference to justified expectations 'is much more satisfactory than good faith as a guide to the resolution of practical problems'. An important concern is the evidentiary burden of proving the reasonable existence of such expectations and ensuring franchisees actual and potential do not get swept up in any false expectations of the power of "good faith", and all that term connotes. Any approach cloaked in the language of 'good faith' may give serve to disappoint franchisees by providing false hope that unsupported subjective hopes may trump hard contractual terms and unforgiving economic reality.

4.2 The Limitations on Good Faith

Even if the meaning of good faith can be determined with sufficient precision to be practically and commercially useful, an important cluster of issues which the meagre case law has only incompletely addressed surrounds the role of good faith in the context of contractual provisions. Questions arise as to whether a requirement of good faith would be able to impose obligations on contracting parties inconsistent with other terms of the contract, whether the duty can be excluded by the parties, and whether good faith can function as an independent source of obligations or is it limited to bad faith violations of express terms?

In Ingot Capital Investments v Macquarie Equity Capital Markets [No. 6] (2007) the New South Wales Supreme Court stated:

> [I]t is plain that no duty of good faith can be implied where the duty. . .is inconsistent with an express term of the contract. . . [E]ven if there is no direct conflict between the term sought to be implied and any express term of the contract, the express terms of the contract as a whole may negate the implication.

Determining whether a contract taken as a whole might limit the operation of a good faith obligation may prove a complex exercise in legal sophistry for as explained by Greenwood J in *Luce Optical v Budget Specs (Franchising)* (2005):

> Good faith is an incident of every commercial contract unless the duty is excluded expressly or by necessary implications and that duty operates as a fetter upon the exercise of discretion and powers conferred by the contract. . .

The next set of questions concern the contractual exclusion of the operation of an obligation of good faith. While an implied term of good faith cannot defeat the use of clause expressly excluding it the question of whether "entire agreement" clauses have the effect of excluding the implied obligation of good faith is less certain. Finn J in GEC Marconi Systems Pty Ltd v BHP Information Technology Pty Ltd (2003) considered that under Australian law, an "entire agreement" clause does not preclude implications ad hoc, and found 'arresting' the suggestion that an entire agreement clause is 'of itself sufficient to constitute an express exclusion of an implied duty of good faith and fair dealing where that implication would otherwise have been made by law'.

A third set of questions which arises is whether an obligation of good faith can arise independently of contractual terms. This question is yet to be authoritatively resolved. Professor Peden suggests that 'in Australia there is reluctance to require an obligation of good faith or cooperation that is independent of express terms of the contract' and to 'state there is a term requiring good faith without some obligation on which to attach it would be to place the obligation in a "vacuum"' (Peden 2003).

4.3 The Reality of Good Faith

While the Singapore Court of Appeal does not speak for the common law world its reason for not endorsing an implied duty of good faith in the Singapore context resonates more widely. In *NG Giap Hon v Westcomb Securities Pte Ltd* (2009) the Court of Appeal stated that

> . . .it is not surprising that the doctrine of good faith continues to be a fledgling one in the Commonwealth. Much clarification is required, even on a theoretical level. Needless to say, until the theoretical foundations as well as the structure of this doctrine are settled, it would be inadvisable (to say the least) to even attempt to apply it in the practical sphere.

Although the *Opportunity not opportunism* (2008) report optimistically accepted that 'while an abstract formulation of a generalised concept of good faith may be

indistinct the courts have demonstrated that they are able to know it when they see it, and more properly, they know a breach of it when they see it', the Singapore Court of Appeal provides salutary caution that the content and application of good faith remains ambiguous and uncertain. Whittaker and Zimmermann (2000) have cautioned that, even under the civil law, good faith is not a legal rule 'with specific requirements that have to be checked but may be called an 'open' norm [the content of which] cannot be established in an abstract manner but takes shape only by the way in which it is applied'. While defining good faith is an improbable exercise in a civil law jurisdiction and an extremely challenging exercise in a common law jurisdiction, it is nevertheless of a lesser degree of difficulty than determining what the obligation demands in a particular case. This is a challenge which faces both the civil law and the common law.

5 Legislating a Good Faith Obligation

The Australian recommendation was to legislatively mandate good faith in the franchising context by adding to the *Franchising Code of Conduct* the requirement that 'Franchisors, franchisees, and prospective franchisees shall act in good faith in relation to all aspects of a franchise agreement'. In civil law jurisdictions good faith exists as an underlying principle for contracts generally and there are a number of precedents in common law jurisdictions. China, Italy, Korea, and four Canadian provinces specifically address good faith. Other regulated regimes, such as Australia under the current *Code*, do not address general standards of conduct but nevertheless specifically address particular conduct issues in relation to, for example, termination and transfer. Beyond the general or specific conduct provisions of dedicated franchise laws the underlying laws of general application may of course have a significant impact in prescribing general ethical standard. In Australia for example the statutory prohibitions of "misleading conduct" and "unconscionable conduct" under the *Trade Practices Act 1974* (Cth) have been particularly influential in raising standards of conduct within the franchising sector (Giles et al. 1998).

China's *Commercial Franchise Regulation* 2007 requires that: 'Franchising activities shall be conducted in compliance with the principles of free will, fair dealing, honesty, and good faith' (article 4). Korea's *Fair Franchise Transactions Act 2002* provides that 'In engaging in the operation of a franchise the franchising parties shall perform their respective duties based on the principles of trust and good faith' (article 4). Italy's *Rules on the Regulation of Franchising* 2004 lay down a duty of good faith in relation to precontractual behaviour: 'The franchisor must exercise loyalty, fairness and good faith at all times in its dealings with the prospective franchise …' (article 6). Malaysia's *Franchise Act* 1998 does not impose a specific good faith obligation but nevertheless requires that 'A franchisor and a franchisee shall act in an honest and lawful manner and shall endeavour to pursue the best franchise business practice of the time and place.' (s.29(1)).

The most useful analogy from an Australian perspective is that of Canada. The *Uniform Franchise Act* 2005, a model law, provides that:

3. Fair dealing

(1) Every franchise agreement imposes on each party a duty of fair dealing in the performance and enforcement of the agreement, including in the exercise of a right under the agreement.

Right of action

(2) A party to a franchise agreement has a right of action for damages against another party to the franchise agreement who breaches the duty of fair dealing.

Interpretation

(3) For the purpose of this section, the duty of fair dealing includes the duty to act in good faith and in accordance with reasonable commercial standards.

This provision specifically exists in the laws of Alberta (*Franchises Act*, 2005) New Brunswick (*Franchises Act*, 2007), Ontario (*Arthur Wishart Act (Franchise Disclosure)*, 2000) and Prince Edward Island (*Franchises Act*, 2005) but, as Shannon O'Byrne (2004) argues, a good faith obligation exists in the other provinces either as part of the common law or, in Quebec, a civil law jurisdiction, under the *Civil Code* which includes the requirement that 'the parties shall conduct themselves in good faith both at the time the obligation is created and at the time it is performed or extinguished' (art. 1375) and which subjects contracts generally to a good faith obligation.

The good faith obligation in Canada – whether arising from the common law, from the dedicated franchise laws or from the Quebec Civil Code – has been applied in a variety of circumstances seemingly without controversy although the Supreme Court of Canada has not yet had the opportunity to consider its application, scope and operation in a franchising context (O'Byrne 2004). It is argued that the doctrine is 'constructive because it expressly prohibits capriciousness improper motive, dishonesty, unreasonableness, opportunistic behaviour and ambush' (Stack 1999). Meehan J in the Ontario Superior Court of Justice in *Elite Specialty Nursing Services Inc. v Ontario* (2002) has indeed observed that 'explicit recognition of the duty of good faith in performance of a contract simplifies and clarifies the law. Contrary to the views of its detractors . . . explicitly recognising the doctrine makes the law more certain, more understandable, and, of course, more fair'. These views are not, as noted elsewhere, held by all commentators, and the benign Canadian experience is not mirrored in the United States. Section 1–203 of the *Uniform Commercial Code* provides that '. . . every contract a duty within this *Act* imposes an obligation of good faith in its performance or enforcement' (see also Section 205 of the Restatement (2nd) of Contracts). Section 1–203 provides the best known example of a legislated underlying good faith obligation but the franchising case law clearly suggests that the substantive difficulties of meaning, application and scope are not removed by the legislative direction. Pitegoff and Garner (2008) suggest that

> . . . although the covenant of good faith and fair dealing probably is law in most jurisdictions, there are very few cases where that principle, by itself, has led to a ruling favourable

> to a franchisee. Several courts have held that no cause of action exists for an alleged violation of the covenant in the absence of an allegation of violation in bad faith of an express term of agreement.

The meaning of the concept remains uncertain and the issue of whether it can operate as an independent source of obligations independently of contractual provisions remains undetermined. As the Singapore Court of Appeal has recently observed in *Ng Giap Hon v Westcomb Securities Pte Ltd* (2009), 'substantive difficulties with the doctrine of good faith [exist] even in jurisdictions where it has been legislatively mandated'.

Such considerations were implicit in New Zealand's recent decision not to introduce franchise specific regulation 'at this time' (Ministry of Economic Development 2009). In relation to the mooted proposal to mandate "good faith" the Cabinet paper expressly refers to the uncertainty and added potential for litigation that would be created by such an obligation:

> 'Good faith' is a term which is not unusual in relational contracts. However, there is no consistent or accepted definition of good faith and the courts in New Zealand have been cautious about implying a general duty of good faith into contracts. There are diverging judicial views about whether good faith is to be implied either in all commercial contracts, types of commercial contracts (eg. franchises), or on a case by case basis, what the precise content of good faith obligations might be, what would constitute a breach of these obligations, and what the consequences should be.
>
> The common law is therefore unclear and if good faith was legislated for, it would likely take some time before the court established the key principles that would underpin such an obligation in the context of franchising.

Similar considerations influenced the Commonwealth Government's Response to the report of the Parliamentary Joint Committee (2009) for the introduction of an overarching standard of good faith to be incorporated in the *Franchising Code of Conduct*:

> While accepting the intent of [the] Recommendation ... there are some difficulties with the suggested approach. The law on good faith is still evolving and there is not a single definition or standard set of behaviours that constitute good faith. The inclusion of a general obligation of good faith in the Franchising Code would increase uncertainty in franchising. Neither franchisors nor franchisees would be certain of the occurrence of a breach: court proceedings would be required to establish whether or not there had been a breach.
>
> The extra uncertainty created by the inclusion in the Franchising Code of a general, undefined good-faith obligation could be expected to have adverse commercial consequences for franchisees.

The Government's approach is that specific issues 'should be dealt with by measures which will address specific behavioural concerns'. This approach is 'legally feasible and avoids undesirable commercial consequences for franchising [including] unnecessary uncertainty and associated extra costs for franchisees and franchisors'.

6 Conclusion

The omnipresent problem with good faith is that it is, in the words of Professor Michael Bridge (1984), 'an imperfect translation of an ethical standard into legal ideology and legal rules'. This is an issue which transcends legal systems. Although the "good faith debate" is frequently presented in a civil law versus common law context the positions are not as entrenched as commonly assumed. Whittaker and Zimmermann (2000) for example argue that 'The position in English law appears to be much less unequivocal than a continental lawyer faced with some of these general propositions might be led to expect. Conversely, the civilian approach is much less uniform than a common law lawyer might be led to believe'. The enduring and common issue for any system that embraces good faith as a guiding proposition is ultimately to determine its meaning, its scope, its limitations. Irrespective of the heritage of the legal system which embraces the concept it 'is not a legal rule with specific requirements that have to be checked but may be called an "open" norm. It cannot be established in an abstract manner but takes shape only by the way in which it is applied' (Whittaker and Zimmermann 2000). Good faith, as Mackaay and Leblanc (2003) argue, is 'an open-ended concept or principle rather than a specific rule' and 'the mould in which have been fashioned a range of more specific concepts that have started to lead a life of their own in case law and legal scholarship'.

The concept of "good faith" has gained traction as the solution to all real and imagined ills within the franchising sector and, for those agitating for reform, has assumed symbolic significance. A workable definition of good faith is elusive, but without it a stand-alone obligation of good faith would thrust the franchise sector into an era of uncertainty, disputation and litigation with breaches of good faith being sought to be applied to an indeterminate range of real and imagined grievances (see generally Zaid 2003). As the authors have written elsewhere, '[i]f franchisor opportunism is a problem warranting legislative intervention this should be addressed by carefully crafted legislative responses rather than by defaulting to an undefined and overreaching standard of indeterminate scope and application' (Terry and Di Lernia 2009). This was the preferred option of the Australian Government which has determined that the imperative that franchisors and franchisees act in good faith is better addressed by measures which will address specific behavioural concerns.

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Effect of New Regulation on Franchising Performance: An Exploratory Study in Spain

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Abstract Compulsory franchising regulation in Spain was introduced in 1998. Until then, franchising had had no specific regulation and was regulated by general commercial laws. This paper examines the effect of the change from a general regulation to a franchise-specific legislation on survival rates and discontinuance rates in the Spanish market. We use a descriptive methodology and a comparison between survival curves. After controlling for time-in-market, results suggest that, after regulation, there is an increase in the organizational failure rates but a decrease in discontinuance rates. Furthermore, regulation affects foreign franchisors slightly more negatively than domestic ones and the reaction of growing firms is different from that of firms with negative growth.

1 Introduction

The importance of franchising in the US and European economies in recent decades (Price Waterhouse and IFA 2006; European Franchise Federation 2008) has led to franchising becoming a major topic in business research. In the franchising literature, the kind of regulatory framework in which franchising should operate is a much-debated issue (Fulop and Forward 1997) because a legal environment that lacks clarity is one of the main impediments to franchise development (Anntonen et al. 2005).

Local regulation is an important aspect that international franchisors have to take into account (Hacket 1976). A lack of awareness about the legal requirements in each country has resulted in many franchisors making mistakes in format extensions (Hoy and Hoy 1994). Government policies and regulations may increase

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business uncertainty for international firms (Miller 1992). Different countries may have different requirements. For example, the Franchise Disclosure Document (FDD), previously known as the Uniform Franchise Offering Circular (UFOC), is based on the US franchise laws. Other countries, such as the UK and Spain, have elaborated specific franchise regulations. Many other countries have not introduced specific franchise regulations but franchise associations have adopted a Code of Ethics to regulate the conduct of their members (Terry 2003).

Despite the importance of the legal environment, very few empirical analysis in the franchising literature are dedicated to it. Studies have been carried out on the Australian market (Lim and Frazer 2002; Spencer 2008) and on the US market (Beales and Muris 1995; Shane and Foo 1999), but there is lack of research on European markets.

The main objective of this paper is to analyze the effect of a change in the legal environment on franchise performance. Our performance measure is network survival, which has been the focus of much of the extant research on franchise performance (Bates 1998; Shane and Foo 1999; Shane 2001; Holmberg and Morgan 2003). Survival, among others such as growth, profitability or satisfaction for the business owner, is a key performance measure in entrepreneurship (Shane 2003). We also examined the moderating effect of origin and growth on the impact of regulation on survival.

The definition of failure is more complex. In the franchising context, failure has been defined in different ways and from different perspectives. Some studies have adopted the franchisee point of view (Bates 1995a, 1995b, 1998; Falbe and Welsch 1998; Holmberg and Morgan 2003; Tuunanen and Torikka 2008). Most of these have analyzed franchisee mortality (Bates 1995a, 1995b, 1998; Falbe and Welsch 1998; Michael and Combs 2008) but other studies have examined the franchisee's decision to discontinue franchising (Frazer 2001; Frazer and Winzar 2005).

However, most of the franchise survival research has focused on franchisor or network failure.[1] If the network survives, it means that it is able to react and to adapt to different competitive environments (Perrigot et al. 2004). Early research focused on comparative studies of the failure rate between franchisors and independent small businesses (Castrogiovanni et al. 1993; Stanworth et al. 1998). Additionally, the failure rate of new franchisors (Shane 1998; Stanworth et al. 2001) and the evolution of the entries and exits of the franchise market (Lafontaine and Shaw 1998) have been analyzed. In recent years, much research paid special attention to the drivers of franchisor failure (Lafontaine and Shaw 1998; Shane and Foo 1999; Shane 2001; Azoulay and Shane 2001; Bordonaba-Juste et al. 2009). As in franchisee survival research, most of the studies have focused on organizational mortality.

Our study examines two types of network failure[2]: organizational failure and franchise discontinuance. We use data about the franchise networks that operated in

[1]In these studies, franchisor failure and network failure are used synonymously.

[2]Organizational mortality might imply bankruptcy, liquidation of the firm or moratorium on payments. The status of the firm was provided by SABI, a database for all the Spanish and

Spain between 1986 and 2004. In this country, until 1998, there was no specific regulation of franchising and this activity was regulated by general retailing laws. This situation makes this country a suitable context for our study. This paper examines the effect of the change from a general regulation to a franchise-specific legislation on survival rates and discontinuance rates in the Spanish market. Because the aim is to provide an exploratory analysis, a descriptive methodology is employed. We provide a comparison test between survival curves before and after regulation. After controlling for time-in-market, we find an increase in organizational failure rates and a decrease in franchise discontinuance rates after the new regulation was implemented. Additionally, the negative effect of regulation on organizational failure is slightly greater for foreign franchise networks than for domestic ones.

This paper is structured as follows. The next section describes the Spanish Franchise legislation. Section 3 examines the positive and negative aspects of franchise regulation. In Sect. 4, we explain our data and the empirical analysis and Sect. 5 presents the results. Finally, we discuss the main results and their implications.

2 The Spanish Franchise Legislation

The specific franchise legislation came into effect in 1998 (Real Decreto 2485/1998, BOE, n° 283[3]). It establishes the basic conditions of the franchising activity and the development of the Franchisor Register.

The new regulation creates new duties for the franchisor with respect to the pre-contractual information given by the franchisor to the potential franchisee. The new regulation is based on information disclosure. The franchisees are given a 20-day cooling-off period. The disclosure of documents forces franchisors to provide a clear picture of their franchises in terms of experience, sales forecast, assistance and financial capability. This brings honesty and trust to the relationship and aids franchisees to take an informed decision. But, before contacting the franchisor, the potential franchisees have another source of information: the franchisor register.

The regulation stipulates that all businesses that want to operate as a franchise system in Spain have to be registered in this specific Franchisor Register. It also

Portuguese firms. In this paper, any status other than active was considered as organizational mortality. Franchise discontinuance is defined when the franchise network was not listed in any franchise sourcebook or in the Spanish Franchise Register for at least two consecutive years but when the firm was still considered active in the SABI and presented its financial documents. In both organizational failure and franchise discontinuance, the franchise network disappears from the franchise sourcebooks but, in the case of franchise discontinuance, the firm continues its entrepreneurial activity while, in organizational failure, the firm is not active any more.

[3]BOE, n° 283, pp. 38859–38862. I General regulations. Ministry of Economy and Taxes. www.boe.es

predetermines the type of information that the franchisors have to provide annually. Apart from general information about the franchisor (such as activity, number of outlets or experience in franchising), franchisors have to provide information about the number of outlets opened and closed. They also have to inform about the disruption of the franchising activity within 3 months. The objective of the Franchisor Register is to have a source of information that brings transparency into the market.

This regulation tries to help the franchisee to take a decision about the best franchise system to invest in and it balances the power between the two parties, reducing information asymmetry and uncertainty.

3 Aspects and Effects of Franchise Regulation

In this section, the theoretical background of the positive and negative aspects of franchising regulation will be examined and the moderating effect of origin and growth will be explained.

3.1 Positive Aspects of Regulation

A high quality franchisor–franchisee relationship is a factor that encourages network performance (Grünhagen and Dorsch 2003; Frazer and Winzar 2005). These relationships are characterized by trust and commitment, which are key variables for a successful relationship between the parties (Fernandez-Monroy and Melián-Alzola 2005).

In the franchise contract, the main problem is that there is an important information asymmetry that creates uncertainty. Franchisees may suffer from a lack of information about the quality of new franchise businesses (Shane and Foo 1999). Some franchisors may use this situation to opportunistically misrepresent their quality to franchisees. Franchisors have to provide franchisees with economic and internal information to reduce the information asymmetry and uncertainty. How can they reduce this uncertainty?

One way to reduce uncertainty in franchising is to have an external certification about the quality of the franchisor. This type of certification is mainly established by franchise associations and requires their members to adhere to codes of ethics (e.g. the European Code of Ethics of the European Franchise Federation). So, besides fulfilling their responsibilities appropriately, franchisors and franchisees must treat each other fairly.

Another way is registration (Shane and Foo 1999). Registration shows that the franchisor will comply with and adhere to the highest quality standards for franchising. This provides a quality check on the system and will reduce the likelihood of franchisor and franchisee opportunism as well as increasing new franchise survival (Shane and Spell 1998).

Franchise laws guide new franchisors about how to create a franchise chain. Both registration and codes of ethics force franchisors to disclose information to new franchisees. Recently, it has been suggested that the information disclosed is not enough and that its quality should be improved (Spencer 2008).

3.2 Negative Aspects of Regulation

There is evidence in the literature of the harmful effects of franchise registration and the disclosure of information (Price 2000; Brickley 2002). Compulsory registration will mean some additional costs for the franchisee and the franchisor. Brickley (2002) found that the franchisee's outcome is lower in states with termination laws. So, franchisees appear to pay a higher price for their businesses in states with these specific regulations. An increase in the prices of the contractual payments will cover the increase in franchisor costs related to the new legal requirements (Stadfeld 1992). The disclosure of information will also mean some economic losses for franchisors because the information will be available to their competitors (Price 2000).

Regulation and legal requirements will increase the number of franchisors ceasing their activity (Stadfeld 1992). The Spanish Franchise regulation forces franchisors to provide information about the number of outlets opened and closed every year in the governmental register. As this information is public and available to all potential franchisees, the franchisors are reluctant to provide negative information. Before this law, potential franchisees did not know how many outlets failed every year as the franchisors avoided giving this information. Now, the availability of this information may reduce the number of franchisees interested in less profitable businesses.

3.3 Moderating Effect of Origin and Growth

Franchise regulation is especially important for international franchise firms. Domestic firms have the advantage of knowing the legal aspects of the local environment. Foreign networks have to change their requirements and even their business format to comply with the local regulations. In countries with no specific regulation, foreign franchisors have fewer problems than in those with a specific regulation. Foreign franchisors have to adapt their business to the new environment. So, the effect on performance will be stronger for foreign franchisors than for domestic franchise networks (Miller 1992).

In Spain, the fact that there is a public register and that all the information is publicly available may affect growing and declining firms differently. Franchisors with a greater number of newly-opened outlets every year or, at least, a positive growth in the total network will be more attractive to potential investors.

Legislation may be more harmful to chains with problems. It may eliminate unsuccessful firms and benefit growing franchise networks to a greater extent.

4 Data and Empirical Analysis

The empirical analysis examines the market exit of franchise systems operating in the catering (fast food restaurants, restaurants, pubs, cafeterias, etc.) and fashion retailing sectors in Spain. Data covers the years between 1986 and 2004 and 384 franchise systems. Of these franchisors, 190 were created before the new legislation came into effect. Information was obtained from different Spanish Franchise Annuals (Franchise Annuals of Tormo & Associates 1995–2004, Franchise Annuals of Barbadillo Associates 1995–2004, Franchise Annuals of the Spanish Association for Franchisors 1992–2004 and Franchise Annuals of Franchisa 1985–2004) and from the National Franchisor Register. In the annuals, we found information about the firm that creates the franchise network, the origin of the franchise network, the year each firm started to franchise, the number of company-owned and franchised outlets and the origin. Additionally, we analyze the status of the firm (active, bankrupt, in liquidation.) using the SABI database.

In our study, we examine organizational failure and franchise discontinuance. In our sample, 114 franchisors exit the market (30%), of which 24 systems failed and 90 systems decided to discontinue franchising.

Regulation was measured with two different variables. The Spanish law for franchising was created in 1998, which is our cut-off year. We have created two variables: a dummy variable (called regulation) that takes value 1 for the years 1998–2004 and 0 for years 1986–1997, and a dummy variable (called franchise creation under regulation) that takes value 1 for firms that became franchisors during 1998–2004 and 0 for firms that started to franchise before 1998.

Apart from the effect of regulation on market exits, we think that the economic situation may influence the number of market exits. There was an economic crisis in Spain during the years 1992 and 1993. So, the economic situation could explain the increase in the organizational failure rate in 1992, but not during the whole sample period. Analyzing the evolution of the growth of GDP between 1986 and 2005, the Spanish economy reached its highest values (around 4%) between 1987 and 1998 (excluding the years 1992–1993), but it is in those years that the highest discontinuance rate is found (see Fig. 1). During the years 1998–2000, the Spanish economy grew at 4% yearly and then till 2004 the economy was maintained at 3% (European Commission 2005). However, from 1996 on, the organizational failure rate shows a positive trend, despite the positive economic trend (see Fig. 1). The franchise discontinuance rate shows a more cyclical trend, decreasing in the central years of the crisis and with a sharp decrease starting in 1997.

Figure 1 shows the evolution of the organizational failure rates and the franchise discontinuance rates during the time of the study. We can see that there is an increase of organizational failure rates after 1998, while the discontinuance rate decreases.

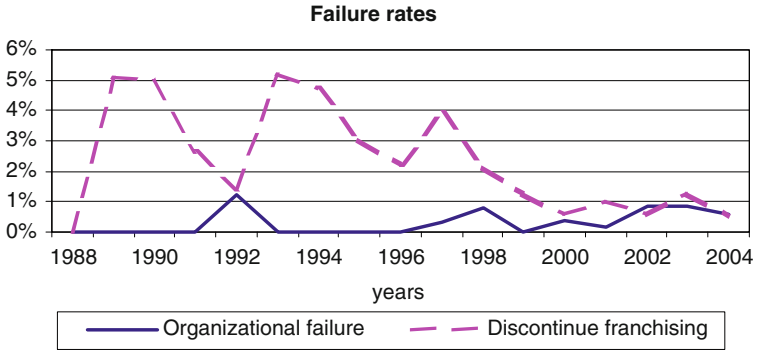

Fig. 1 Failure and discontinuance rates.
Source: Own elaboration based on franchise annual sourcebooks

Table 1 Failure rates by regulation and year of creation of the franchise system (before or after 1998)

	Organizational failure	Franchise discontinuance
Regulation = 0	0.0011	0.0305
Regulation = 1	0.0115	0.0133
Franchise creation before 1998	0.0063	0.0276
Franchise creation after 1998	0.0076	0.0038

Source: Own elaboration

Table 2 Failure rates depending on their period of creation and regulation

	Organizational failure		Franchise discontinuance	
	Regulation = 0	Regulation = 1	Regulation = 0	Regulation = 1
Franchise creation before 1998	0.0011	0.0163	0.0257	0.0409
Franchise creation after 1998	n.a.	0.0076	n.a.	0.0133

Source: Own elaboration
n.a. Not available

5 Results

Tables 1 and 2 show the effect of regulation on each type of failure after controlling for experience in franchising.[4] The risk of failure was higher after 1998 than before that year (see Table 1). However, after 1998, with compulsory registration, the

[4]The failure rates and the analysis of the survival curves have also been tested using calendar time instead of experience in franchising. This analysis is normally applied in survival research when the macroeconomic environment is more important than the firm-specific factors. The results obtained were similar and we reached the same conclusions.

number of discontinuances was lower. So, the effect of regulation depends on the type of failure analyzed.

Before drawing any conclusions about the effects of regulation and mandatory registration, we examine the effect of the change in regulation on franchise systems depending on their period of creation. Franchise firms created before 1998 show the highest failure rate (0.0163) and the highest discontinuance rate (0.0409) after the establishment of the new regulation (see Table 2). The change in franchise regulation hurts incumbent franchise firms as it increases their exit rate. The lowest rate is found in franchise discontinuance for firms created under regulation. As they follow strict requirements for becoming franchisors, the risk of not finding franchisees and the probability of discontinuing the franchising activity decrease.

The results suggest that regulation changes the survival curves for the types of exits (see Table 3). If we only analyse the franchise networks affected by the change in legislation and compare the survival curves before and after the implementation of the new law, we find that regulation has a negative effect on both market exits: organizational failure and franchise discontinuance.

However, comparing the survival curve for the franchisors that were created before the new legislation with those created afterwards, findings are different (see Table 4). In this case, the results suggest that franchisors created in the new legal environment suffer a lower relative franchise discontinuance rate (the number of observed discontinuances are lower than expected). The findings suggest that franchisors created in the new legal environment suffer a lower failure rate than incumbents, although this difference is not significant.

Table 3 Test of equality of survival curves for franchisors created before 1998

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Regulation = 0	0.3640	2	8.69	0.8485	42	50.20
Regulation = 1	3.3205	14	7.31	1.3604	35	26.80
LR chi2(1)	12.99**	10.19**		3.92**	2.30	

*** Significant at 1%, ** significant at 5% * significant at 10%

Table 4 Test of equality of survival curves in the period 1998–2004

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Franchise creation before 1998	1.135	14	12.7	3.77	35	13.89
Franchise creation after 1998	0.839	8	9.27	0.591	14	35.11
LR chi2(1)	0.38	0.31		39.13***	48.54***	

*** Significant at 1%, ** significant at 5% * significant at 10%

The effect of regulation for domestic and foreign franchise networks is shown in Tables 5 and 6. We find that regulation increases the organizational failure rate for the two types of networks, foreign and domestic, but it has no effect on the franchise discontinuance rate. In the two groups of franchise networks, regulation has a negative effect, increasing the failure rate. The effect of regulation on the organizational failure curve is only slightly higher for foreign (chi(2) = 6.81) than for domestic franchise networks (chi(2) = 6.45).

Looking at the effect of regulation for firms that have negative growth rates (see Table 7), we find that regulation has no effect on the hazard rate of organizational failure, but the new law helps to reduce the number of expected discontinuances. However, regulation has an unexpected effect on growing firms. Comparing the hazard rate before and after regulation for growing firms (see Table 8), results suggest that, with the new legal environment, the number of exits observed is higher than the expected. So, the new regulation did not benefit them.

Table 5 Test of equality of failure curves for foreign franchisors

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Regulation = 0	0	0	2.01	0.90	15	16.7
Regulation = 1	1.447	3	0.99	1.31	8	6.30
LR chi2(1)	6.81***	5.79**		0.66	0.42	

*** Significant at 1%, ** significant at 5% * significant at 10%

Table 6 Test of equality of survival curves for domestic franchisors

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Regulation = 0	0.3924	2	6.02	1.265	27	21.81
Regulation = 1	2.242	11	6.98	0.85	27	32.1
LR chi2(1)	6.45**	5.39**		2.06	1.71	

*** Significant at 1%, ** significant at 5% * significant at 10%

Table 7 Test of equality of failure curves for negative growth franchisors

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Regulation = 0	1.00	1	1	1.640	12	8.58
Regulation = 1	0.998	3	3	0.689	8	11.42
LR chi2(1)	0	0.05		2.96*	4.07**	

*** Significant at 1%, ** significant at 5% * significant at 10%

Table 8 Test of equality of survival curves for growing franchisors

	Organizational failure			Franchise discontinuance		
	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)	Relative hazard (Cox)	Events observed (Wilcoxon)	Events expected (Wilcoxon)
Regulation = 0	0.324	1	5.79	0.738	6	9.24
Regulation = 1	4.715	9	4.21	2.76	6	2.76
LR chi2(1)	11.14***	8.52***		4.51**	6.77***	

*** Significant at 1%, ** significant at 5%, * significant at 10%

6 Discussion

The aim of this research is to examine the effect of a specific franchise regulation and mandatory registration on franchise survival. Although regulation is important for survival, it has received little attention in the literature (Shane and Foo 1999). Our research analyzes the failure rates and the survival curves of existing franchise firms before and after regulation and those of firms created after regulation came into force.

Our results suggest that regulation increases failure rates but decreases the number of discontinuances. As the new regulation defines what a franchise business is and the basic requirements for the franchising activity, we expected a higher number of discontinuances. Businesses that were not really a franchise would disappear from the franchise market and the franchise annuals. Our results confirm the negative effect of regulation on survival found in other studies (Marvel 1995; Terry 2003). Although a negative effect of regulation on survival has been found, this effect should be analysed over a longer period. This negative effect may have been an initial reaction, with the effect becoming positive after some years, as suggested by Terry (2003).

In the new legal environment, the lowest failure and discontinuance rates are for new franchise chains. This change in the legal environment implies new costs, so some existing firms decided to discontinue franchising. Our results suggest that incumbents and new franchise systems show different survival patterns.

Although some studies suggest that one factor that influences the success of international franchise networks is to understand local regulations (Stanworth et al. 2001), we have found no significant differences between domestic and foreign franchisors. Our results about the effect of the origin of the franchise system suggest that regulation increases organizational failure for foreign and for domestic firms. As was expected, the negative impact is slightly higher for foreign than for domestic firms.

Our research suggests that regulation has a different impact on the survival of growing systems and of systems with negative growth. Contrary to our expectations, the new regulation had a negative impact on successful firms and a positive impact on unsuccessful firms. Incumbent firms with negative growth rates do not suffer any change in their survival curves, and regulation and registration reduce the

franchise discontinuance rate. We expected that the mandatory disclosure of information would cause declining firms to fail or cease franchising because no franchisees would be interested in investing in these systems. Regulation had a strong harmful impact on incumbent firms with positive growth rates, increasing the hazard rate and the number of firms that discontinued their franchising activity.

Our findings provide some important contributions to franchising research. Our research expands the franchising survival literature, providing some descriptive results on the crucial, but infrequently discussed, effect of the introduction of specific franchise legislation and mandatory registration on survival. Furthermore, it contributes to the franchising literature with some evidence on the reaction of incumbents when there is a change in the legal environment. It also provides evidence on how origin and growth moderate the effect of regulation. Our findings show that growing firms are the ones that are most damaged by the introduction of the new law and that both foreign and domestic firms are damaged by the introduction of the new legal requirements.

Managers will find our results useful. We suggest that franchisors should adapt their business to the legal situation. This adaptation is needed for operating in the Spanish market, but it implies additional costs, which could affect franchise survival. The stable legal environment will reduce the number of franchise discontinuances because requirements for becoming a franchise system are clearer and, therefore, uncertainty and information asymmetry is reduced. This situation helps to attract potential franchisees.

Our research has some important implications for policy makers. It seems that registration decreases the number of franchise discontinuances, but it does not have the same effect on survival. These contradictory and unexpected results may suggest that registration is not enough to encourage survival. Regulators should adapt the legislation so that franchisors disclose appropriate information (Hing 1999; Fulop 2000). The information provided to franchisees should be accessible, usable and suitable to help them to make their decision about the best franchise systems to invest in (Lim and Frazer 2002; Spencer 2008).

This research is not without its limitations. First, the methodology used is descriptive, looking only at the change in the survival curves. It would be interesting to continue analyzing this issue using an econometric model such as the Cox model or the clog-log estimation. Furthermore, we have only focused on two sectors. The effect of regulation may vary for other types of services. With respect to performance measurement, we have only examined market exit. It would be interesting to analyze the effect of the new regulation on other measures, like profitability, or on subjective measures such as trust or the quality of the franchisor-franchisee relationship. Additionally, it would be interesting to analyze the effect of regulation from the franchisee's perspective. As has been suggested (Terry 2003), after regulation, the number of franchisees increased although the number of franchisors decreased. We hope that this paper will spur further research into the factors that affect the success of firms.

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Part B
Alliances

Value Creation in Network Relationships

Organization of Innovation through Alliances

Knowledge Management in Networks

The Efficacy of Relational Governance and Value-Creating Relational Investments in Revenue Enhancement in Supplier–Buyer Relationships

Muhammad Zafar Yaqub and Rudolf Vetschera

Abstract The paper integrates and extends insights from relational exchange theory and value exchange model to discuss the efficacy of relational governance and value-creating relational investments to affect certain revenue-enhancing (relational) behaviours. It is postulated that value-creating relational investments made in a highly relational environment successful enough to engender high relationship quality (manifested through total partner satisfaction and inter-organizational trust) result in higher interorganizational commitment. This commitment ultimately translates into superior performance of the focal firm since partners exhibit revenue-enhancing behaviours like longevity of relationship, increased business share, positive word-of-mouth and reduced partial defection. It is further argued that the dynamics of model may vary across different phases of relationship life cycle and are moderated by the nodes' relational polygamy.

1 Introduction

The success of an inter-firm relationship depends to a great extent upon quality of the ecosystem in which transactions take place (Roehrich et al. 2002; Yaqub 2009b). An ideal ecosystem provides higher levels of social, economic and political egalitarianism. In such an environment, the participating nodes equitably benefit from their efforts made in arriving at win-win solutions for their economic and social problems, and ultimately end-up in attaining a state which leaves everyone better-off or at least as well off (in social, economic, and political sense) as they were before becoming a part of that structural arrangement. The main obstacle to achieving such an environment is opportunism, which has been identified by a number of scholars as the key antecedent to reduced cooperation (Gulati et al. 1994;

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Kogut 1991; Parkhe 1983). In order to escape the problem of opportunism, the focal actors in such collaborative relationships eventually fall back upon efficient mechanisms to govern these structural arrangements.

Consonant with Lieblien et al. (2002), who argued that firms' performance is contingent upon an alignment between governance decisions and degree of contractual hazards, the deployment of efficient and effective exchange governance has been revealed as an important determinant of superior exchange performance in the strategic management literature (Lubell and Scholz 2001; Malhotra and Murnighan 2002). Research in transaction cost economics (TCE), resource-based view (RBV), and the relational view of strategic networks have discussed the efficacy of many formal and informal governance mechanisms like explicit contracts, transaction specific investments (TSIs), vertical integration, relational norms, or trust in order to effectively deal with opportunistic hazards like hold-up, 'tragedy of commons', and agency problems like adverse selection, moral hazards etc. in the context of strategic alliances, supplier–buyer partnerships, joint ventures, and virtual organizations (Heide and John 1992; Kaufman and Stern 1988; Macneil 1980; Reuer and Arino 2006; Williamson 1979, p 85).

The governance structures can be seen more broadly as institutional modes (Williamson 1979) that establish the context of exchange through a 'system of rules plus the instruments that serve to enforce these rules' (Furubotn and Richter 1997). Dominated primarily by transaction cost economics (TCE) and relational exchange theory (RET), exchange governance literature has differentiated between two types of governance: transactional governance and relational governance. Both can be considered as the two ends of a continuum along which various other exchange governance configurations can be attained or described. In consonance with Williamson's (1985, p 17) claim that: 'economic institutions of capitalism have the main purpose and effect of economizing on transaction costs', TCE centres on a reduction in the costs of minimizing exploitation risk that is magnified by the market structure surrounding the exchange relationship (Zajac and Olsen 1993). Based on Williamson's (1991) discriminating alignment hypothesis, TCE suggests the focal firms to seek an efficient governance mechanism contingent upon transaction attributes such as asset specificity, environmental uncertainty, and transaction frequency in such a way that the transaction cost is minimized. It advances TSIs, explicit contracts, and vertical integration as key protective devices against the possible (opportunistic) exchange hazards.

Although, TCE is a popular framework because of its clear delineation of governance structures, it has been widely criticized for its over-reliance on the assumption of opportunistic behaviour (Zhang et al. 2003). It does not pay adequate attention to the strategic objectives like establishing commitment, improving coordination, enhancement of competitive position etc. Zajac and Olsen's (1993) proposed the transaction value analysis (TVA) as an extension to the transaction cost analysis (TCA) framework for the following reasons;

Transaction cost perspective has two limitations,(1) a single party cost-minimization emphasis that neglects the interdependence between the exchange partners in the pursuit of joint value, and (2) an over emphasis on the structural features

of inter-organizational exchange that neglects important process issues. . .. Cooperative relations are more a function of anticipated value gains, rather than anticipated losses due to the costs of constraining the opportunism. . .. It is the opportunities for value maximization, rather than simply transaction cost minimization that drive the decision to continue or reconfigure a relationship. . .. The pursuits of joint value-maximization sometimes require the use of less efficient (from TCE perspective) governance structure, with the expectation that joint-value gains will outweigh the transaction cost efficiency losses. (pp. 134–140)

Relational exchange theory, on the other hand, considers relational norms as a distinct form of governance (the relational governance) that prescribes commitment and proscribes opportunism in exchange relationships (Joshi and Stump 1999; Mcneil 1980; Morgan and Hunt 1994). Relational norms evolve over time as a function of previous transacting experiences of exchange partners (Granovetter 1985; Gulati 1995; Gulati and Nickerson 2008; Ring and Van de Ven 1992; Zaheer and Venkatraman 1995). The extent of relational governance is gauged through strength of relational norms prevalent in exchange (Noordewier et al. 1990) where strength refers to the rigour of norms-mix as well as the degree of 'normative compliance' exhibited by the actors in a structural arrangement. Low levels of rigour and compliance with relational norms can be equated with transactional or contractual governance (Ferguson et al. 2005).

Inspired by the works of Mcneil in law during 1980s, a few researchers in social-contracting theory have espoused relational norms as an alternative to formal ownership and/or contractual governance (Dyer and Singh 1998; Granovetter 1985; Gulati 1995; Larson 1992). According to Heide and John (1992, p 34), 'Relational norms promote subordination of individual interests by engendering a win-win exchange atmosphere; and as the partners will not like to jeopardize it so they will refrain from acting opportunistically'. Cochet et al. (2008, p 68) concluded that 'relational forms of governance can play a prominent role in reducing the costs from exchange hazards thereby paving the way for successful decentralized structures, especially within networks of small business owners'.

In our opinion, prior research in TCE or RET is deficient on two accounts; (1) by elaborating upon the role of a number of protective devices against opportunism, they have concentrated more upon cost-minimization rather than on revenue-enhancement as a mean to profit-maximization, (2) even with respect to control mechanisms, the focus has been more upon antecedents rather than the consequences of such instruments (Anderson and Weitz 1992; Stump and Heide 1996). In this research paper, based on a review of literature in strategic management, marketing, law, social psychology and economic sociology, we propose a model that addresses these deficiencies by elaborating upon the roles of various instruments espoused by TCE and RET (i.e. relational governance, and value-creating relational investments) as antecedents to superior (focal-firm) performance resulting from a variety of revenue-enhancing (rather than cost-reducing) relational outcomes. The model is conceptually grounded in the relational exchange theory (RET) and the value-exchange model (VEM). The following paragraphs discuss some research gaps that this framework intends to fill out.

Morgan and Hunt (1994) described the scope of focal firms' exchange relationships to include supplier partnerships, lateral partnerships, internal partnerships, and buyer partnerships. Buyer partnerships are further sub-divided into partnerships with (1) the ultimate customers, and (2) the intermediate customers. Even though there is proliferation of research on the first type, the latter has received only scarce attention in literature so far. The model introduced here makes up for this deficiency. Even though our framework has, primarily, been intended at explaining dynamics of the supplier–intermediate buyer dyad exchanges, yet with little adaptation it can be generalized not only across upstream partnerships but also across other (more) elaborate forms of strategic networks like virtual organizations, strategic alliances etc.

Based on the means-end principle, efficient exchange governance can be regarded only as means to an end, which in our case is achieving superior performance. Profitability is perhaps the most objective indicator of superior performance (at least in the supplier–buyer relationships) as revealed in the strategic management literature. Since profit depends on revenues and costs, there can be three possible avenues to profit-maximization: (1) lowering costs, (2) enhancing revenues, or (3) a combination of both. Whereas there is plethora of research (in almost all perspectives of strategic networks) geared to explain dynamics of profit-maximization through the first avenue, there has been scarcity of efforts directed at explaining the same from a revenue-enhancement perspective. The model presented here bridges this research gap.

In an empirical study involving 206 purchasers of market research information, Ivens (2004) found the relational behaviours such as role integrity, mutuality, flexibility, solidarity, and long-term-orientation to be positively associated with the three determinants (i.e. satisfaction, trust, and commitment) of relationship quality as perceived by the customer. One of the limitations of this study in his words has been:

> From a supplier's vantage point, relationship quality constitutes an important objective. However, it is unclear to what extent it is directly linked to economic success (contribution margins, turnover, penetration rates etc.). Future research might examine this link. (Ivens 2004, p 307)

The model addresses this limitation by elaborating upon the consequences for a supplier when it manages to secure higher perception of relationship quality and commitment among the participating nodes.

Finally, following Wilson (1995) who reveals that various aspects of exchange may have systematically differing effects over time, this model takes into account the moderating effect of the relationship life cycle (RLC). This can be regarded as yet another unique feature of this framework as previous research has not undertaken many efforts to explain the time-dependent effects of the governance instruments on critical performance outcomes.

Before describing the model in detail, we will discuss its conceptual foundation in the second section of this paper. Section three presents a detailed discussion on the nature, scope and interaction of all constructs of the structural model. In the final

section, beyond summarizing the discussion, we have highlighted certain avenues for future research.

2 Conceptual Background

Granovetter (1992) argued that economic institutions are socially constructed i.e. they result from actions taken by socially situated individuals embedded in networks of personal relations with economic as well as non-economic goals like sociability, approval, status, power etc. Similarly, from an in-depth case study, Larson (1992) concluded that economic transactions cannot be separated from the social context in which they take place. As such, to view firms as atomistic entities competing for profits against each other in an impersonal marketplace becomes increasingly inadequate (Gulati et al. 2000). Social institutions, norms and interactions improve and shape individual action (Camic 1979). In Granovetter's (1992) opinion, economic action and outcomes (like all social actions and outcomes) are affected by (1) actors' history of dyadic relations (the relational-embeddedness argument), and (2) structure of the actors' overall network of relations (the structural-embeddedness argument). The central theme in economic sociology is the necessity of trust and trustworthy behaviour (as a function of past interactions as well as the future expectations) for even the normal functioning (let alone the superior performance) of economic action and institutions (Granovetter 1992).

Consonant with the economic-sociological account, Achrol (1991), in early 1990s, forecasted the rise of 'true marketing-companies' within networks of functionally specialized organizations whose norm-driven interrelationships would be held together and coordinated by 'market-driven focal organizations' by means of norms of sharing, and commitment based on trust. This conceptualization reveals two important facets along which research in the relational exchange theory (RET) progressed in subsequent years. These two facets include;

1. Relationalism which refers to the degree of relational-orientation prevalent in the exchange environment and is measured on a (Discrete – Relational) continuum based on a mix of relational norms.
2. Commitment-Trust Theory (CTT) which reveals the mediating role of trust and commitment between the antecedents and consequences of successful relationships.

By elaborating upon the central tenets of relationalism and the commitment-trust theory, relational exchange theory (RET) explains the essence of relational governance as being an 'impetus to successful exchange relationships'. Relational governance envisages the creation of a 'relational environment' by putting in place a social contract based on a multitude of relationship-preserving norms (Blios and Ivens 2006). The criterion for the successful culmination of such an environment is its ability to promote trust and commitment among the participating nodes (Ivens 2004). Empirical research has shown relational governance to be positively associated

with superior performance in a wide array of B2B contexts while employing trust and commitment as key mediating variables (Ferguson et al. 2005; Paulin et al. 1997). Commitment-trust theory (CTT), quite exhaustively, explains the mediating role of these constructs.

We have integrated relational exchange theory (RET) with the value-exchange model (VEM) to explain the interactive effect of relational governance and value-creating relational investments (VcRIs) on certain (revenue-enhancing) relational outcomes in inter-firm relationships. The bases for choosing RET and VEM has been the rigor with which they discuss relational governance and relational investments respectively. We will now briefly discuss these reference frameworks.

2.1 Relational Exchange Theory (RET)

Whereas the theory of economic exchange puts economic transactions at the centre, the theory of relational exchange considers them of secondary importance and only as a consequence of strategic (long-term) relationships. If the nodes continuously perceive their relationship with a focal actor to be of sufficiently high quality, the transactions automatically follow. Following the 'principle of generalized reciprocity' developed in social-exchange theory the nodes reciprocate relational behaviours of the focal actor. This behaviour ultimately results in a host of desirable relational outcomes for the focal firm (Ring and Van de Ven 1992). Since perceptions of high relationship quality emerge from experiencing higher satisfaction and trustworthiness in exchange episodes with the focal firm (Crossby et al. 1990), RET suggests that focal firms should recognize the development and promotion of trust-based commitment as the key strategic objective. The likelihood of successful accomplishment of this objective is maximized when the focal firm exhibits significant conformance to just the "right" kind of relational norms/standards for value-maximizing behaviours (Joshi and Stump 1999). Relationalism, which exhaustively covers the nature, scope and efficacy of such (relational) norms, and CTT, which reveals how trust and commitment mediate between these (relational) norms and the desirable relational outcomes, constitute agenda for the discussion to follow.

2.1.1 Relationalism (Relational Governance)

Relational governance or relationalism conceives of exchange relationships functioning within a context of socialized contractual norms of behaviour (Macneil 1978; Kaufman and Stern 1988). Norms are expectations about behaviour that are partially shared by a group of decision makers and directed toward collective goals (Gibbs 1981; Macneil 1980; Thibaut and Kelly 1959). Norms that govern exchange behaviour in discrete transactions are different from those in relational exchange (Kaufman and Stern 1988). Norms associated with discrete exchanges are more likely to create an environment where, while ruthless opportunistic behaviour may

not be tolerated, it is assumed that an exchange partner will give his own interests priority over those of the other party or even over cooperative gains. With discrete norms, partners adjust terms of trade through bargaining before entering into an exchange arrangement (Mcneil 1978, 1980). On the contrary, relational norms support cooperative adaptation by stressing behaviours that will preserve the relationship even when pure self-interest might suggest otherwise (Mcneil 1980). In Blios and Ivens's (2006, p 353) opinion, 'norms associated with relational exchanges are those that might be expected to enable trust and commitment to develop'.

2.1.2 Commitment-Trust Theory

Morgan and Hunt's (1994) commitment-trust theory, also known as the key mediating variable (KMV) model, reveals the mediating role of trust and commitment between the antecedents and consequences of successful relationships. It focuses on one party in the relational exchange and that party's trust and commitment. Trust refers to the confidence that exchange partners have for each other's reliability and integrity (Zhang et al. 2003), whereas commitment refers to partners' desire to continue a valued relationship (Moorman et al. 1992) and a willingness to make short-term sacrifices to preserve that relationship (Anderson and Weitz 1992). The mediating role of trust and commitment has been corroborated by Friman et al. (2002) in B2B context, Keith et al. (2004) in service industry, Martin et al. (2004) in customer relationship management (CRM) context, Styles and Hersch (2005) in international joint ventures, Macmillan et al. (2005) in non-profit organizations, Tokman et al. (2006) in joint ventures, Mukherjee and Nath (2007) in online retailing, and Yang et al. (2008) in supply chain alliances. The model presented in this paper explains how these relational constructs mediate between relational governance and VcRIs as antecedents, and certain revenue-enhancing (relational) behaviours (ReBs) as consequences in the context of supplier–intermediate buyer dyadic exchanges.

2.2 Value-Exchange Model (VEM)

Advanced originally in context of CRM by Grant and Schlesinger (1995), the value-exchange model (VEM) centers on the second of the following three ways to maximize profits from customer relationships:

1. By acquiring new customers
2. By enhancing the profitability of existing customers
3. By extending the duration of customer relationships

Grant and Schlesinger (1995) suggest that reaping the full profit potential of each customer relationship should be the fundamental goal of every business. As the means to achieve this end, they prescribe to follow a value-based segmentation and positioning strategy, commit value-based relational investments, align business processes with customer needs, and foster an organization-wide value-orientation. Value exchange in VEM is regarded as the relationship between a company's financial investment in a customer relationship and the return that the customer generates in response to that investment.

The VEM in principle, bases itself upon the logic of leverage rather than the logic of opportunity. When applied to the focal-node dyadic relationships, it suggests the focal actors to concentrate more on the high value nodes in their relational portfolios when making relational investments. The leverage potential can serve as a criterion to differentiate between the high value nodes from the low and/or medium value nodes. Getting VEM integrated with RET, we postulate that (value-gap based) value-creating relational investments (VcRIs) made in a highly relational transaction climate induce inter-organizational commitment in nodes that ultimately adds to the focal actors' bottom-line by leveraging the revenue-potential of these nodes. The nature, rationale, and scope of such investments and their consequences are discussed in the following sections.

3 The Conceptual Model

3.1 Perceived Relationality (Relational Governance)

An exchange's degree of stability is, to a substantial extent determined by conductivity of the overall atmosphere of relationship (Roehrich et al. 2002). This is sometimes distinct from formal governance (Humphrey and Ashforth 2000). The key to the development of such an atmosphere is to put in place (as governance mechanism) a relational contract based on an adaptive mix of satisfaction, trust and commitment preserving relational norms. These norms constitute the expectations shared by partners about what constitutes the "right" behaviour within their relationship (Heide and John 1992; Morgan and Hunt 1994). An intensification of norms conforms to more pronounced content in a business liaison (Mcneil 1980). Cochet et al. (2008) assert that relational governance becomes more intense when the specific norms considered are perceived by a node to be increasingly relevant for his behaviour.

In an operational sense, relational governance can be considered a single higher order construct in a second order factor model where the first order is the set of highly correlated (relational) norms (Noordewier et al. 1990). Several such norms have been revealed in the relationalism literature. For example, Mcneil (1983) argued that various levels of 'relationality' can be tracked or attained along a discrete-relational continuum, where each level characterises a different mix of

relational norms like role integrity, contractual solidarity, harmonisation of relational conflict, supracontractual relations, and proprietary of means. Kaufman and Stern (1988) reduced Mcneil's list to three norms i.e. solidarity, role integrity, and mutuality. Later studies added a number of other relational norms such as information exchange, participation, fairness, flexibility (Blios and Ivens 2006; Heide and John 1992; Jap and Ganesan 2000) to this list and revealed them to be positively associated with superior performance in a variety of business contexts (Kaufman and Stern 1988; Macneil 1980). Bercovitz et al. (2006) concluded that an adequate compliance to these norms leads to benefits like increased within-relationship adaptability, smoother coordination, reduced opportunism, and greater effort by transacting parties. The context of exchange, however, influences the relative importance of each norm in ensuring the desired performance levels (Pauline et al. 1999).

As Kaufman (1987) differentiates between value-creating and value-claiming types of relational norms, it is the former that matter the most in breeding satisfaction, inter-organizational trust and inter-organizational commitment in the exchange relationships (Ivens 2004). If the nodes perceive higher normative compliance (referred here as high relationality) in the focal firm behaviour, it induces in them a belief for a higher efficacy of the partnership in achieving the desired outcomes (Ferguson et al. 2005). Consequently, such a belief fosters higher satisfaction and inter-organizational trust in the nodes which eventually result in an increased (affective) inter-organizational commitment. Moreover, as relational norms evolve, they get internalized by the exchange partners (Kelman 1958) and hence come to serve as moral controls that promote pro-relationship behaviours like (normative) commitment, and discourage detrimental unilateral behaviours like opportunism (Joshi and Stump 1999).

A number of studies such as Artz and Brush (2000); Aulakh et al. (1996); Ivens (2004); Joshi and Stump (1999); Kaufman and Stern (1988); Vazquez et al. (2007); and Zhang et al. (2003) have, in a variety of business contexts shown a positive association between adherence to relational norms and firms' superior performance while employing relationship quality or its individual determinants (satisfaction and inter-organizational trust) as mediating constructs. However, it is important to note that the perceived level of relational norms can deviate from the expected level as the development of such norms is the result of complex social processes that management cannot directly and fully control. From a survey of 182 R&D collaborative alliances, Bercovitz et al. (2006, p 724) concluded: 'exchange performance suffers when the realized level of cooperative exchange norms falls below the expected level, but overshooting expectations lays a critical groundwork for repeat transactions'.

Firms can build relational assets that competitors have difficulty in imitating (Barney 1991; Dyer 1996). While management can put directives and incentives to develop cooperative norms, these mainly emerge from complex social processes which the management cannot fully control (Bercovitz et al. 2006). Even though, in early relationships, the level of expected relational norms in an exchange can be the result of a calculative process facilitated by transaction attributes like joint

transaction-specific investments and observability (Bercovitz et al. 2006), these norms, at large, evolve over time as a consequence of partners' transacting experiences (Granovetter 1985; Gulati 1995; Gulati and Nickerson 2008; Ring and Van de Ven 1992; Zaheer and Venkatraman 1995). Relational norms mature through time and require substantial up-front investment of time, money and personnel from exchange partners (Frazier et al. 1988). Rather than following a 'more-is-better' approach, it is advisable to follow the standard economic logic for achieving adequate levels of 'relationality' as the benefits from relational behaviours accrue at diminishing rate while the cost of ensuring such behaviours accrues at increasing rates (Bercovitz et al. 2006). Maintenance of these fragile constructs is still more problematic and can best be achieved through a reciprocity-based socialization process (Crosby et al. 1990; Gundlach and Achrol 1993). Putting in nutshell, if an adequate compliance to the relationship-preserving norms is reflected in partners' behaviours, it not only reduces transaction cost by substituting more elaborate governance, but also contributes to revenues by promoting trust-based commitment.

3.2 Relationship Quality

Relationship quality refers to the appropriateness of a relationship to fulfil needs of an actor associated with that relationship (Henning-Thurau and Klee 1997). The relationship quality model basically assumes that an actor's perception of the appropriateness of a relationship influences his decision to stay in or exit from that relationship. Quite consistent with the pioneers Crossby et al. (1990), the majority of the researchers have considered relationship quality as a two-dimensional higher order construct containing the two dimensions of satisfaction and trust. Recently, in an empirical study conducted among purchasers of market research information, Ivens (2004) found evidence that supplier behaviours such as role-integrity, flexibility, mutuality, solidarity, and long-term orientation have a positive impact on different dimensions of customer-perceived relationship quality. He included commitment as the third dimension of relationship quality. Earlier, Henning-Thurau et al. (2002) in a review of relationship quality literature also concluded that commitment should be designated as another dimension of relationship quality. However, a significant body of empirical research has espoused trust and satisfaction as important drivers of commitment (Macintosh and Lockshin 1997; Morgan and Hunt 1994). Geyskens et al. (1999) further substantiate the argument by concluding that over the time, satisfaction develops first, trust develops in the medium term, and commitment emerges only in the long-term as a result of the two.Therefore, we have incorporated a bi-dimensional view of relationship quality in our model i.e. satisfaction and trust are the two dimensions of relationship quality while commitment has been treated as its natural consequence. The next section discusses in detail the nature, scope and interaction among these relational constructs.

3.2.1 Total Partner Satisfaction (TPS)

Satisfaction is defined as a positive affective state resulting from the appraisal of all aspects of a firm's working relationship with another firm (Frazier et al. 1989; Gaski and Nevin 1985). Schul et al. (1985) argued that satisfaction affects partner's morale and the resulting incentive to participate in collective activities. Hunt and Nevin (1974) concluded that satisfied channel members are less prone to exit the channel, less inclined to file lawsuits against other channel members, and are not keen to seek protective legislation.

In a focal-node context, satisfaction can be seen as the degree to which a focal firm rises up to or exceeds expectations of the nodes in relation to their motives to collaborate. Interfirm relationships are formed with expectations of success and complementary benefits. These benefits fuel the future of the relationship and give the parties an incentive to stick together (Anderson and Jap 2005). As the scope of such benefits can be quite wide, including economic, social, informational, political and other dimensions, satisfaction is a multi-faceted construct. Geyskens and Steenkamp (2000) have interpreted satisfaction in B2B relationships as a two dimensional construct consisting of economic satisfaction and social satisfaction. Economic satisfaction refers to the evaluation of economic outcomes that flow from the relationship whereas social satisfaction refers to the psychological aspects of the relationship. It consists of an exchange partners' evaluation of the personal contacts and interactions with the other partner. In an empirical study, Ivens (2004) found certain relational behaviours like role integrity, flexibility, and mutuality to be positively associated with both economic and social satisfaction in supplier–buyer relationships. Geyskens et al. (1999) demonstrated that satisfaction is both conceptually and empirically separable from related constructs like trust and commitment. However, they concluded that 'the distinction between satisfaction and trust is less pronounced when satisfaction is operationalized in non-economic as opposed to economic terms' (p 234).

Interfirm relationships evolve in successive collaboration cycles through a process of negotiations–commitment–execution contingent upon partners' evaluations of complementarity of contributions, benefits and changed priorities in strategic interests across different stages of the network life cycle (Ring and Van de Van 1994). Each stage of cooperation provides a receptive context for the initiation and evolution of economic and social exchanges in the subsequent stages (Park and Ungson 2001). Therefore, single-shot satisfaction, i.e. satisfaction in a single instance or cooperation cycle becomes insufficient as it fails to engender process-based trust. Totality needs to be ensured which, in this sense, refers to the (1) satisfaction in all episodes of economic and social exchange, and (2) satisfaction experienced in all constituents of the offer i.e. product/service, personnel, process, etc.

Hagedoorn et al. (1998) found that negative reactions are more likely when outcomes and processes are considered unfair in the workplace. Similarly, Porter and Fuller (1986) argued that an alliance is stable for as long as contributions and rewards by each partner are perceived to be balanced and equitable. Asymmetry in resource contributions provokes the (resource) dominant partners to expect and

appropriate greater payoffs. This asymmetric resource-dependence creates power asymmetry. Consequently, the powerful players who are not inequity-averse sometimes manage to appropriate a larger share of the pie beyond their equitable share leaving a state of discomfort in the power recessive players. If the incentive structure fails to ensure distributive justice, such players are not only negatively reinforced to contribute or even to participate in the successive cooperation cycles, but also begin to distrust the partner for such a display of opportunism. Samouel (2007) concluded that establishing enduring relationships and supportive norms can serve as an effective protective device against deviant and opportunistic behaviour in bilateral exchange featuring asymmetry both in economic and relational power.

3.2.2 Inter-organizational Trust

Whereas trust has been treated as redundant or even misleading in transaction cost economics (Nooteboom et al. 1997), the central tenant of economic sociology is the necessity of trust and trustworthy behaviour for the normal functioning of economic action and institutions (Granovetter 1992). Actors behave in trustworthy ways because: (1) they think it is in their best social and economic self-interest (the under-socialized account), (2) they think it to be morally right, whatever the incentives (the over-socialized account), and/or (3) they aspire to rise up to the regularised expectations that characterise their relationships with their partner. As per the relational-embeddedness argument, an actor A may deal fairly with B not because it is in his best interest, or because he has assimilated B's interest to his own (the approach of interdependent utility functions), but because they have been close for so long that they expect this of each other, and A will be mortified and distressed to having cheated on B even if B did not find out (Granovetter 1992).

Trust is a multifaceted construct that can been viewed from many different perspectives. Trust, generally, has been defined in one of the two possible ways; (1) as a confident belief or expectation (i.e. a trusting belief), and/or (2) as a willingness or intention to depend on the trustee (i.e. a trusting intention) (Dicky et al. 2007). Trusting beliefs involve perceptions that the other party will act in ways favourable to the trustor (Boone and Holmes 1991), or that the other party has ethical, efficacious, or favourable characteristics (Hagen and Choe 1998). Some of these beliefs, as revealed in previous research, include: continuity of natural order, competence, and fiduciarity (Barbar 1983); dependability (Kumar 1996); ability, benevolence, and integrity (Mayer et al. 1995); competence, judgement, and openness (Mishra 1996); reliability, and predictability (Rempel et al. 1985). By contrast, trusting intention involves a willingness to become vulnerable to the other or willingness or intention to depend on the other (Baier 1986; Currall and Judge 1995) based on the expectation that the other will not exploit this vulnerability (Mayer et al. 1995). Some evidence that trusting beliefs predict trusting intention has been documented in studies on trust in leaders (Mayer and Davis 1999).

Organizational theorists tend to think about trust at either the micro level (i.e. interpersonal) or the meso level (i.e. inter-organizational) (Hosmer 1995). In Mouzas et al. (2007) opinion, trust as a concept, appears to be more applicable at the level of inter-personal relationships than the inter-organizational relationships. Zaheer et al. (1998) has described these two types/levels of trust as related but distinct constructs which play different roles in affecting B2B exchange performance. Based on the premise that it is individuals as members of organizations rather than the organizations themselves who trust, they have defined interorganizational trust as the extent of trust placed in a focal organization by members of the partner organization.

From a relational perspective interorganizational trust has been defined as the expectation that an actor (1) can be relied on to fulfil obligations (Anderson and Weitz 1989), (2) will behave in a predictable manner, and (3) will act and negotiate fairly when the possibility for opportunism is present (Anderson and Narus 1990). Whereas communication and fairness early in the relationship are keys for the development of trust (Ferguson et al. 2005), relational trust, at large, emerges out of the quality of experience or interaction with a particular exchange partner (Ring and Van de Ven 1992). More specifically, relational trust emerges from mutually beneficent successive collaboration cycles among the participating nodes. By transacting repeatedly, partners become familiar with one another and develop social attachments (Gulati 1995; Ring and Van de Van 1994) which foster stronger forms of trust like process-based trust and familiarity-based trust as a consequence of opportunities to share information and learn about each partner's proclivities toward trustworthy behaviour (Gulati 1995, 1998). However, from a futuristic perspective, Luhmann (1979) argued that trust stems from a growing confidence in a firm's expectations of the future. Granovetter (1992, p 42) also asserted that 'the fact of a continuing relation with certain partners offers incentives to be trustworthy so as to ensure future transactions. But continuing economic relations become overlaid with social content that, apart from economic self-interest, carries strong expectations of trust and abstention from opportunism'. Duncan and Weiss (1979) and Fiol and Lyles (1985), however, asserted that it is the history of past transactions that sets precedence for future exchanges and provides information thorough which the focal firms can establish expectations about the future behaviour of its partner(s). Schelling (1960, p 134) also provides a rational account by positing that, 'trust is often achieved simply by the continuity of the relation between the parties and the recognition by each other that what he might gain by cheating in a given instance is outweighed by the value of the tradition of trust that makes possible a long sequence of future agreement'. However, for the partners new to the structural arrangement, trust assumes the form of characteristics-based trust with reputation, size, economic power etc. being the focal characteristics.

Aulakh et al. (1996) proposed that trust mediates the relationship between relational norms such as continuity, flexibility and information exchange, and export partnership performance. Zhang et al. (2003) conclude that incorporating bilateral solidarity, maintaining flexibility, and fostering information exchange with channel partners have positive effects on trust in the international channel setting.

Similarly, Ivens (2004) has reported a positive association between relational norms such as role integrity and mutuality, and the interfirm trust. Mutuality refers to an attitude that the realization of one's own success depends on partner's overall success (Dant and Schul 1992). It prevents the focal actors to optimize at the cost of the nodes, assures distributive justice, and consequently breeds trust through increased fiducairity. Role integrity implies the focal actors to dispel their roles, rights and obligations in consonance with their charter of engagement with the nodes. A conformance here infuses trust through increased fiability, i.e. enhanced total satisfaction, and predictability.

Trust in interfirm exchange is beneficial and can be a source of competitive advantage (Barney and Hansen 1994). It is central to almost every relationship (Mishra 1996), and becomes particularly important in situations of risk, uncertainty or high likelihood of opportunism (Cummings and Bromiley 1996). In the organizational economics literature, trust has been theorized to reduce cost associated with opportunistic hazards, ultimately resulting in more efficient governance (Poppo et al. 2008). The choice of trusting behaviours reduces cost and thus results in transaction efficiency (Ganesan 1994; Volery and Mensik 1998). Where there is trust, appropriation concerns are likely to be mitigated and organizations may not choose to rely on detailed contracts that are costly to write, monitor, and enforce (Gulati 1995). Finally, Hwang (2006) concluded that trust and commitment attenuate the fear of exploitation due to higher TSIs.

For relational exchange, trust is so crucial that Spekman (1988) postulated it to be the 'cornerstone of strategic partnerships'. The 'Principle of generalized reciprocity' in social exchange theory holds that 'mistrust breeds mistrust' and as such not only decreases commitment in the relationship but also shifts the transaction to one of more short-term exchanges (McDonald 1981). More recently, Croonen (2008, p 201) also concluded that 'franchisees' perceptions of distrust and unfairness result in destructive responses like aggressive voice, neglect, or even exit, towards the franchisor'. Achrol (1991) has posited relational trust to be the major determinant of relationship commitment. Because commitment entails vulnerability especially when perceived risk is high (as is the case in volatile environments), parties in an exchange relationship seek only trustworthy partners (Morgan and Hunt 1994). As trust constitutes the basis of socially embedded exchanges (Granovetter 1985; Uzzi 1997) and relational patterns of governance (Macneil 1978), the partners in an interfirm relationship need to continuously earn and re-earnmutual trust so as to fuel the longevity of such relationships.

3.3 Inter-organizational Commitment

Commitment is the focal construct in our model as it signifies the highest form of relational bonding between firms (Dwyer et al. 1987) and contributes to the longevity of relationships (Gundlach et al. 1995). Defined as an attitude that reflects the desire to continue a valued relationship (Moorman et al. 1992) and as

willingness to make short-term sacrifices to maintain that relationship (Anderson and Weitz 1992), commitment has been examined quite extensively in consumer contexts (Verhoef et al. 2002), work-place contexts (Luthans 2006; Allen and Meyer 1990), and business-to business contexts (Gruen et al. 2000; Morgan and Hunt 1994). Extending Luthans's (2006) view of workplace commitment to the relational context, we define commitment as a predisposition that comprises of an actor's willingness to (1) stay long in the relationship, (2) accept the norms and values that govern the relationship, and (3) contribute maximally for the welfare of the relationship.

Whereas organizational researchers like Morgan and Hunt (1994), Garbarino and Johnson (1999) viewed commitment as a unidimensional construct, a vast majority of researchers has regarded it as a multidimensional construct in a variety of business contexts (Allen and Meyer 1990, Geyskens et al. 1996; Gundlach et al. 1995). Whereas Geyskens et al. (1996) differentiated between affective commitment and calculative commitment; Allen and Meyer (1990) have revealed three dimensions of commitment which include: continuance commitment (cost-based attachment), affective commitment (desire-based attachment) and normative commitment (obligation-based attachment). Considerable support has been established for these three dimensions of commitment and that these dimensions were appropriate regardless of the target of commitment (Bansal et al. 2004; Herscovitch and Meyer 2002). In our model, we have extended the Allen and Meyer's (1990) multidimensional view of workplace commitment to the interorganizational context, and have theorized that relational norms and value-creating relational investments (VcRIs) induce all three types of commitment.

Social scientists across a wide range of literature have examined the effects of commitment on effectiveness or performance related outcomes (Jap 2001; Voss et al. 2006). Commitment has been shown to be positively associated with cooperation (Morgan and Hunt 1994), relationship longevity (Ryu et al. 2007), and satisfaction (Mohr and Spekman 1994) in structural arrangements like joint ventures, strategic alliances, buyer–supplier partnerships etc. Axelrod (1984) noted that long-term commitments can generate a state of cooperation between partners due to the 'shadow of the future'. With each partner anticipating doing business with the other well into the future, cooperation between them is more likely. Game-theorists also suggest that committed relationships establish an expectation of repeated exchange, which discourages opportunistic behavior whenever expected payoffs from continued exchange surpass short-term gains from defection (Axelrod 1984; Taylor 1987). Rather than this quid-pro-quo face of commitment, the relational governance seeks to foster a trust-inspired commitment. Ryu et al. (2007), in the context of manufacturer–supplier relationship, have revealed relational norms and satisfaction with supplier performance as the antecedents of trust which has been described as an essential precursor of the manufacturer's long-term commitment. Moreover, considerable conceptual and empirical evidence in marketing channels research concludes that commitment is the ultimate outcome with causal precedence of satisfaction and trust (Anderson and Weitz 1992; Hess and Story 2005; Morgan and Hunt 1994).

3.4 Value-creating Relational Investments (VcRIs)

There are two approaches to increase relational revenues;

1. **Static**; following the logic of opportunism, the focal firm sets out to appropriate a bigger slice of the pie i.e. increase her share in the surplus generated by the relationship.
2. **Dynamic**; following the logic of cooperation, the focal firm together with the nodes sets out to increase size of the pie which will eventually result in increased economic value for all the partners.

As it leads to a win-win situation through joint value-creation, we would favour the dynamic approach over the former. Hwang (2006) argued that greater productivity gains from cooperation are possible only when firms are willing to commit specific investments to a relationship and combine resources in unique ways. Relational investments have also been emphasized by Grant and Schlesinger's (1995), in their value-exchange model (VEM), as an important instrument to harness customers' fullest profit potential. Consequently, we have postulated value-creating relational investments (VcRIs) as an important antecedent to increased nodes' commitment. VcRIs are a behavioural manifestation of value-creating relational norms and create (economic) satisfaction and (calculative) trust that further strengthen (continuance) commitment. As an example for VcRIs, consider the context of a pharmaceutical company-clinic dyadic relationship context, where they would include renovating and/or upgrading the customer's clinic, facilitating training and/or learning endeavours, upgrading the knowledge of medical staff, facilitating automation, providing social networking opportunities, etc. We will now elaborate upon the rationale, process and the (relational) consequences of making such investments.

Kaufman (1987) classified relational behaviours into two types as; (1) value-creating behaviours, and (2) value claiming behaviours. Ivens (2004) found a significant positive association between certain value-creating relational behaviours and enhancement in satisfaction, trust and commitment. Relational investments are an important manifestation of focal actor's value-creating relational norms such as mutuality and long-term-orientation. We therefore consider value-creating relational investments (VcRIs) by the focal firm as an instrument to enhance the nodes' capacity to create value for themselves with an assumption that, following the norm of reciprocity, they will equitably share these benefits with the focal firm.

Value-based-management (VBM) urges the focal firms to avoid self-centric optimization. It suggests them to adequately consider the value gains and losses to all stakeholders (in addition to their own) while formulating their business strategy. If a focal firm grows exponentially and requires a catch-up response from its partners (i.e. an enhancement in their efficiency), it is not ethical to leave this task of efficiency-enhancement solely up-to them while being the major (if not the only) beneficiary of all such improvements. We theorize that the investments in

partners' value-creation-ability (VcRIs) not only facilitate those partners in fulfilling that particular focal firm's growing requirements but also facilitate them in avoiding service re-appropriations resulting in an annoyance of some of their valuable accounts other than the focal firm. Owing to the norm of reciprocity, the nodes are expected to generate a similar response to the focal firm. In other words, such a benevolent behaviour will not only inspire a positive state-of-affect but will also induce strong (normative) commitment among these nodes. Moreover, if these investments are made sequentially, these induce continuance commitment as it becomes imperative for the nodes to play fair or otherwise loose candidacy for the subsequent investments. This culmination of commitment eventually reduces the agency risk (moral hazards) especially when exponential growth increases focal firm's vulnerability and dependence on the fiduciarity of these nodes.

3.4.1 Value-Creating Relational Investments: The Process

Relational investments will not be equally rewarding across all nodes, as Fink et al. (2007, p 37) reflect in the context of supplier–buyer relationships;

> While the competitive market may dictate supplier relational investments to retain customer business, it should be done with the full understanding that their performance may not improve'. Therefore, suppliers need to be very selective in targeting buyers for relational investments.

Following Pareto's 20/80 rule, we can presume that 80% of the firms' relational value will result from 20% of the relationships in its portfolio; therefore it becomes quite rational to appropriate relational investments according to the nodes' value. In order to increase precision of the flow of VcRIs both within and outsides the high value-segments, leverage potential/value-gap coupled with relational polygamy can be used as criterion to appropriate VcRIs. Leverage-potential refers to the difference between current and the maximum revenue potential whereas the extent of relational polygamy is gauged by the number of rival elements in a node's supplier portfolio.

The higher the leverage potential, the greater the value, and consequently the greater should be the appropriation of relational investments. However, if the partners feature high relational polygamy (as is often the case in virtual organizations) basing investment decisions solely upon the value-gap can be misleading. If the focal firm does not occupy a lead position in such partners' hierarchy of preferences, the risk of unavailability of desired contributions (the moral hazards) increases as the node (as a rational agent) will allocate more of its capacity/efforts to the rivals elements higher in its hierarchy of preferences. In order to escape this problem, the focal firm may make the investment management process more rigorous by considering the nodes' degree of relational polygamy in addition to the leverage-potential. Based on the two criterions, Table 1 presents a classification of partners that can be used to add to the precision of the allocation of VcRIs.

Table 1 The Intermediate buyers' classification w.r.t. value gap and relational polygamy

Value gap	Relational polygamy	
	Low	High
High	1 Value-busters	2 Real candidates
Low	3 Over-embedded ties	4 Potential divorces

Adapted from Yaqub (2009a)

Value busters feature high leverage potential which is easy to harness as the node's supplier portfolio contains only few rival elements. Every focal firm needs to maintain a handsome number of such elements in her portfolio since larger value streams flow from them. Real Candidates are of equal value but they are tough targets as the value created might be shared with a number of rival actors. The firms need to commit considerable investments to turn such real candidates into the value-busters. Over-embedded ties are the low value ties with low levels of relational polygamy. Here, focal firm needs to escape what Uzi (1997) calls the 'paradox of embeddedness' and should avoid over-investment beyond an optimal level. Potential divorces are the partners featuring lower value-gaps besides being tied to a higher number of rival actors. Investment in such players can prove to be an unnecessary cost until and unless it has strong future implications. The relational investments should flow from quadrants 3 and 4 to the quadrants 1 and 2. In other words, focal firms may re-appropriate investments from potential divorces and over-embedded ties to real candidates and value busters, if the situation warrants so.

3.5 Revenue-Enhancing Behaviours (ReBs)

Previous empirical research in business-to-business relationship contexts has reported a number of benefits from increased satisfaction, trust and commitment such as an increase in acquiescence and cooperation, and a decrease in the propensity to leave, functional conflicts, social uncertainty, and opportunism (Crosby et al. 1990; Morgan and Hunt 1994). However, most of these benefits are attributable to the upstream relationships. More explicit downstream revenue-enhancing relational outcomes of having a loyal customer base have been well documented in a service provider context. Loyal customers can lead to: predictable sales and profit streams (Aaker 1992); increased revenue for the firm (Reichheld 1993, 1996); more purchases of additional services i.e. upselling, and cross-selling (Reichheld 1996); generation of new business from positive word of mouth (Reichheld 1996; Reichheld and Sasser 1990); lower customer turn-over (Reichheld and Sasser 1990); and decreased cost as loyal customers are less demanding (Reichheld 1996). Extending some of these outcomes to the supplier-(intermediate) buyer context, we have postulated that strong relational bonding (i.e. commitment) stemming from higher perceived relationality and value-creating relational

investments (VcRIs) results in higher levels of ReBs manifested through an increased longevity of relationship, increased business share, positive word-of-mouth effect, and reduced partial defection in the node. These effects ultimately translate into increased supplier's profitability through increased revenues. Let us have a brief account of these formative indicators.

3.5.1 Longevity of Relationship

Relational behaviours like mutuality, solidarity, and role integrity promote trust that together with long-term-orientation creates (affective) commitment in the nodes (Ivens 2004). Moreover, as discussed earlier, relational investments induce (normative) commitment in the nodes. Lastly, such investments, if made sequentially, make it imperative for the node to continue the relationship and play fairly in order to keep appropriating future streams of such investments, and thus spur the (continuance) commitment. No matter whatever is the impetus to commitment, it leads to increased longevity of relationships. This has been revealed in the value-exchange model (VEM) as one of the three possible means to maximize relationship profitability (Grant and Schlesinger 1995).

3.5.2 Increased Business Share

It is human nature that they like to patronize those with whom they share strong emotional bonds (Ring and Van de Van 1994). Similarly, if a focal firm manages to secure strong commitment with certain nodes, they patronize the focal firm by sharing more of their increased business with her, especially when this increase has been a consequence of the focal firm's support in the form of VcRIs. In other words, a node will share its enhanced business surplus equitably with a focal firm (i.e. proportional to the relational investments) if it exhibits higher inter-organizational commitment.

3.5.3 Word-of-Mouth Effects

The nodes occupying highest positions on the loyalty-ladder (Murray 1980) not only patronize the focal firm by giving her more business by themselves but also act as its "part-time marketers" by spreading positive word-of-mouth (Gummesson 2002). This word-of-mouth establishes and/or improves the focal firm's reputation as a good candidate to network with. This reputation of trustworthiness benefits the focal firm not only in attracting new business but also in leveraging revenue-gaps of elements in its existing buyers' portfolio.

3.5.4 Reduced Partial Defection

Axelrod (1984, p 140) asserts that 'the ability to recognize defection when it occurs is not the only requirement for successful cooperation to emerge but it certainly is an important one'. Glady et al. (2008) define a churner as someone whose life-time value (LTV) is decreasing over time. Reichheld (1996) designates such a decrease in LTV as a partial defection. In the case of high relational polygamy, it is possible that the increased surplus is not equitably shared with the focal actor by the node(s). As an example, consider the following scenario;

Node A has been sharing his total business volume of $10,000 as $5,000, $3,000, and $2,000 with focal firms X, Y, and Z at time 't'. At time t + 1, his total business volume doubles, and his new business volume break-up subsequently becomes $8,000, $12,000, and $0 for X, Y, and Z respectively.

Let X is the focal firm here. Even though there seems to be a (nominal) increase in her business volume (from $5,000 to $8,000), in fact there is a decrease in terms of business share i.e. from 50 to 40%). We postulate that such partial defections decrease with an increase in the VcRIs-cum-relationality-induced commitment.

3.6 Moderating Variables

We postulate that efficacy of the two instruments, as revealed in the aforementioned theoretical framework, may vary with respect to the phase in relationship life cycle (RLC) and the extent of a node's relational polygamy for the reasons discussed in the following section.

3.6.1 Relationship Phase

Relationships evolve through phases characterised by distinct behaviours, processes, and orientations (Dwyer et al. 1987; Ring and Van de Van 1994). The term 'relationship phase' refers to the major transitions in how parties in an exchange regard each other (Dwyer et al. 1987; Thibaut and Kelly 1959). Four such phases as described by Jap and Ganesan (2000) include: exploration, build-up, maturity, and decline. We have theorized that efficacy of the two instruments varies across different phases of the relationship life cycle (RLC).

The exploration phase is characterised by high levels of risk and uncertainty (Berger and Bradac 1982), therefore, relational investments can prove to be more instrumental in inducing commitment (much lower though) than relational norms which are not well-developed yet (Jap and Ganesan 2000). During the build-up phase, partners experience a continuous increase in benefits and interdependence. A display of relational behaviour by the focal firm promotes greater trust and commitment among the participating nodes in this phase. During the maturity phase, as the parties implicitly or explicitly have made a pledge to continue the

relationship on a regular basis (Blau 1964) for the reason of consistently embracing relational benefits, tangible assurances like relational investments may not be as instrumental in fostering commitment as in the other phases. Rather, it is the most appropriate time to harness incremental benefits attributable to such VcRIs. In the decline phase, the parties become short-term oriented in their dealings with each other and at least one party begins to signal relationship termination due to the perception of declining relationship quality. It is not optimal to make relational investments at this stage. However, relational norms – as they signal a willingness to manage the decline process constructively – can prove to be more useful in preventing the relationship termination from turning into a debacle (Jap and Ganesan 2000).

3.6.2 Relational Polygamy

As discussed earlier the relational investment management process needs to be moderated by the leverage potential/value-gap of a node: the greater the value-gap, the greater should be the allocation of VcRIs. However, an important consideration here is the node's ethical proficiency since increasing its stake in the node makes a focal firm more vulnerable to ex-post opportunism (Williamson 1985; Anderson and Weitz 1992; Gulati et al. 1994). The likelihood of such an opportunistic exploitation increases if the node(s) maintain polygamous relationships. Consequently, the instrumentality of both instruments increases with an increase in the number of competing elements in a node's supplier portfolio. An abundance of equally competing alternatives may infuse a transactional-orientation in the node. A sequential deployment of VcRIs can protect relationships from becoming transactional provided the node exhibits a higher valence for such investments. However, this becomes quite unlikely if the rival firms offer equal or more competent packages.

4 Summary and Future Research

In this paper, a conceptual model has been presented where we have integrated and extended insights from relational exchange theory (RET) and the value exchange model (VEM) to explain profit-maximization in supplier- (intermediate) buyer dyadic relationships from a revenue-enhancement perspective. The model is conceptually grounded in the relational exchange theory (RET) and the value-exchange model (VEM). It elaborates upon the effects of relational governance and value-creating relational investments (VcRIs) in ensuring superior performance of the focal firm by causing certain revenue-enhancing relational behaviours (ReBs) in the nodes. It is theorized that value-creating relational investments (VcRIs) augmented with relational governance, positively affect a node's perceptions of relationship quality (manifested through total partner satisfaction and trust). The culmination of

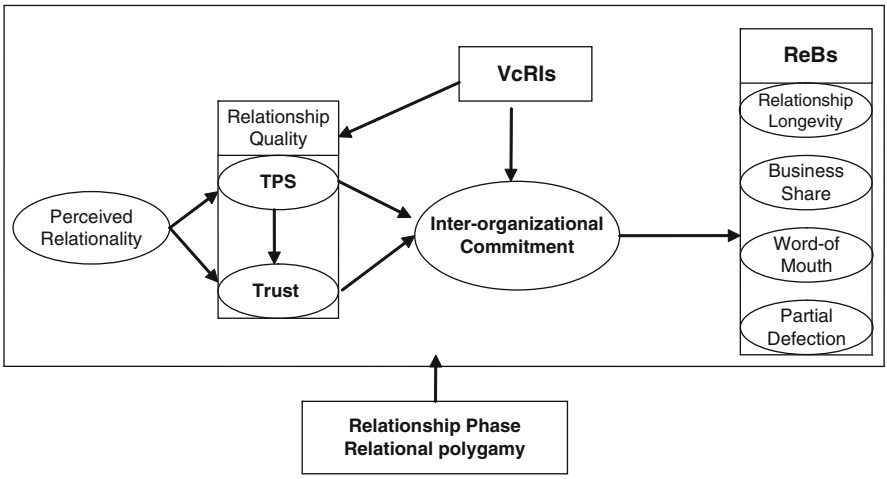

Fig. 1 Portrays the conceptual model that describes the joint effect of relational governance and value-creating relational investments (VcRI) in ensuring superior focal firm performance through inducing certain revenue-enhancing (relational) behaviours in the partnering nodes. In rest of this paper, we will discuss the nature, scope and roles of all constructs in this model

total satisfaction and interorganizational trust leads to increased interorganizational commitment that eventually translates into increased focal firm profitability through embracing revenue-enhancing relational behaviours (ReBs) like longevity of relationship, increased business share, positive word-of-mouth, and reduced partial defection. It is further argued that efficacy of the two instruments varies across different relationship phases and extent of the nodes' relational polygamy. Relational norms are more valuable in transition phases (i.e. build-up and decline) because they act as emotional and procedural buffers that minimize stress associated with change in these phases, whereas relational investments are more instrumental in the exploration phase of the relationship life cycle. Finally, it is argued that the instrumentality of both the antecedents increases with an increase in relational polygamy since an abundance of equally competing alternatives may infuse a transactional-orientation in the node(s).

Even though the individual links of the model are well established in prior research in a variety of inter-firm relationship contexts, the model, as a whole, needs to be empirically tested in context of the supplier–intermediate buyer dyadic relationships which sets a useful agenda for future research. On a theoretical account, the model presents a detailed account of the processes involved in translating the joint effect of relational governance and value-creating relational investments (VcRIs) into increased inter-organizational commitment. However, it is not equally exhaustive in revealing the dynamics of translation of inter-organizational commitment into superior performance of the focal firm. Future researches can

make-up for this deficiency. Lastly, by making an appeal to a variety of theoretical frameworks, the model has laid down a basic foundation for the development of an integrated framework for interfirm relationships. The explanatory power of the model can be enhanced by integrating insights from more theoretical perspectives like property rights theory and information economics.

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Networked Resource Access and Networked Growth: A Double Network Hypothesis on the Innovative Entrepreneurial Firm

Anna Grandori and Eugenia Cacciatori

Abstract Through an empirical study on new innovative entrepreneurial firms, we test the hypothesis that there are positive complementarities between firms' networked access to human, technical and financial resources and the networked growth of those firms. This "double network hypothesis" supports a view of entrepreneurial firms generating value through shifting combinations of resources and growing by external networks, rather than as a necessarily unique combination of highly specific resources. In addition, the test of complementarities between types of networks bringing resources to the firm and types of networks through which growth occurs, contributes a much needed specification of the sources of complementarities among organizational practices, at least as far as network practices are concerned.

1 Introduction

A main ingredient of entrepreneurship is the recombination of resources for the discovery and development of new goods and services (Schumpeter 1911; Penrose 1959). In Schumpeter's view, the focus on resources is due to the understanding that the development of new goods and services is a discovery process sustained by the pooling of resources in new ways. In Penrose's view, the focus on resources is due to the understanding that the expansion and change of services derives from the multifunctionality of resources: the capacity of generating more activities than that for which they were initially developed. These dynamics of resource recombination and utilization over an expanding range of services were at the basis of the explanation and prediction of value creation and the growth of the firm within a resource-based perspective. Contemporary debate in the resource based view, with perhaps the exception of literature on related diversification, has however lost most

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of that dynamic connotation (Grandori 1999a; Foss 1999). Discussion has become primarily centered on the strength of a firm's competitive "position" as determined by the "amount" of resource controlled and by their rarity, value and inimitability (Barney 1991; Wernerfelt 1984). In this view, the "lock-in" of unique and specific resources is the major source of competitive advantage and even the very "nature" of the firm. The extensive literature on networks in new high tech sectors (Saxenian 1991; Powell et al. 1996; Elfring and Hulsink 2003 to quote only a few) suggests that this portrait of value creation and firm growth based on resource uniqueness and specificity is in fact a special case, to which we became accustomed in relatively stable sectors and technologies, which is highly inadequate in the case of entrepreneurial firms based on new technologies and operating in new sectors (Grandori 2003). In industries based on new technologies, it is increasingly clear that highly specific combination of resources and intense knowledge sharing can occur both within firm and in highly connected inter-firm networks (Grandori 1997; Colombo 1998). In addition, both in firms and in networks, if technology is unstable, its applications are not fully known and configurations of products and production processes have yet to be discovered (Abernathy and Utterback 1978; Klepper 1997), shifting rather than stable combinations of resources are likely to be superior in the discovery and design of these new solutions (Meyerson et al. 1996). On these bases, this paper undertakes a conceptual and empirical study on entrepreneurial firms in innovative settings, in particular New Technology Based Firms (NTBFs), focused on identifying what aspects of organizational arrangements may help in generating and governing a shifting combination of complementary resources, building on the hypothesis that one of the most important organizational practices that can arguably contribute is networking.

The importance of networks, in general and in entrepreneurship in new high-tech sectors, however, is not confined to access to resources. It is widely recognized that organizing transactions through networks is an important governance alternative with respect to organizing within the firm or through markets (Williamson 1991; Thompson et al. 1991). It is deemed to be suitable especially when there are advantages in tight coordination among different activities, but economies of specialization and scale (Richardson 1972; Mariotti and Cainarca 1986) or relative efficiency in innovation (Nooteboom 1998) are configured to the advantage of separate firms. These transaction-based arguments on the role of networks have been enriched in terms of comparative assessment of alternative forms of networks as contingently effective for regulating transactions of different type (Grandori 1997).

This enrichment has been however still conceived in a logic of "external fit" between organizational attributes and circumstances. The current paper further expands the analysis by considering the "internal fit" problem (Milgrom and Roberts 1995) – in this case, the complementarity among various types of network forms; as well as by introducing a more dynamic perspective on network formation (Ebers and Grandori 1999) – which types of networks are conducive to the formation of new networks, thereby contributing to economic growth.

As to growth, the argument builds on an interpretation of networks as both a predictor of internal firm growth and as alternative to it. It has been argued that

networks are important for overcoming the "liability of newness" (Powell et al. 2005; Pennings et al. 1994); and there is broad support for the hypothesis that networking has a positive impact on new firms survival and growth (e.g., Brüderl and Preisendorfer 1998), in particular for NTBFs (e.g., Baum et al. 2000; Elfring and Hulsink 2003; Almus and Nerlinger 1999). Alternatively, sometimes networks have been recognized as a different *form of growth* of the firm (Pfeffer and Salancik 1978) rather than as an alternative to growth. Recent literature has emphasized that NTBFs are important in economic development not so much because some of them grow to be large firms, but because many of them remain small specialized suppliers that act as catalysts for the growth of other firms (Autio 1997a; Fontes and Coombs 2001). Therefore, networking is not only a strategy for the acquisition and rapid recombination of resources that best fits the demands of turbulent environments, but also a means through which NTBFs contribute to economic development and the development of other firms.

The paper is organized as follows. Section 2 reviews what we know about the role of various types of networks in ensuring NTBFs access to the shifting combination of resources they need to survive in the turbulent environment that they inhabit. Section 3 discusses the shift in the literature on NTBFs from an emphasis on growth in terms of revenues and employment to an emphasis on growth in terms of activity expansion through external networks. Section 4 builds on the two preceding sections by putting forward a "double network hypothesis", i.e. that NTBFs that have highly developed networks for accessing resources achieve superior growth, especially in terms of their capacity to form new networks. Section 5 describes the empirical study conducted on a sample of Italian NTBFs and discusses the double network hypothesis, especially in terms of sources of complementarity among network practices. Section 6 draws the conclusions.

2 Networked Resource Access in NTBFs

It is widely recognized that networks are important in helping newly founded businesses (e.g., Brüderl and Preisendorfer 1998) and NTBFs in particular (e.g., Baum et al. 2000; Elfring and Hulsink 2003; Almus and Nerlinger 1999) to overcome the difficulty caused by the "liability of newness" (Freeman et al. 1983) in accessing resources, contributing to improve their chances of survival and growth. Indeed, networks perform a fundamental role in attracting the main types of resources NTBFs need: not only technical and financial assets, but also, and even more importantly, knowledge and human capital. In fact, it is widely known that sheer market transactions are bound to fail when the knowledge to be transferred is complex and investments are risky (Williamson 1979; Alvarez and Barney 2007). This holds for knowledge transfers and investments, but also for the attraction of financial investments into very uncertain ventures. The alternatives forms of governance usually considered in these cases are either sheer integration or networks. The latest have been typically conceived as a hybrid form between market

and hierarchies, which enable the parties to maintain separate legal entities, but to coordinate their action through organizational, voice-based mechanisms. Various forms of networks have been identified, mostly on the basis of the type of coordination mechanisms employed. It is commonly hypothesized and found that the more complex and risky the transaction, the stronger the needs for integration, thereby bringing governance from simple communication and informal contact, to contractually regulated exchanges, to property right sharing (Grandori 1997).

In the present study we make a further distinction among networks, not only by form and content, but by the input versus output processes they sustain and regulate, thereby allowing an analysis of complementarities oriented to understand networked growth. In relation to *knowledge*, we consider the main forms in which knowledge can be accessed: through access to qualified human resources; through contractual relationships, including the acquisition of technology via licensing and of specialized competencies via outsourcing or franchising; and through proprietary agreements. The acquisition of technology via licenses is a relatively "market-like" form of networking. It is known, however, that market exchange unsupported by human interaction soon fails as knowledge complexity increases (e.g., Ouchi and Bolton 1988) and that licensing in complex sectors is significantly integrated by organizational interaction (Grandori and Soda 1995). Outsourcing represents an important mode through which new small firms can access knowledge in the form of expertise, including traditional areas such as legal, tax and financial advice, and specialized technical expertise – for instance in design and production. The outsourcing of part of the firm's activities in order to access specialized knowledge is an appropriate solution as long as the knowledge being transferred does not require significant specific investments. When this is the case, the acquisition of knowledge implies the "acquisition of people."

The second type of resources considered are therefore *human resources*. It has been empirically widely shown how important networks are in providing input knowledge through communication or circulation of personnel in systems of NTBFs (e.g., Saxenian 1992). Indeed, NTBFs tend to cluster in areas where there is an abundant supply of qualified personnel (e.g., Armington and Acs 2001). While the literature exploring the role of networks in labor markets has initially underlined the role of *social* networks deriving from family acquaintances and friendship relationships (e.g., Granovetter 1973), the literature on the labor dynamics of innovative clusters such as Sylicon Valley (Saxenian 1992) and on high-tech innovative firms in general (e.g., Bagdadli et al. 2003; Roberts 1991; Prevezer 2001) show that *professional* networks deriving from either shared higher education or shared work experiences play a prominent and even more important role in the careers of high-tech professionals. The importance of professional networks derives from their performing of two functions that are particularly important in high-tech innovative contexts. Firstly, they enable entrepreneurs to perform knowledge brokerage. A wide range of contacts deriving from previous business relationships provides entrepreneurs with partner-specific knowledge and enables them to build a map of the distribution of competencies among actors. This is clearly of paramount importance in an uncertain dynamic environment that requires the ability to rapidly

recombine resources. Secondly, while social networks may be sufficient to enable entrepreneurs to solve the classic problems of adverse selection and moral hazard in evaluating resources that do not have an important technical component, professional networks become crucial when entrepreneurs need to overcome the problems of asymmetric information related to the level of technical competence of potential business partners and employees.

With regard to *financial resources*, it is well known that the mere provision of finance to technically excellent but often business naïve entrepreneurs by actors who do not have a substantive knowledge of the field is bound to fail. This is the main reason why "networked finance" based on co-investment, rather than traditional finance based on bank loan, has become so central to successful high-tech districts. The risky investment required in NTBFs need to be sustained by informed investors, with specialized knowledge of the field and capacity of substantive knowledge sharing with the entrepreneur, rather than by traditional financial institutions (Sapienza and Gupta 1994; Clarysse et al. 2007). In addition, the more networked not only with entrepreneurs, but even among themselves the capital providers are, the more sustained the growth of the system of innovating firms (as shown in a comparative study on Silicon Valley and Route 128; Castilla 2003). Networked finance is not only a matter of risk sharing, is also a matter of knowledge sharing and specialized co-investments. For this reason, the financing of NTBFs takes place primarily through equity investments – which identify proprietary networks, where, as it is the case for highly skilled people, resources are co-invested and associated, rather than "exchanged."

3 Networked Growth

As mentioned above, networks are important not only because they enable faster recombination of resources than traditional integration, but also because they represent a form of growth. It was recognized very early in organization studies that what counts as the "boundary" of the firm, and therefore its size, depends of what aspect of the firm is being looked at and that networks of relationships allow firms to influence the use of human and technical capital well beyond their "boundaries" as defined by traditional employment relations and by the ownership of technical assets (Pfeffer and Salancick 1978; Grandori 1999a, Grandori 1999b; Rajan and Zingales 2000). The debate on what is the most appropriate measure of firm size and firm's growth has recently been renewed in the context of the policy discussion on NTBFs. This section briefly reviews this debate, to set the ground for our empirical analysis of the relationship between traditional size (revenues and number of employees) versus "networked size" (number of networking relationships) in the case of NTBFs.

Since at least the 1980s, the new wave of firm founding and entrepreneurship giving raise to the "new economy" have been the object of growing interest from both academics and policy makers (for reviews: Autio 2000; Storey and Tether 1998).

This interest has been driven by the belief that, through the development of new markets and technologies, entrepreneurial firms, and especially innovative and new technology based firms, play a central role in enabling the economies of developed countries to escape stagnation. The policy objectives inspiring research have been dominated by a concern for the identification of factors that affect the ability of these new firms to grow (e.g., Almus and Nerlinger 1999; Autio 2000; Bantel 1998). In other words, the objective underlying much research on new firms has been to identify the conditions that allowed the expansion in size of firms like Microsoft, Apple or Adobe, in order to facilitate similar developments in other countries and industries. As part of this line of research, several contributions have examined whether and to what extent inter-organizational networks contribute to the survival and growth of NTBFs. A review of the available evidence shows that there is robust empirical support for the positive effect of inter-organizational networks on growth in terms of traditional measures of size – turnover and number of employees (e.g., Baum et al. 2000; Elfring and Hulsink 2003; Almus and Nerlinger 1999). Almost three decades of research, however, have shown that the emphasis on growth in this sense is likely to be at least partially misled (Autio 1997a). NTBFs that grow to be large firms are a very small minority and, particularly in Europe, there have been very few stories of spectacular growth comparable to the major US success stories (Storey and Tether 1998). To counter this rather bleak assessment, however, research has shown that NTBFs play a crucial role in fostering economic development by nurturing inter-organizational networks of innovators, as well as the innovation capacity of large established firms (e.g., Powell et al. 1996, Saxenian 1991, Orsenigo et al. 2001). Over the last years, then, the focus of research has been shifting from the identification of fast growers and of the environments nurturing them, towards a more sophisticated understanding of the role of entrepreneurial firms as agents of economic development at a wider level. This shift in emphasis derives from several arguments. Firstly, over the years empirical evidence has accumulated showing that there are internal differences between types of entrepreneurial firms in growth respects. In particular, while the rate of growth of NTBFs is usually higher than that of other start-ups, they typically do not grow much and often have little *intention* to grow.[1] Albeit the no growth choice has been considered, and sometimes is, a pathology, it can also be effective on many grounds: avoiding bureaucratic escalation, keeping a substantive professional rather than administrative orientation, maintaining intrinsic motivation and the working "imprinting" of the NTBF (Baron and Kreps 1999). Finally, but of primary importance here, the "lack" of expansion of organizational boundaries of the firm may hide other forms of growth: growth by changing the combination of resources, by the development of resources in terms of knowledge and experience, and growth by spin-offs and external alliances and collaborations.

Secondly, there has been a shift away from a linear to an interactive model of innovation, and the understanding of the role of NTBFs has correspondingly

[1]Reviews of the empirical evidence are provided by Autio (1997a, b) and Storey and Tether (1998).

changed (Autio 1997b). In the linear model of innovation, in which a sequential series of steps transforms advances in scientific knowledge into new technologies and new products, NTBFs are seen as the introducers of new and disruptive technologies that, if successful, would grow to replace existing large firms. The systemic view of innovation highlights the interactive and recursive nature of the process, in which science, technology and markets influence each other. Within this view, NTBFs find a role as agents of innovation contributing both to the phases of exploration and discovery of new technologies (Freeman and Soete 1997; Nooteboom 1998) and to their diffusion and adaptation to a variety of contexts (Autio 1997b; Fontes and Coombs 2001), in particular contributing to the renewal of the competencies of large, established firms (Beesley and Rothwell 1987; Rothwell 1983; Orsenigo et al. 2001; Lipparini and Lomi 1999; Powell et al. 2005). Somehow paradoxically though, a successful role as innovation catalysts may hinder rather than help firm growth, as NTBFs tend to occupy small specialised niches. Indeed, recent studies have shown that there is a portion of firms that are highly successful in terms of innovative output (measured in terms of patenting activities), which remain relatively small (less than 500 employees) (Hicks and Hegde 2005). These small "serial innovators", who act prevalently in industries characterised by the growth of "markets for technologies" (Arora and Gambardella 1994), are less likely to be manufacturer than large patenting firms, therefore supporting the view that they act as specialist technology suppliers running R&D or consultancy activities.

Thirdly, in highly innovative settings, where firms are "trials" in a "trial and error" process of discovery of new combinations, survival and growth of every single firm is just not possible and arguably not effective from the standpoint of the overall process of economic discovery (it would be as if no hypothesis were ever rejected in a research process) (Campbell 1960; Klein and Klein 2001; Klein and Foss 2005; Pennings et al. 1998). Indeed, "failed" NTBFs still contribute to the economy by producing qualified human resources (cf. Møen 2007). This aspect contributes to identify a role, and related "success" criteria, for NTBF, that do not include stability, duration and growth. In fact, a key parameter for firm-level success in successful high innovation systems of NTBF is often their "termination" through sale and transformation in something else (Grandori and Furlotti 2006).

The increasing understanding of the role of new innovative firms in promoting the growth of large established firms and of networks of further new firms suggests that (a) traditional measures of size may not correlate with size measured as a firm's network of relationships and (b) the contribution of NTBFs to the economy can be better captured by indicators of their inter-organizational activity than by the traditional measures of firm survival and size.

4 A "Double Network" Hypothesis

Bringing together the two lines of argument on the role of networks in the acquisition and recombination of resources and on the networked growth of new innovative entrepreneurial firms, we advance a "double network" hypothesis. Networks

are fundamental both in attracting and combining an internally varied set of inputs, and in sustaining the growth of entrepreneurial firms as a system. It can be argued that (a) the management of networks constitutes a distinct capability and that, therefore, the extent of use of networks in ensuring access to resources is likely to positively influence the extent of use of networks for distributing the firms outputs to other economic actors; and (b) networks that are used to access resources may in time become networks through which firms sell their product and services. In other terms, the capacity of forming networks thanks to outflows of financial and knowledge resources is sustained by the experience and contacts deriving from having utilized external sources of those types of input in the constitution of the firm in the first place. Therefore, we *hypothesize that there is complementarity between the two types of networks, a virtuous circle between the "vortexes" of knowledge and financial resources in input and the new firms' vitality in terms of inter-firm networking as an output*.

A second research question regards the interactions between qualitatively different types of networks. In order to distinguish types of networks, either in input or in output, we shall use the threefold typology distinguishing among networks according to governance and coordination properties developed in Grandori and Soda (1995), as the conditions for the effective contingent use of network forms thus defined are reasonably well understood (Grandori 1997): i.e. proprietary networks (based on equity or other property rights sharing); bureaucratic/contractual (based on formal contracts rich in procedural clauses, rules and arbitration provisions); and social/personal networks. The further question addressed here regards the complementarity among qualitatively different forms of network, both in input and output. Two countervailing arguments may be conceived on this matter. On the one hand, the formation of inter-firm networks of the contractual or proprietary types is most often nurtured by the embeddedness of firms in wider social and professional networks. Furthermore, in the case of entrepreneurial firms in the most innovative sectors of the economy, social and professional networks can be seen as a relatively stable organizational and social structure, while firms can be seen as arrangements for combining resources into "projects" that may well be more temporary than the social networks they grew out from (Grabher 2002). In fact, entire groups of connected people do migrate from firm to firm (Meyerson et al. 1996; Bagdadli et al. 2003), firm tenure is relatively short (Grandori and Solari 2002) and entrepreneurial project-based firms may be efficiently short-lived – they may terminate for completion of projects, or "die" by transformation into corporations, by aggregation via mergers and acquisitions, or by disaggregation into networks of new entrepreneurial firms (Lindkvist 2004; Hannan and Freeman 1989; Miles et al. 1997; Ebers 1997; Burt 2004). Conversely, the use of formal network for attracting resources may contribute to build informal business contacts. In other terms, not only informal networks generate formal ones, but also vice-versa (Ring and Van de Ven 1994) as much as any formal collaboration generates interpersonal relation and produce new social structure (Seiler 1967). This type of mechanisms should generate *complementartity among different types of networks*; *in particular between informal interpersonal networks and formal inter-firm networks.*

On the other hand, the contingency argument – fit to context – says that the effectiveness of different types of network (social/professional, contractual or proprietary) depends upon the characteristics of resources and tasks, and implies that there may be only limited fungibility among networks of one type in input and networks of other type in output. In addition, the complementarity argument itself, has been usually intended as implying that organizational practices that are "similar in kind", rather different, are "consistent" and therefore complementary (Roberts 2004). Hence, this second type of arguments would suggest that *complementarities link similar, rather than dissimilar, organizational attributes or practices* – in our case, informal interpersonal networks in input and output, inbound and outbound contractual networks, and inbound and outbound proprietary networks.

Given those possible countervailing factors, the issue of which type of inbound and outbound networks sustain each other will be explored empirically. First, we shall examine relations among all types of networks in input and output, in order to detect possible complementary configurations. Second, we shall examine the relationships among those configurations and some situational variables. In particular we shall consider firm size, as an indicator of complexity of activities as well as of internal growth; firm age, as an indicator of life cycle; and type of high tech industry (manufacturing versus service) as the nature of the innovation process, and in particular the relative importance of social networks, may differ between manufacturing and service industries (Gallouj and Weinstein 1997).

5 A Test of the Double Network Hypothesis

5.1 Sample and Measures

The data employed in testing our double network hypothesis relate to a sample of Italian new technology based firms (NTBFs): The database (RITA), initially developed at Politecnico di Milano in 1999 (with up-dates in 2001 and 2003), contained information on about 630 Italian NTBFs, founded in 1980 or later, and independent at start-up. Firms in the RITA database operate in high-tech sectors in both manufacturing and service sector, including telecommunications, industrial automation, computing, software, e-commerce, multimedia services, aerospace and biotechnology. RITA was used as a basis for a joint project between Politecnico and Crora-Bocconi, in which the data set on technology and financial structure was integrated with data on human resources practice and organization.[2] The data for this paper has been gathered through a survey, conducted during the summer 2004.

[2]This study adopts a definition of NTBFs as firms younger than 25 years operating in high-tech industries. There are a variety of definitions for NTBFs (see Storey and Tether (1998) for an in-depth discussion). In particular, some studies adopt a definition similar to ours, while others opt for narrower definitions such as firms engaged in the development of new technologies.

Firms were contacted by phone and e-mailed or faxed the questionnaire. Two rounds of follow-up calls were made in July and September in order to increase the response rate. Of the initial 630 target firms, 48 had ceased to exist, had been acquired or could not be reached. From the remaining firms, we were able to collect 110 completed questionnaires, equivalent to a response rate of 19%. The data from the questionnaire were then integrated with other information available in the updated RITA, in particular in relation to age. The integration process brought the number of complete records to 84.

The variables examined in our study are shown in Fig. 1. The following paragraphs will describe the construction of the variables in more detail.

5.1.1 Inbound Networks

Inbound HR from Networks is measured by the intensity in the use of networks in order to access human resources. The measure is an index ranging from 0 to 4 constructed summing the answers (0 for no, 1 for yes) to four questions asking whether new employees were recruited by using referrals from professional contacts, from personal contacts, from former employees or from firms with which the focal firm has any type of relationship.

Inbound Contractual Networks are measured by the intensity of use of contractual networks as a means to procuring and accessing resources within the economic system. Contractual Networks In is an index constructed as the average number of relations in which the firm is as licensee, as franchisee or by outsourcing part of its activities – each of which is measured on a 0–4 scale, with 0 for no relationship, 1 for 1–3 relationships, 2 for 4–6 relationships, 3 for 7–9 relationships and 4 for ten or more relationships.

Inbound Proprietary Networks is measured by the intensity of use of proprietary networks in accessing capital on a 0–4 scale, constructed by asking the number of other firms that hold equity stakes in the focal firms on a 5-point scale, with the following values: 0 (no equity stakes); 1 (between 1 and 3); 2 (between 4 and 6); 3 (between 7 and 9) and 4 (10 or more).

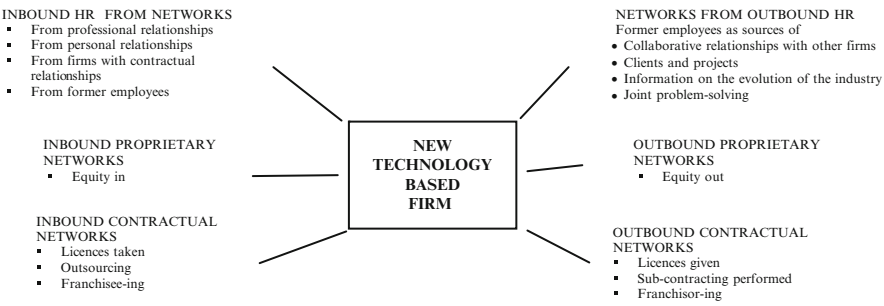

Fig. 1 The double network hypothesis

5.1.2 Outbound Networks

Networks from Outbound HR are measured by the intensity of the relationships maintained by the firm with its former employees. The question asked is whether they became sources of new employees, new clients, new projects, information on industry evolution and help in problem-solving. This variable has been constructed by summing dichotomous (yes or no) variables for each of the component, resulting in a scale with values ranging from 0 (no network whatsoever from former employees) to 4 (all types on networks are used).

Outbound Contractual Networks are measured by the intensity of use of contractual networks as a means to distributing the firm's resources within the economic system. Contractual Networks Out is an index constructed as the average number of relations in which the firm is licensor, franchisor or subcontractor – each of which is measured on a 0–4 scale, with 0 for no relationship, 1 for 1–3 relationships, 2 for 4–6 relationships, 3 for 7–9 relationships and 4 for ten or more relationships.

Outbound Proprietary Networks is measured by the number of other firms in which the focal firm has equity stakes, on a 5-point scale, with the following values: 0 (no equity stakes); 1 (between 1 and 3); 2 (between 4 and 6); 3 (between 7 and 9) and 4 (10 or more).

5.1.3 Control Variables

Industry. A dummy variable distinguished firms active in manufacturing (telecommunications, industrial automation, computing, aerospace and biotechnology) or service industries (software, e-commerce, multimedia services). A more fine-grained distinction was not possible given the magnitude of our sample. In our sample, 66% of firms is active in services and 34% in manufacturing.

Age. This dummy controlled for the age of the NTBF, distinguishing firms older than 5 years (59% of our sample).

Size. As customary, we used revenues as a proxy measure of size.

As illustrated in Section 5.2, these variables have been employed to link the internally fit configurations to their external conditions of effectiveness, in terms of firm life cycle, firm complexity and type of industry.

5.2 Data Analysis and Results

A reasonable, albeit rough test of complementarities among organizational practices can be provided by correlational analyses (Ichniovsky et al. 1997). From Table 1, reporting the correlations among all variables, hypotheses can be advanced on the couples of mechanisms that may be complementary. There seem to be complementarity between inbound and outbound network of similar form: i.e. inbound HR with outbound HR networks, inbound contractual with outbound contractual, and

inbound proprietary with outbound proprietary. However, there are relevant exceptions. As to inbound networks, HR inflows from networks are complementary with richness in contractual networks. "Obvious" as it is, this result, if confirmed, would usefully shed light on the sources of complementarity among formal and informal networks. As to outbound networks, contractual and proprietary networks correlate among them. Given that proprietary ties are also related to firm size, we should examine this result after having controlled for size. In order to test the robustness of all these relations, we ran Ordered Probit Analysis – suitable to our case as our measures are ordinal. The number of valid cases is 64 for Networks from Outbound HR, 63 for Outbound Proprietary Networks and 58 for Outbound Contractual Networks. Table 2 reports the results.

All the analyses support the general double network hypothesis: the formation of outbound networks and the use networks in accessing resources are complementary.

As to the *forms of networks*, the results reinforce the hypothesis that there are complementarities between networks that are different in role (inbound versus outbound) but similar in form (personal, contractual or proprietary). This result interestingly refines our current understanding of organizational complementarities. In a static portrait, empirical research on complementarities has typically found that a variety of practices that are different in form – i.e. social and communitarian, formal and bureaucratic, and incentive based – can coexist effectively (Whittington et al. 1999; Grandori and Furnari 2008). Nevertheless, in a more dynamic perspective, the present study suggests that complementarities among practices of the same form may be generated by a competence accumulation and learning process, i.e. the accumulation of knowledge on how to build a given type of relation (for instance, how to achieve agreement and write contracts in complex interfirm transactions), and accumulation of contacts that generate new contacts within specific communities (say financial communities, professional communities, industry-specific communities of firms and suppliers/buyers). These factors may be particularly relevant as far as network practices are considered (with respect to organizational practices in general), because of the snow-balling effects that are pervasive in network formation (having contacts of a certain type produces more contacts of that type).

With regard to the relationships among networks with different form, ordered probits confirm the positive relation between inbound HR and contractual networks, and between outbound contractual and proprietary networks, although both of them seem to be stronger under certain contingencies (Tables 3 and 4). In other terms, we are going to ascertain whether contingency variables, such as sectors and tasks, lifecycle and size, discriminate among the combinations of network forms used, as "external fit" models would predict.

The use of networks to access human resources increases with firm size, while outgoing personnel becomes less important as a source of networks when firms grow and mature. Actually, among the inbound variables, only the coefficient of HR from Networks is related to size (cfr Table 5). These results suggest two tentative conclusions. First, the internal growth of the firm, even when measured in terms of revenues (rather than of number of people) is distinctively supported by the networked access of human resources, beyond and above the networked access

Table 1 Correlations

	Inbound HR from networks	Inbound proprietary networks	Inbound contractual networks	Networks from outbound HR	Outbound proprietary networks	Outbound contractual networks	Service sector	Revenues
Inbound HR from networks	1							
Inbound proprietary networks	−0.0275	1						
Inbound contractual networks	0.2741**	−0.1851	1					
Networks from outbound HR	0.4043**	0.1216	0.162	1				
outbound proprietary networks	0.1860*	0.3453**	0.0419	0.1499	1			
Outbound contractual networks	0.2608**	−0.1482	0.6844**	0.1012	0.2759**	1		
Service sector	−0.0335	0.0245	0.3145**	0.1203	0.0621	0.2262*	1	
Revenues	0.1622*	0.045	0.1373	0.1309	0.2349**	0.2996**	0.0105	1
Older than 5 years	0.1098	0.0481	0.1616	−0.0646	0.2413**	0.2150*	0.1569	0.2199**

**$p < 0.05$; *$p < 0.1$

Table 2 Ordered probit regressions – outbound on inbound

	Networks from outbound HR	Outbound proprietary networks	Outbound contractual networks
Pseudo R-sq	0.11	0.33	0.22
Inbound HR from networks	0.55**	−0.16	0.18
Inbound proprietary networks	0.39	1.48*	−0.40
Inbound contractual networks	0.03	0.50	1.35**
Service sector	0.88**	−0.08	0.30
Older than 5 years	−0.47	0.91	−0.11
Revenues	−4.01e-09	1.20e-07*	5.71e-08**

**$p < 0.05$; *$p < 0.1$

Table 3 Ordered probit regressions – Inbound on Inbound

	Inbound HR from networks	Inbound proprietary networks	Inbound contractual networks
LR Chi2(5) Pseudo	14.58**	6.49	12.56**
R-sq	0.10	0.17	0.05
Inbound HR from networks	–	0.41	0.39**
Inbound proprietary networks	0.73	–	−0.51
Inbound contractual networks	0.61**	−0.73	–
Service sector	−0.42	−0.09	0.69**
Older than 5 years	0.08	−0.54	0.67
Revenues	6.67e-08*	5.63e-08	1.95e-08

**$p < 0.05$; *$p < 0.1$

Table 4 Ordered probit regressions – outbound on outbound

	Networks from outbound HR	Outbound proprietary networks	Outbound contractual networks
LR Chi2(5)	9.37*	14.42**	11.74**
Pseudo R-sq	0.06	0.32	0.06
Networks from outbound HR	–	0.09	0.077
Outbound proprietary networks	0.31	–	0.79*
Outbound contractual networks	0.07	0.68*	–
Service sector	0.67**	−0.41	0.49
Older than 5 years	−0.69**	0.10	0.23
Revenues	3.10e-08	1.17e-07**	3e-08

**$p < 0.05$; *$p < 0.1$

Table 5 OLS for revenues and inbound network variables

Adj R-sq	0.20
Inbound HR from networks	1,013,309*
Inbound proprietary networks	2,296,610
Inbound contractual networks	446,041
Service sector	165,448
Older than 5 years	3,145,577**
Const.	−1,307,485

$^{**}p < 0.05$; $^{*}p < 0.1$

Table 6 OLS for revenues and outbound network variables

Adj R-sq	0.30
Networks from outbound HR	341,968
Outbound proprietary networks	4,708,871**
Outbound contractual networks	415,510
Service sector	−514,137
Older than 5 years	2,905,889**
Const.	−75877

$^{**}p < 0.05$; $^{*}p < 0.1$

to financial capital and technological assets. Second, the external growth through networks, especially due to former employee mobility, is a distinct phenomenon and to a good extent an alternative to internal growth. By contrast, the outbound proprietary and contractual networks are complementary among them and, at least partially, with the size of the firm. Actually, among the outbound networks variables, only Proprietary Networks Out is positive and significant (Table 6). This is natural if seen as stemming from the fact that only relatively large firms engage in equity operations. On the other side, more interestingly, it signals that the capacity to establish *formal* networks is complementary rather than alternative to internal growth, as contrasted with the capacity to establish *informal* networks.

The effect of sector is interesting. Coherently with the literature underlying the importance of personal relationships in the service industry, being a service firm has a strong positive influence on the formation of networks thanks to former employees that enable the focal firm to make its knowledge, in the form of product and services, available to the rest of the economy. However, for service firms the acquisition of resources through contractual networks is more important than for manufacturing firms. This is an unexpected result requiring further investigation. Tentatively, it may be thought that some of the typically highlighted features of service industries – higher mobility, diversity and site specificities of resources – may increase the need for accessing resources through contractual relations such as taking licenses, affiliate to a franchising chain, and outsourcing.

6 Summary and Conclusions

This paper has highlighted that there are two forms of growth – internal and networked; maintained that the latter should be particularly relevant for new firms; and inquired in its predictors. The conceptual framework set out a “double

network hypothesis": there are interaction effects between the two types of networks, a virtuous circle between the "vortexes" of human, technical and financial resources in input and the new firms' vitality in terms of inter-firm networking in output. In addition we inquired in the interactions between the qualitative composition of inbound and outbound networks. The results support the double network hypothesis in its general form: the formation of outbound networks is complementary with the use networks in accessing resources.

The empirical analyses answers the question about the qualitative composition of networks by indicating that there are more intense and positive interactions among networks of "the same form," rather than of different form: in particular inbound contractual networks sustain outbound contractual networks, and the same holds for proprietary networks, supporting the explanation of the double network effect in terms of competencies and contingencies, rather than in terms of complementarities. HR networks, however, behave in a somewhat different way. They seem to be more multifunctional. In particular, inbound flows of HR through networks do contribute to both types of firm growth: internal (via the contribution of people) and networked (contractual); while the other forms of inbound networks – contractual and proprietary – contribute in a discriminating way only to growth through the same form of networking.

Hence, on a theoretical ground, the paper contributes, as intended, in analyzing the complementarities among network practices, and in a more dynamic model of the growth of the firm. That contribution innovates with respect to the currently dominant versions of both resource-based and transactional views of the firm, and is more suitable for analyzing innovative entrepreneurial firms. In addition, the control for contingencies as sector, age and size contributed in a more refined contingency view of networks than previously available.

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A Network Approach to the Structure and Organization of Joint R&D Projects

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Abstract Joint R&D projects have long been studied as an important determinant of innovation success. Researchers have highlighted the benefits that such technological projects offer to partners and to their industries and countries. However, the multiple interactions involved in joint R&D projects in order to achieve the common objectives are not fully understood. Such complexity justifies the need to seek adequate methodologies for determining the project attributes that will lead to an explanation of how joint R&D projects operate. In this paper we introduce ideas about the structure and organization of joint R&D projects in order to explore how attributes and properties of networks influence the attainment of R&D project objectives. The Delphi approach allows a detailed look at the functioning of networks which are much more difficult to capture in traditional, linear analytical models. We tested the measures in the context of the European sponsored R&D projects developed within Framework Programmes.

1 Introduction

Joint R&D projects have long been studied as an important determinant of innovation success (Pek-Hooi and Roberts 2005). Joint R&D projects are usually defined as the union of two or more partners through a cooperative agreement with the purpose of developing a technological project (O'Sullivan 2003). Generally, joint R&D projects in their development are supported in a network structure, the technological network.

Prior research has considered technological networks as an organizational and economic reality, making their study a promising field for scientific research. Thus, from an organizational viewpoint, firms join other firms or institutions organizing networks, not only at local but also at national and international levels, in order

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to develop technological projects that can positively influence competitiveness (Hagedoorn et al. 2000). From the economic viewpoint technological networks are promoted by public institutions as part of their Science and Technology Policies, with the purpose of enhancing competitiveness and the technological base of the country. Many cases can be mentioned, such as those which Sakakibara (1997) reports in Japan, where technological networks are encouraged by the Japanese administration. This policy is also followed by the American administration (Doz et al. 2000) and the European Commission (Mytelka 1991) whose technological policies are conducted through the Framework Programmes for Research and Technological Development. These funding programmes prioritize the main lines of action that support and encourage the European Research Area through networks for the development of these projects. Researchers have highlighted the benefits that such technological networks offer to partners and to their industries and countries (Hagedoorn et al. 2000). However, technological networks entail multiple interactions to achieve the common objectives of the joint project which are not fully understood (Pek-Hooi and Roberts 2005). In technological networks that develop joint R&D projects, the different partners taking part establish among themselves diverse kinds of ties (financial, technological, informative, etc.) which also have dissimilar frequency and intensity (Dyer and Nobeoka 2000). This makes the network of partners a complex structure. Such complexity justifies the need to seek adequate methodologies for determining the network's structural attributes that lead to an explanation of how the networks operate (Contractor and Monge 2003).

Recent advances in the study of networks by social network analysis (Parkhe et al. 2006) have placed powerful tools at our disposal, enabling us to suggest alternative measures of the structural attributes of networks to analyze their functioning. In this paper we introduce ideas about the architecture of R&D networks seeking to explore how attributes of networks influence the attainment of R&D project's objectives. We tested these measures in the context of the European sponsored R&D projects. These projects involve several European countries – to promote transnational collaboration, – several firms – to abide by competition laws – and, as far as possible, small and medium enterprises and universities to stimulate technology transfer. Cooperation through networks is thus a sine qua non condition for obtaining financing from European Framework Programmes.

The Delphi approach we used allows a detailed look at the functioning of networks which are much more difficult to capture in traditional, linear analytical models. We use social network analysis to approach the structural attributes of joint R&D projects, identifying three groups of properties that are essential in explaining the performance of projects: heterogeneity, connectivity and cohesion.

This study advances innovation research by investigating the performance implications of certain aspects of joint R&D projects. First, by empirically revealing the implications of structural attributes in the kind of technological projects developed. Second, this study unveils the organizational network effect by demonstrating the attributes which have a great incidence in the achievement of project objectives. Third, it extends prior work on networks by highlighting alternative

variables in order to analyze the network structure. Finally, this study extends prior research that has focused on results of technological alliances or networks by analyzing the factors that explain the formation of networks or the benefits of partners.

To orient our work, we provide a brief summary on joint R&D projects as social and complex networks, reviewing the literature ad hoc and specifying central research questions. The third section describes our research methodology, including data collection and construct measurement. Our data analysis and results are provided in section four. Section five presents the discussion and managerial implications of the findings, and we conclude with limitations and suggestions for future research.

2 Theoretical Perspectives

2.1 Joint R&D Projects as Social and Complex Networks

The development of joint R&D projects implies the execution of activities that create interactions in the dynamic process for the accomplishment of objectives (Santiago and Bifano 2005), which supposes on the one hand the development of a technological process (R&D process) and on the other, the existence of an organizational structure (R&D network) to develop it (Tatikonda and Rosenthal 2000).

Rowley et al. (2000) suggest that R&D networks are social networks with a series of interrelated nodes (comprised of institutions and individuals) which permit networks to be defined in terms of structures of ties. These networks of contacts between partners can be an important source of information for participants, and therefore, the ties (or the relations between partners) and the information in the network acquire great importance in the definition of governance structures. The strength or weakness of ties is based on a combination of the duration of the tie itself, emotional intensity, intimacy or mutual confidence, and reciprocal services between the partners in the network (Ahuja 2000). Many authors have justified the ties between partners as a mechanism of governance structures since strong ties develop a shared understanding of the utility of certain behaviors as a result of discussing opinions in highly socialized relations, which in turn influence their actions (Ahuja 2000). Hagedoorn et al. (2000) point out efficiency and learning in networks as key questions and emphasize the degree of interaction and the connectivity of partners to achieve a common profit. The last argument leads to a definition of R&D networks as social structures of ties, embedded in the environment and looking for market information or technological knowledge.

Pek-Hooi and Roberts (2005) pointed out the complex nature of R&D networks where complexity arises from the number of densely connected parts and multiple levels of embeddedness that encompass the development of a collaborative project. Contractor and Monge (2003) assert that technological and social networks can be

considered complex by virtue of non-trivial structures. Such non-trivial structures include: heterogeneity of partners; multiplicity of interactions among partners; a hierarchical structure that is embodied in the centrality of the network and the heterogeneous distribution of connections within; and the affinity and privileged relations between some partners as a result of the different roles that they adopt. In contrast, simple networks have none of these features, and are typically represented by graphs such as a lattice or a random graph, which exhibit a high similarity no matter what part is examined. Joint R&D projects clearly fall into the first category. Therefore, using the framework of social network analysis we can approach the main attributes of these projects.

2.2 Structural Attributes of Social and Complex Networks

A network is a set of points, called nodes or vertices, with connections between them, called links, ties or edges. In the context of joint R&D projects, each partner is considered to be a node of the network – which has its own distinctive contribution to the whole network – and the interactions among partners are contemplated as the ties that link each other. Therefore, the main components of the network which develops the project are the node and the tie. The first characteristic of nodes and ties is their heterogeneity. From the node viewpoint, heterogeneity is the result of the variable and diverse number of partners with various objectives and preferences that form part of the project. From the tie viewpoint, heterogeneity is reflected by the multiplicity of interactions among partners which are the result of the exchange of resources (these may be technological, financial, informative, and so on) (Contractor and Monge 2003).

From a network viewpoint, we have pointed out that in a random network connections among partners are homogeneous, but in the case of social and complex networks these connections or ties are heterogeneous because of the varying predominance among nodes (Parkhe et al. 2006). There are many ways of characterizing the patterns of connections among partners in a network. Contractor et al. (2006) indicate that connectivity explains whether and how partners are connected to one another through the network. A first structural attribute related with connectivity is centrality which suggests that the network has a core configuration, that is, when a concentration of ties forms around a node or group of nodes. Centrality is a measure of the contribution of network position to the importance, influence, or prominence of a partner in a network. This measure has a twofold level: node and network. Node centrality measures how central a given node is with respect to the others. According to Contractor et al. (2006) central nodes must be the most active because they have the most ties to other nodes. Network centrality measures how centralized the network is with respect to a perfectly centralized network, that is, those based on the consensus and the participation in the decision process of all partners (Contractor and Monge 2003).

Another attribute related with connectivity is the cohesion of a network (Contractor and Monge 2003). Cohesion is the degree to which actors are connected directly to each other by cohesive bonds. This property shows the average value of ties among nodes. One way to start examining the extent of cohesion of the network is to measure the proportion of all possible links that are actually present in the network. This ratio is called network density (Contractor et al. 2006) and refers to the number of contacts or interrelations established among the partners in a network. Rowley et al. (2000) also define the "network intensity" as a cohesion measure. Network intensity refers to the frequency of interaction among partners and their level of resource commitment to the relationship.

2.3 Research Questions

As Contractor and Monge (2003) indicate, many aspects of the behavior of networks are thought to follow from their structure, or structural attributes. The ability to respond quickly to stimuli, the rate and completeness of diffusion, the ability to identify and construct novel solutions to new problems and the institutionalization of cooperation among partners are all affected by the pattern of connections among the partners. Contractor et al. (2006) affirm that the structure of a network tells us about the likely performance of the social structure that arises out of the physics of its connections; the actors embedded in the network, however, may be completely unaware of this structure. For example, networks in which most partners have connections at short distances to all others are likely to display a rapid diffusion. Such structures, as March (1991) points out, support a great spectrum of R&D projects, from those whose objectives are exploitation, that is, the refinement and extension of existing competencies, technologies and paradigms, to those whose objectives are exploration, that is, the experimentation with new uncertain alternatives. While exploitation involves using existing information to improve efficiency and returns from present strategies, competencies, and procedures, exploration entails searching and experimenting to find emerging innovations that will produce future profits. Dyer and Nobeoka (2000) showed two distinct types of networks depending on the objectives and the processing of technological knowledge inside: networks that explore technological information, with a great number of partners, low cohesion and weak ties, and highly cohesive networks with strong ties and a small number of partners whose objective is to exploit technological information in order to obtain, for example, an innovative product. In general, the literature on technological management has assumed that the less applicable or tangible a technology is, the larger the number of partners and their type. Normally the partners of these networks that develop exploration activities constitute sources of technological information (mainly universities and public or private research centres) whose objective is to spread technological information and research that, on occasion, may lead to patents. These networks have a low hierarchy level and little cohesion. On the contrary, in the networks whose objective is to exploit a

technology (for example, developing a product) the features change, as is pointed by Hoang and Rothaermel (2005) and Gupta et al. (2006). Theses authors note in exploitation networks the necessity of hierarchy, the creation of work teams, their small size regarding the number of partners and the participation of partners from different areas (firms, users, suppliers, clients, universities, research centres and so on). Since the two projects are quite different and require different resources and partners, structural attributes of networks may have an unequal impact on the formation and the performance of each network.

Therefore, considering the joint R&D project as a social and complex network, and taking the above attributes of complex and social networks (heterogeneity, connectivity and cohesion) as our departure point, we explore two research questions:

Research Question 1: Do the network properties or attributes vary with the type of joint R&D project developed?

Research Question 2: Do the network properties or attributes have an impact in achieving the objectives of the joint R&D projects?

3 Data and Methodology

To analyze the structural attributes of joint R&D projects and the incidence in success of project, a Delphi survey approach was adopted to identify the critical variables required by the project. The study was conducted within the framework of European R&DT Programmes designed to sponsor joint projects in this field. Joint R&D projects involve several European countries – to foment transnational collaboration, – several firms – to abide by competition laws – and, as far as possible, small and medium enterprises and universities to stimulate technology transfer. European cooperation is thus a sine qua non condition for obtaining financing from Framework Programmes. Projects submitted have to meet the following terms: each team must include centres and/or companies from at least two community countries; participants must include at least one industry and one university or research centre and, lastly working teams must be as interdisciplinary as possible. In short, the European Union's technology policy encourages transnational R&D projects.

Two main reasons justify the use of the Delphi method to reach the proposed objectives. This technique is a communication structure aimed at producing a detailed examination and discussion of issues, and is also an appropriate method for studies lacking in historical data and which require collecting experts' opinions (Landeta 2006). There are some clear advantages with the Delphi approach in our case: the pooling of expert talents; the anonymity of experts, thus avoiding domination of a group by individuals; and iterations, with structured feedback from group responses, to help the views of the experts coalesce, reaching a consensus. Some weaknesses of this method are that it can be time consuming due to the iterative nature of the approach which requires the experts to be surveyed

repeatedly and, as in many other survey techniques, the problems of ambiguity and uncertainty both in survey questions and responses (Landeta 2006). Because the survey respondents tended to be imprecise when transforming qualitative impressions into specific quantitative values, the Delphi method also allowed this problem to be overcome. This method consists in an aggregation and iterative filtration of opinions or recommendations from experts about a question, which reduces dispersion and, generally, unifies the tendency of opinions and recommendations (Gallego et al. 2008).

3.1 Experts Panel Selection

For this study the panel of experts was made up of qualified experts with in-depth knowledge of the European sponsored R&D projects. These experts were selected from the publicly available Community Research Development Information Service database (CORDIS) (CORDIS 2004). This database contains information on all funded projects (a total of 27,758 projects carried out over the period 1984–2004), project-coordinators, as well as a listing of all participating organizations. Landeta (2006) considers that the heterogeneous nature of a panel is always suitable as long as the experts have been chosen after verifying that they have the required knowledge. Taking this recommendation, we have chosen experts from the different organizations (universities, industries, consultants and research centres) which have had links with the European joint R&D projects for at least 10 years.

3.2 Panel of Experts Range

We conducted a pre-experimental two phase analysis. The first phase involved 250 experts who provided an initial departure point for the specific representativeness of the sample of experts. This initial questionnaire was based on the following items: years of experience and frequency with European projects; role most frequently carried out in the project (coordinator, partner); organization on which they depend; and project objectives in which they most frequently participate.

The results of this initial questionnaire allowed us to select the appropriate number of experts. Okoli and Pawlowski (2004) and Landeta (2006) establish that, for qualitative research in social studies, the usual range of experts has to be between 15 and 30. Considering this objective, 40 invitations were handed out to experts who fulfilled the following criteria:

- High level of experience (more than 10 years) in joint European projects (Mean $\approx$ 13 years)
- Inter-sectoral character (Mean $\approx$ 70%)
- Geographical representativeness (ten countries represented)

- Institutional representativeness (Universities, Industries, Research Centres and Consultants)
- Type of technological activity developed (Exploration/Exploitation)

Twenty-eight experts completed the first round, and 25 participated in the other two rounds initially proposed. This response rate is similar to that achieved by other studies which have applied the Delphi method in social sciences (Landeta 2006; Gallego et al. 2008).

3.3 Design and Validation of the Questionnaire

The second phase involved the suitable design of the questionnaire. Although a number of scales focusing on the technological objectives of projects and on the typology of partners have been used in previous studies, specific scales on structures are less established. Therefore, the scale used for measuring perceptions of utility was based on the variables of our specific model. Previously, a pre-test was carried out on five experts, each familiar with empirical research in R&D projects, which provided a sounding board for the specific wording of our items. Also, the structure and design of the questionnaire were validated by two experts in Delphi methodology. The feedback produced during this second phase was included in the final design of the first Delphi questionnaire.

3.4 Measures

The questionnaire was divided into two sections. The first section deals with the independent variables, and the second section deals with dependent variables. Both sections were measured on a scale of 0 – null value/importance/frequency – to 10 – maximum values – which admits flexibility of answers.

3.4.1 Measure of Independent Variables

For the input variables we have considered that network structure is formed by the partners taking part in it (typology) and their interrelation ties (type of resources exchanged).

The heterogeneity of partners, as we have shown, ranges among universities, research centres, industries and consultants. We measured both the typology and the dispersion of partners. Typology was measured by a flexible scale from 0 (null) to 10 (high), determining each partner typology by their frequency of participation in the network. The dispersion of partners was measured by the Gini coefficient which ranges between 0 (heterogeneity of partners) and 1 (homogeneity of partners).

The heterogeneity of resources was measured by the typology and the dispersion. Typology was measured by a flexible scale from 0 (null) to 10 (high), determining each resource by its frequency of exchange in the network. Dispersion in the type of resource was measured by the Gini coefficient which ranges from 0 (in the case of heterogeneity of resources contributed to the network) to 1 (in the case of homogeneity of resources contributed). For each kind of resource we determine the average intensity of the network using a flexible scale ranging from 0 to 10, thus we will consider resource *i* to be high-intensity if its value is near 10, and low-intensity if its value is near 0. Additionally, we measure the density of the network where 0 is the null density or sparse network and 10 the maximum density of ties.

For the cohesion of the network the attributes to be measured were density and intensity (Contractor and Monge 2003). Density was measured as the number of existing ties in the ego network (other than those involving the focal partner) divided by the total possible number of ties among its partners if each partner were tied to every other partner. This measure is based on findings by Hagedoorn et al. (2000), Rowley et al. (2000), Contractor and Monge (2003) and Parkhe et al. (2006). Thus, dense networks are those in which all or a great part of their nodes are interconnected and, sparse networks if they are not. The scale ranges from 0 (sparse network) to 10 (dense network).

A network's intensity refers to the frequency of interaction among partners and their level of resource commitment to the relationship. Measures of strength of ties are based on Hagedoorn et al. (2000), Rowley et al. (2000), Contractor and Monge (2003) and Parkhe et al. (2006). This variable was measured as the average value of connection between nodes. Thus, values near 10 correspond to a high intensity of connection, while the values near 0 mean a low or null intensity of connection between partners in the network.

In other respects, following Contractor and Monge (2003), we have considered the centrality as a structural attribute of connectivity in complex networks. We measured centrality with two attributes, the centrality of nodes and the centrality of the network.

Node centrality reflects how centralized a partner is. It is the extent to which a partner occupies a central position in the network in one of the following ways: having many ties to other partners (centrality degree), being able to reach many other partners (centrality closeness) (Contractor et al. 2006). Centrality degree is the count of the number of ties to other partners in the network, this yielding the measure ranging from 0 (minimum degree) to 10 (maximum degree).

Network centrality measures how centralized the network is with respect to a perfectly centralized network (Contractor et al. 2006). A centralized network will have many of its links dispersed around a few nodes, whereas a decentralized network is one in which there is little variation between the numbers of links each node possesses. This measure ranges from 0 (decentralized or least centralized) to 10 (centralized).

3.4.2 Measure of Dependent Variables

Traditionally, project success has been assessed using the triple measure set of cost, time and performance (Huchzermerer and Loch 2001). A project was considered successful if it was completed within its budget estimate, within its initial scheduled time frame, and performed as it was designed to. More recently other soft outcomes have been taken into account, such as the satisfaction of the client or intended user, and employee development and satisfaction. Acknowledging that project success is much broader than the triple measure set, our study has focused on the overall network success level because of the appropriateness of this criterion to the collaborative projects. With the aim of measuring the impact of structural attributes in the achievement of project objectives, the dependent variable is a binary one that takes a value of one when the expert perceived a positive likelihood of project success and zero otherwise.

3.4.3 Control Variables

We use three types of control variables: sectoral characteristics, size and type of project.

As for sectoral characteristics, dichotomic variables are included to indicate whether the sector to which the firm belongs is high-tech (HT), mid-high-tech (MHT), mid-low-tech (MLT) or low-tech (LT), using the OECD (1997) classification on technological intensity (ISIC revision 2), such that 0 = not-belong this sector and 1 = belong this sector (Hatzichronoglou 1997). Manufacturing industries are classified according their technological intensity (ISIC revision 2).

The size of the network assessed the number of partners to take part in the R&D project. Thus, the number of partners considers only those partners which have a contractual relation with the network (this is the usual procedure in sponsored European networks).

We measure the type of projects differentiating between exploration and exploitation projects (Lavie and Rosenkopf 2006). These variables are binary coded "1" when the network's objective is exploration or exploitation and "0" when not (see Table 1).

4 Analysis

Three Delphi rounds were carried out. With respect to the intrinsic quality and reliability of the Delphi results, various indicators allowed us to affirm that the results were good (Landeta 2006; Gallego et al. 2008). Firstly, the quality and stability of the panel of experts: the vast majority of the experts who were invited to participate did so. Secondly, the quality and intensity of the participation: each interview lasted an average of 1 h. In addition to the answers to the Likert-type

Table 1 Descriptive variables

	Variable	Parameter	Scale
Input	Heterogeneity of partners		
	Universities	Frequency of partners	0/10
	Research Centres	Frequency of partners	0/10
	Industries	Frequency of partners	0/10
	Consultants	Frequency of partners	0/10
	Partners dispersion degree	Gini Index	0/1
	Heterogeneity of resources		
	Information ties	Frequency of resources	0/10
	Scientific ties	Frequency of resources	0/10
	Financial ties	Frequency of resources	0/10
	Staff ties	Frequency of resources	0/10
	Ties dispersion degree	Gini Index	0/1
	Connectivity measures		
	Centrality Node	Importance value	0/10
	Centrality Node	Importance value	0/10
	Cohesion measures		
	Network Density	Importance value	0/10
	Network Intensity	Importance value	0/10
Output	Success of project	Probability of success	0, 1
Control	Type of project (exploration/exploitation)	Frequency of activities	0, 1
	Size of network	Number of partners	Natural
	Sectoral characteristics:	Technological level	0, 1
	High-tech (HT)		
	Mid-high-tech (MHT)		
	Mid-low-tech (MLT)		
	Low-tech (LT)		

question, each expert also made qualitative contributions per question. The feedback was structured by the coordinating group, which the experts received, and included, together with the questionnaires of the next two rounds, statistical data by item obtained from the distribution of the answers and additional information, qualitative or quantitative, coming originally from the experts themselves. Thirdly, the time between rounds was less than 2 months. Fourthly, the stability of the results between rounds, which is the principal criterion to finish the Delphi analysis. It implies non-significant variations in the opinion of respondents between rounds, independently of the degree of convergence achieved. Thus, the degree of group stability and individual stability (Landeta 2006) in the answers between rounds two and three was much higher than that between rounds one and two. In the case of group stability, in 75% of the answers in the last round, stability – measured through the variation in the relative interquartile range – was higher than that in the previous round. Individual stability was also higher in 87% of these answers in the last round, that is, a smaller proportion of experts modified their answer. Finally, consensus and convergence of opinion – measured by means of the relative interquartile range – was achieved in over 50% of the items, with a spread rate below 25%, and in 96% of the questions, the degree of consensus was higher than that shown in

Table 2 Correlation matrix between variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
Dispersion partners	1.000	0.021	0.099	0.048	0.012	0.034	0.047	0.050	0.048	0.071	0.015	0.032	0.028
Network intensity		1.000	0.033	0.052	0.088	0.067	0.087	0.058	0.044	0.085	0.092	0.051	0.024
Network density			1.000	0.010	0.072	0.067	0.006	0.026	0.024	0.076	0.011	0.065	0.030
Dispersion resources				1.000	0.059	0.025	0.051	0.017	0.032	0.052	0.032	0.009	0.076
Centrality node					1.000	0.063	0.039	0.081	0.093	0.090	0.049	0.088	0.063
Centrality network						1.000	0.084	0.035	0.050	0.084	0.052	0.039	0.041
Project success							1.000	0.007	0.029	0.057	0.059	0.080	0.074
Type of activity (exploration/exploitation)								1.000	0.046	0.015	0.031	0.002	0.051
Size									1.000	0.085	0.078	0.043	0.075
High-tech (HT)										1.000	0.067	0.022	0.087
Mid-high-tech (MHT)											1.000	0.020	0.089
Mid-low-tech (MLT)												1.000	0.053
Low-tech (LT)													1.000

the first round. Table 2 and Table 3 shows the descriptive statistics of all variables used.

5 Results

The objective of this study has been to characterize joint R&D projects by the attributes used in social network analysis. With this purpose, we have studied firstly the variability and significance of these measures in relation to the network's objective, which is to develop the two different type of projects considered (exploration and exploitation), and secondly, the impact of these measures on the success of the network. Table 4 shows the aggregate findings from attributes that characterize joint R&D projects.

Table 3 Descriptive values (results of Delphi analysis)

Variables	Exploration		Exploitation	
	Mean	S.D.	Mean	S.D.
• Dispersion partners	0.79	0.14	0.32	0.26
• Dispersion resources	0.82	0.05	0.21	0.13
• Density network	1.99	0.13	7.25	1.07
• Intensity network	2.63	0.99	6.71	1.32
• Node centrality	2.54	1.04	3.06	1.29
• Network centrality	1.08	0.37	7.95	0.67
• Size	8.9	3.1	4.8	1.4
• High-tech (HT)	6.04	1.90	3.95	0.58
• Mid-high-tech (MHT)	5.38	0.73	6.02	1.27
• Mid-low-tech (MLT)	5.09	1.01	5.67	1.38
• Low-tech (LT)	3.27	0.95	4.94	1.23

Table 4 Regression model

Variables	Exploration		Exploitation	
	β		β	
Dispersion partners	0.213**	(0.000)	0.430	(0.217)
Disper. resources	0.331	(0.702)	0.003	(0.197)
Density network	0.066	(0.125)	0.305**	(0.001)
Intensity network	0.138	(0.670)	0.011*	(0.017)
Node centrality	0.802	(0.145)	0.150**	(0.000)
Network centrality	0.239	(0.163)	0.485**	(0.001)
Size	0.870**	(0.005)	−0.463**	(0.000)
High Tech	0.205**	(0.009)	0.257	(0.778)
High-mid tech	0.003	(0.271)	0.014*	(0.017)
Mid-low tech	0.138	(0.845)	0.025*	(0.011)
Low tech	0.003	(0.076)	0.659	(0.172)
McFadden R^2 (%)	11.51	11.57	10.39	10.75
Log. likelihood	−38.07	−41.12	−33.43	−33.08
Probability (LR sat)	0.001	0.000	0.003	0.001

*$p < 0.05$, **$p < 0.01$

5.1 Research Question 1: Variability and Significance of Measures

The results showed in Table 3, in the first block of descriptive variables (size and Gini-partners), confirm previous results displayed in others works (O'Sullivan 2003; Johansen et al. 2005). In exploration projects we observe their larger size (average ≅9) versus the networks whose objective is the exploitation of a technology (average ≅5). These networks also show greater heterogeneity regarding the type of partners (Dispersion partners, Gini ≅0.32) compared to networks that develop exploration projects, which are more homogeneous with a Gini coefficient near 1 (0.79). The higher heterogeneity in the composition of exploitation projects is consistent with previous research that reflects the need to include technological sources such as universities, research centres and firms in this type of technology development project. In contrast, as stated by Lavie and Rosenkopf (2006), exploration projects that search to capture new knowledge and technological information are characterized by their low applicability and the homogeneity of the partners that take part.

Regarding homogeneity/heterogeneity of ties using the analysis of resources exchanged, the Gini coefficient shows the heterogeneity of resources in the case of product networks, where it is necessary to switch personnel, financial resources, information, and so on to accomplish innovations. In the case of patent networks this coefficient is lower because the main flow in the network is technological knowledge.

If we observe the attributes at the network level, the results are meaningful. The literature points out that the governance form of networks is based on consensus between partners taking decisions and on the role of the project manager (Oke et al. 2008). The analysis shows a high variability in the centrality of the network (1.08 in exploration to 7.95 in exploitation) in contrast with the low variability in the existence of a central node (2.54 exploration and 3.06 in the case of exploitation). These results confirm the low level of hierarchy in these projects (Oke et al. 2008) which are carried out by a coordinator who has a limited capacity in the decision taking but, in the case of sponsored projects, take on the role of linking the network with these institutions. Moreover, as structural characteristics of exploitation networks, we observe the existence of a central core of partners, and in terms of the number of partners, the small size (average five partners). These two characteristics combined with the high density (7.25) of the network and the intensity (6.71) in the connection make us consider that in this case the network is formed by a very cohesive group of partners, all of them involved in the decision-taking process. These results confirm previous empirical research (Dyer and Nobeoka 2000; Rowley et al. 2000) which pointed out that cohesion between partners and consensus in the decision process are the main features of exploitation networks. In contrast, in the case of exploration networks low density (1.99) and intensity (2.63) is observed, together with the low level of centrality. This corroborates previous research which pointed out as structural characteristics of these networks the low cohesion (sparse)

and high autonomy of partners (Rowley et al. 2000). The low value of the node centrality variable (2.54) shows the little hierarchy, a result well known in exploration networks. If we compare the results of node centrality and network centrality variables we see the greater influence of node centrality as governance form. As stated by Hoang and Rothaermel (2005), the presence of a coordinator with limited capacity in the decision taking is the main system of governance found in exploration networks.

Therefore, our results show that these structural attributes are significant in explaining the structure and organization of R&D networks in the case of joint exploration projects as well as in the case of joint exploitation projects.

5.2 *Research Question 2: Determinants of the Success of Projects*

The causal analysis of network structural measures reported in Table 4 presents the different impact of these measures in the achievement of project objectives. As shown, the significant variables in project's results are: type of partner, the node and network centrality, density and intensity of the network and size.

In the case of exploration networks the size of the network ($\beta = 0.870$, $p < 0.005$) and the dispersion of partners ($\beta = 0.213$, $p < 0.000$) are the variables with a positive and significant impact on the probability of fulfilling an exploration project. This positive effect suggests the importance of size and the participation of universities and research centres in the composition of exploration networks, especially in high technology sectors ($\beta = 0.205$, $p < 0.009$). As is pointed out by Pek-Hooi and Roberts (2005), each institution or node has a twofold function. It is a source to attract knowledge and a diffusion agent through the ties that link it to the other partners. Tatikonda and Rosenthal (2000) also approach these two functions, to capture information and knowledge and to spread it within the network. Therefore, the success of an exploration joint R&D project is sustained in the development of these functions, and the large size and the homogeneity among the partners are the attributes which lead to the achievement of their objectives.

While size has a positive impact on the case of exploration networks, this variable is negatively associated ($\beta = -0.463$, $p < 0.000$) with the achievement of objectives in exploitation projects. In this case the results indicate that in exploitation networks the relevant variables are the existence of a coordinator ($\beta = 0.150$, $p < 0.000$), and especially, the network centrality ($\beta = 0.485$, $p < 0.001$). Moreover, the cohesion degree is an important factor in order to achieve the objectives, showed by the results of density ($\beta = 0.305$; $p < 0.001$) and intensity ($\beta = 0.011$, $p < 0.017$) variables. These results confirm previous literature in which it is pointed out that size and cohesion are central variables for the governance of networks. Gulati (1998) confines the main tasks of governing the network to coordination, payoff and resolution of conflicts. Regarding size, its negative impact in the achievement of objectives in exploitation networks is explained by the need to coordinate complex tasks. It requires creating small working groups which are very cohesive and with high degrees of coordination. Johansen et al. (2005) point

out that the specificity of knowledge managed by partners normally makes their decision-taking one of consensus rather than hierarchy. Regarding size, Hagedoorn et al. (2000) indicate that in networks which develop projects with high applicability or immediacy in expected results, size is perceived by partners as a negative aspect in relation with the achievement of individual utilities. Cohesion is marked as a key factor in the transfer of knowledge. Thus, Granovetter (1985) points out those weak ties are usual when networks manage novel knowledge; in contrast, strong ties are usual in projects of tacit knowledge transmission. Equally, in the coordination of complex tasks dense networks are more desirable than sparse networks.

6 Conclusions

We have studied how attributes and properties of networks influence the attainment of R&D project objectives from the social network perspective. We focused on two broad categories of joint R&D projects, exploration and exploitation projects. We suggested that a greater cohesion and network centrality is observed in exploitation projects than in exploration projects. The contingent nature of the R&D network's attributes implies that in the development of each particular project the most suitable structural form must be determined. We also suggested that the different impact of structural attributes on network success varies with the type of R&D project. This leads to the determination of which attributes are more important in each case based on the objectives of the R&D network.

We must stress the exploratory nature of our research. We have combined qualitative and quantitative techniques to obtain the results which have allowed us to approach subjects of forecasting in areas of organization, which are too complex to collect by quantitative data exclusively. In this research, we find that significant heterogeneity exists in the attributes and properties of R&D networks, and there seems to be no reason to expect that this result would not hold for other exploration and exploitation joint R&D projects. We also find that the architecture of R&D networks strongly affects network success, a result that should encourage further research in the area.

Our paper has limitations that provide avenues for further research. First, our dependent variable does not distinguish between the different success measures. As not all the success variables (cost, time, performance, satisfaction) have the same importance, it would be interesting to distinguish the impact of structural attributes in the different success variables to increase our understanding of the issue. Second, this study was based on a sample of European joint R&D projects whose main singularity is that they are sponsored projects in the framework of the technological policy of the EU. It would be interesting to test the effects of structural attributes on project success across other collaborative R&D projects to understand whether these measures vary and to explain the possible differences.

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Strong Ties, Weak Ties and the Management of Innovation: The Case of Danish and German SMEs

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Abstract Dynamic changes in the structure of value-added chains lead to an enhancement of innovations of SMEs (small and medium sized enterprises) and therewith to an impact of the national economies. In the European context the support of the innovation process of SMEs is a goal of the economic policy. In this context private and public consultancies should provide advice for the innovation management of SMEs. This is to some extent politically introduced but the offer of advisory service is seldom used. The integration of consultancies leads to weak relations in the cooperating innovation network and so the risk of losing the competitive edge increases. Based on a Danish–German dataset, this contribution addresses the question of which conditions initiate and impede the utilization of the consulting system from a business point of view. We found that both Danish and German SMEs utilize far more strong than weak ties when it comes to choosing cooperation partners, but at the same time the Danish SMEs manage to exploit the range of services offered by consultancies better.

1 Introduction

Economic operations and thus innovations are embedded in social relations and structures (Granovetter 1985; Hagedoorn 2006). Therefore, the organizational units that create innovations are not individual businesses, but usually networks. From a resource-oriented point of view, networks hold a variety of advantages for their members, such as access to material and immaterial resources, information and knowledge. Powell et al. (1996), for example, conclude in their study on innovation behavior in pharmaceutical companies that companies that are not able to initiate networks or form a cooperation have strategic disadvantages on the market. In this

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context, especially small and medium-sized enterprises are considered to be dependent on the social capital of networks, because of the limited resources they have under direct control due to their size (Kaufmann and Tödtling 2003).

However innovation networks are not only relevant for participating SMEs, they also affect the economy in general (Laforet and Tann 2006). On the one hand, SMEs generate a large share of the economic output, as well as a large share of the innovations. On the other hand, globalised SMEs using innovation as competitive strategy ensure that new knowledge spreads and nourishes the innovative capacity of the overall economy. In order to keep up in the competition with well-resourced businesses, SMEs inevitably depend on cooperation. Information even has to be collected beyond the borders of the cooperation network. "Networks are vital providers of various kinds of knowledge not only from directly related relationships but also from indirect relationships (Tolstoy 2009, p 207)." At the same time, with the trends towards decentralization and outsourcing in the past two decades, SMEs have significantly gained in importance for innovative strength: as a result of the transformation of the value-added chain, innovations have frequently shifted from large companies to small and medium-sized businesses and thus to networks (Asheim 2004).

These are good reasons for policy makers to support the development and especially innovations of SMEs. For that purpose, business development services provide general information for SMEs. However they also try to specifically arrange access to material and immaterial resources, to connect with network partners and to directly or indirectly integrate consultancies. Some of these measures might however be counterproductive. From a strategic management's point of view – and on this all common approaches agree, from New Institutional Economics with the transaction cost approach through the market-oriented viewpoint of industrial economics to the resource-based view of the firm – it is essential to protect certain information and not feed it into the networks, through which it spreads uncontrollably. All these approaches agree on the fact that knowledge is a scarce resource in the field of innovation and that it has to be protected. They differ merely in how scarcity is defined and measured.

To express it in the terminology of social networks analysis, SMEs need *strong ties* in the process of innovation – i.e. a dense network of trustworthy relations – to keep the innovation process under control. However, strong ties imply the weakness that they are less suitable in opening up novel information (Granovetter 1973). This insight from network-analytical research holds a dilemma for the management of the innovation process: a balance of *strong* and *weak ties* needs to be created in the relation network of SMEs, without jeopardising the exclusiveness of the *strong ties* (Burt 2004; Fliaster and Spiess 2007; Stark and Vedres 2009; Uzzi 1997).

The resulting management problem of balancing different information sources in the innovation process has lately been a frequent object of innovation research from sociological, and business economics viewpoints. In the course of both perspectives, individual networks are discussed as well as strategic alliances and regional clusters. In contrast, the role of the public and private consulting system has attracted less attention (Tödtling and Kaufmann 2002; Cornett and Freytag

2006). This role is the focus in our comparative study on the utilization of the consulting system by SMEs in the innovation process. First evaluation studies on innovation policies in the European context suggest that the support provided by public institutions is used to varying degrees. In particular, a low degree of utilizing the public consulting system to promote innovation is reported for Germany, compared to the Scandinavian countries (Cornett 2007; Latniak and Rehfeld 1994; Sounder and Jenssen 1999). In the Danish–German comparison we will address the following question: Which conditions initiate and impede the utilization of the consulting system from a business point of view? Is there a country effect?

We will develop this business perspective in the next section, referring back to central statements of strategic management, the *resource dependence approach* (Pfeffer and Salancik 1978) and the *relational view of the firm* (Dyer and Singh 1998) in particular. Based on this theoretical frame of reference on the relevance of *strong* and *weak* ties in SME innovation management, hypotheses about the utilization of consulting systems in the innovation process will be derived. We will discuss also the commonalities and differences in Danish and German innovation management, which possibly influence the utilization of the consulting system. The empirical part describes first the underlying survey study on SMEs in western Denmark and northern Germany (Cornett and Sørensen 2005). Multivariate analyses of successful and unsuccessful innovation processes provide information about factors of the utilization of the consulting system in both countries. The article concludes with critical indications regarding the limits of the study and for further research on innovation management.

2 Innovation in SME Networks

2.1 Innovation, Knowledge and Networks

Knowledge is a central variable in the process of *creative destruction* and implementation of *new combinations* of production factors (Schumpeter 2006). Schumpeter's elements in the definition of the innovation process clearly show that knowledge can be perceived in different ways here. Business-related innovation research emphasizes in particular the aspect of creativity that is linked to human capital. Drucker (1999), for example, speaks of the *knowledge worker* in this context. However when the aspect of *new combinations* is accentuated, the perspective changes and the relational level of the entrepreneur – on the individual or the corporate level of the organization – becomes the centre of attention. In other words, from this point of view it is not only the human capital, but also the social capital of the organization that is of interest (Matiaske 2010).

This shift in problem is, on the one hand, the result of the theoretical and empirical development in sociologically characterized network research. With his prominent study on the relevance of the individual social capital in job search,

Granovetter (1973) pointed out that for the job seeker it is not only helpful to fall back on a dense network of relatives and friends for social support, but that it is especially distant acquaintances who give access to new information and job offers. The strength of weak ties in social networks is to grant access to new information pools. This insight can be used strategically. Burt (1992) in particular developed the position of brokers in his theory of *structural holes* in networks. There is an arbitrage opportunity for brokers to bridge several densely closed networks, whereby they create connections between them or communicate information. These developments in sociological network research have not only extended the term of social capital, which has so far been restricted to close and trustful relations (Coleman 1990), but has also created a link to business-related organization, and more specific innovation research (Burt 1999). On the other hand, the trends towards decentralization and outsourcing in the previous decades, which have for example been taken up in organization research under the heading of the hybrid organization or *relational contracting* (Williamson 1985), have contributed to a change in perspective in business research. At first, the network organization as a phenomenologically new type – e.g. as strategic alliance, associations or joint ventures – attracted empirical and theoretical attention (Duschek 2004). Recently, business research has also linked up with the methodology of social network analysis (e.g. Ebers 1997).

As in sociology, the question of knowledge generation in networks is gaining in importance in organization and innovation research (Perry-Smith and Shalley 2003). Unlike in the classical job search example, the reciprocity of information transmission in networks turns out to be problematic in the context of innovation research. While it is usually convenient for the job seeker when the signal of his or her concern starts to spread, this is not the case for innovating businesses. Instead, the chance of gaining new information via network connections creates the risk of losing knowledge (Fliaster and Spiess 2007, p 114f.). This risk exists, for example, for companies working together with partners who are interested in technological novelties. In the case of SMEs, due to their role as suppliers to large companies, there is also an unequal balance of power, which allows the stronger partner to absorb innovations easily (Katila et al. 2008). Another hazardous situation that Katila et al. (2008) point out is the cooperation with consultancies that also work in other companies at the same time.

In the process of innovation, private as well as state-owned consultancies play a vital role. Tödtling and Kaufmann (1998, p 10) report that private consultancies are, for example, involved as partners in 16% on the regional level, in 20% on the national level and in 10% on the European level. State-driven organizations are also of great importance on the regional and on the national, but not on the European level.

Consultants utilize the barriers between closed dense networks as brokers, the way Burt sees them, and diffuse information from one social circle to another. This might be useful for the macroeconomic development, but is certainly not in the interest of the *exploited* sub-networks or their member companies. In this context, though, Cohen and Levinthal (1990) point out that innovation knowledge is thus not

easily transferable. In order to be able to absorb innovation knowledge, the competitor would first need to have the compatible *absorptive capacities* (Cohen and Levinthal 1990). However the barrier of a company's different basic knowledge alone does not provide protection from the transfer of strategic know-how by brokers in the medium to long term.

Yet, also an isolation from central network partners, other businesses or organizations in general and from consultancies in particular carries risks (Fliaster and Spiess 2007; Li; Atuahene-Gima 2001; Xu 2008): Innovative solutions are found either too late or not at all and resources might be lacking to establish an innovative solution on the market. In summary, Katila et al. (2008, p 322) do not generally consider it appropriate to avoid risky relationships: "By examining multiple types of partners, we find that firms swim with sharks rather than safer partners when they need the unique resources that sharks possess and can protect themselves... Conversely, firms avoid relationships that offer too little resource benefit or entail too much risk".

The following argumentation runs along these lines. Certainly it needs to be considered whether specific combinations of strong and weak ties are appropriate for specific types of innovation processes or phases thereof. With this question we focus on which determinants prompt corporate actors, or SMEs to be precise, to seek or avoid specific partnerships in innovation processes. In the following sections the unit of analysis is not the network, but the decision of the individual company.

2.2 Strategic Partners in the Innovation Process

Strategic management refers to a number of central theoretical frames of reference. In this study the reference point is the *research dependence approach* (RDA) (Pfeffer and Salancik 1978), which seems to be particularly suitable for a number of reasons. Not only is the RDA considered theoretically well developed and empirically sound (Nienhüser 2008), but it is also specialized in the question of external relations of organizations. Following the criticism of the contingency approach, which has long dominated organizational theory (Aldrich and Pfeffer 1976); Pfeffer and Salancik (1978) fall back on a power-theoretic argument (Emerson 1962) in order to clarify which situational determinants govern the behavior of organizations. With this theoretical foundation they provide a meta-criterion that limits the arbitrariness of situational influencing factors and explains why the environment has an influence: the resource dependency of the organization is the basis of external exertion of influence. As opposed to other resource-oriented approaches, resources are here defined not only as input but also as output factors, i.e. the access to pre-product markets can be considered as a resource, just like the one to the final sales market.

External control can be exercised by those actors that control resources which are significant for the organization's effectiveness. The level of the organization's

demand determines how powerful the partner is: the greater the interest of the focal organization in resources that are under the control of an external actor, the greater the power and also the influence of just this external player on the focal organization. This argument entails, furthermore, that the better the external actor manages to monopolize the interesting resources, the more influence he can exert. Conversely: the more difficult it is for the focal organization to obtain the interesting resources outside the relation to the external actor, the greater his power in the focal organization. It is particularly useful for the influence on the organization if the external player controls resources that are vital for the focal organization. In this case, Pfeffer and Salancik (1978) talk about *critical resources*.

In that situation actors, i.e. organizations, act under uncertainty: the RDA transforms this proposition according to the action-theoretical concept of power with the assumption of an intended rational behavior or *bounded rationality* (Simon 1955). As a rule, the conception of the actor operates with the simplified assumption that the organization behaves like an individual actor.

These assumptions characterize the RDA as a strategic management approach. In practical application, the core idea of the approach is that organizations should avoid uncertainty and power dependencies in order to secure their effectiveness and long-term survival. In developing this argument, the RDA looks at different strategic options, such as avoidance or change of external dependencies through e.g. warehousing or diversification, the co-optation of partners or influencing the environment via marketing measures or lobbying (Gretzinger 2008). Beyond these strategic options for reducing uncertainty and power dependence, the RDA, however, avoids specifying the argumentation, in particular with respect to potentially critical resources. Pfeffer and Salancik (1978) do not want to repeat the mistake of the *old* contingency approach to list random influencing factors, but argue for a specification of the power-theoretic core argument according to the object of investigation or rather of the suspected interests of organizations in specific situations, as resources become critical resources because of the demand from an organization.

A suitable frame of reference for assessing the interests of businesses in an innovation process is in our context the *relational view of the firm* (RV) (Dyer and Singh 1998; Foss 1999). In extension of the better known *resource based view of the firm* (RBV) (Wernerfelt 1984), which focuses on individual businesses and their core competencies, the RV identifies the relevance of networks for the companies' resources and for generating a competitive advantage. Just like the RBV, the RV is so far predominantly phenomenologically or normatively oriented (Duschek 2004; Freiling 2008). However, the descriptive integration of business networks, competitive markets and core competencies of the individual businesses is here sufficient to derive specific constellations of interests. To explain these we refer back to the power-theoretic argumentation of the RDA.

The argumentation of the RV aims at expanding core competencies in networks which are, analogous to the request of Katila et al. (2008), supplied by complementary material and social resources of network partners. Dyer and Singh (1998) argue that it is the task of the network members, according to their interests and position

of power in the innovation network, to negotiate appropriate governance mechanisms that allow a market-oriented cooperation. This means that the internal cooperation of the network partners in the innovation process is directed at gaining competitive advantages externally, i.e. on the market. The ideal structure of an innovation network is, from this perspective inwardly-directed, described as a network of *strong* ties. Agreed and assertive norms, on the one hand, and trust on the other hand provide the innovation network with stability. When directed outwardly, the network correspondingly acts as a cooperation, which controls *weak* ties in view of enforcing innovation on the market (Fliaster and Spiess 2007).

Therefore, the paradox of the social structure is also clearly shown from the RV's point of view. The close and trustful cooperation structure in the network creates advantages which can, to quote Duschek (2004) and Kogut (2000), be called the Coleman rent, as Coleman's conception of social capital focuses on the close relations in networks. Accordingly, the arbitrage from utilizing weak ties to spread innovations is known as Burt rent. Possibly, the structural paradox can be solved by introducing time as additional variable. Dynamic analyses (Ahuja 2000; Stark and Vedres 2009) suggest that weak ties can lead to an expansion of networks: "A firm's linkages therefore provide it with access not just to the knowledge held by its partners but also to the knowledge held by its partners' partners" (Ahuja 2000, p 430). The utilization of indirect communication channels results in an intensified relation and weak ties turn into strong trust relations. In view of the comparative statistical analysis, which is our focus in this study, this argumentation cannot be pursued further.

From the RDA's perspective the restriction to strong ties in the innovation process can be explained as a result of the mechanism for avoiding dependence and uncertainty. Strong ties can also be better controlled through formal mechanisms and contracts than informal norms and trust (Matiaske 1999). It should be noted that trust in the understanding of the power-theoretic argumentation is with Coleman (1990) considered a risk assessment of making profits or avoiding losses in a relation. There are good reasons to do without the affective component of trust, which the authors of the RV emphasize. Even if there are no human actors free of affects in business networks, they do act in the role of members of a purposeful organization (Kieser 1997).

2.3 Avoidance of Uncertainty and Dependence

Following these considerations, some hypotheses can be derived regarding the utilization of public, as well as private consultancy services in the innovation process. The term 'innovation', as we use it in this study, emphasizes the aspect of re-combining production factors. In anticipation of the operationalization, we generally assume that SMEs tend to resort to their customers' knowledge, on the one hand, and to that of suppliers or network partners on the other, to detect problems or generate solutions, rather than drawing on the knowledge provided

via the weak ties of the consulting system. Possibly, customer needs will rather be picked up in the context of product innovations, while supplier know-how is in demand when it comes to process innovations. Still, SMEs will not reject the services of the consulting system in principle. If they revert to public or private consultancies, then most likely if the company can easily control the uncertainties and potential power dependencies. This is easier for businesses that are strong in resources and therefore generally larger than for businesses that are weaker in resources. The situation whether a company is well-equipped or not is operationalized by its size, measured by the number of employees. The first hypothesis is stated as follows:

Hypothesis 1: *The better a business is equipped with resources, the more likely it is that consulting services are used in the innovation process.*

However, different reasons can lead to the utilization of *weak* ties, in this case the consulting system. If critical resources have a high level of monopolization, the focal company needs – from the RDA's point of view – to tap alternative resource repositories outside these power relations. Therefore, the consulting system can be useful in this situation. Because of the number of external contacts that varies with the size of a business, smaller companies will probably have more difficulties in getting access to alternative resource repositories. The reasons leading to the utilization or neglect of *strong* or *weak* ties cannot be empirically determined here. Following the argument of size, the reason for having to open up new resource repositories via weak ties should rather be valid for small businesses, though. The interrelation stated in Hypothesis 1 does, therefore, not have to be tested for non-linearity, as smaller businesses are possibly using the consulting system to avoid a monopolizing dependency.

It can, in contrast, be generally assumed that the use of formal and informal control mechanisms lowers the risk of the outward flow of information through consulting in the innovation process. Particularly contracts with the implication of binding legal norms rank among the formal control mechanisms. However, legal norms and contracts also depend on trust due to their incompleteness. Trust in this context implies that, according to the assessment of a risky decision for or against a cooperation partner, a gain can more likely be expected than a loss. Following Coleman (1990), this expectation depends on experience from another specific or generalized relation, i.e. previous profitable transactions facilitate trust in specific transaction partners or in an anonymous system, respectively. These thoughts support our general assumption that businesses in an innovation process will rather cooperate with customers and suppliers or network partners than with the consulting system, as with the first two groups there is generally far more opportunity to develop a relation that is *resistant to disappointment* (Luhmann 1973) than with the consulting system. This does not mean that innovating enterprises avoid involving consultancies. It means that it is unlikely that a consultancy is involved when the network is not strengthened by strong ties. Pfeffer and Salancik (1978) state that both the importance and the concentration of resources within the network are of great significance for managing scarcity. Concentration can be created in different

ways. An organization can have a legally protected or legally established monopoly position, or a group of firms can act together as one (Pfeffer and Salancik 1978, p 50). Contracts and trust are classical initiatives to stabilize innovation networks. The poorer a company is equipped with resources (see Hypothesis 1), the greater the importance of having an impact on the concentration within the network. Regarding the utilization of the consulting system in the innovation process this leads to two hypotheses that complement each other:

Hypothesis 2: *The better the contractual agreement of the consulting service, the more likely it is that consulting will be utilized in the innovation process.*

The contractual agreement was measured by the question if there was a binding contract and if the partner was tested beforehand and afterwards.

Hypothesis 3: *The stronger the trust in the consulting system, the more likely it is that consulting will be utilized in the innovation process.*

In the questionnaire the respondents were asked to indicate whether they trusted their cooperation partners and, vice versa, whether their partners had trust in them.

The RDA as well as the RV indicate with the terms *critical resources* and *core competencies* that not all resources or relations are equally important for organizations. Referring to the innovation process, it therefore needs to be differentiated to which extent the innovations are of main, strategic or just of minor importance. Strategically important innovations must rather be protected against information outflow than innovations of minor importance. The greater the expectation of the innovating company that the innovation induces high returns, the more likely it is that the higher costs of in-house production are accepted. Less strong partners are accepted to share knowledge and to participate in the earnings. In this situation trust is very important. These thoughts motivate the following hypothesis:

Hypothesis 4: *The more important the innovations for the business, the less likely it is that consulting will be utilized in the innovation process.*

To measure the novelty of the innovation we referred to the Hauschildt–Schlaak index. The items include the applied technology, channels of distribution, suppliers and production, the culture and structure of the organization and marketing costs (Hauschildt and Schlaak 2001).

2.4 Innovation Management in Denmark and Germany

Just like for the European Union as a whole (Borrás 2003) it is also true for Denmark and Germany that the public authorities have intensified innovation policy as a means of promoting the national economy. With new consulting and organization concepts it is not only the innovation process, but also small and medium-sized businesses as the bearer of innovations that are to be supported.

SMEs are of central significance for both the Danish and the Germany economy.[1] This is even more valid as SMEs increasingly become the initiator for innovations in large businesses, (Cooke and Wills 1999; Cornett 2007; Keeble and Wilkonson 1999; Nauwelaers and Wintjes 2003). Innovation policy was adapted as an integral part of business development policy (Cornett 2007, p 231). Public consulting and funding institutions, research parks and *innovation clusters* that have recently been initiated in Denmark give evidence. However, referring to Germany, Reinhard (2001), for example, draws a critical conclusion. Although new structures to support knowledge and technology transfer were also created in Germany, their success fell short of expectations. Reinhard states that in order to overcome existing deficits a change in behavior needs to be initiated among businesses, and for this purpose, he demands more transparency of information in the technology transfer system, e.g. by setting up contact platforms or initiating networks.[2] Latniak and Rehfeld (1994) substantiate in a somewhat older study the information deficit that is criticized, based on a representative survey among SMEs in North Rhine-Westphalia. According to that, only 0.4% of the interviewed SMEs made use of public technology transfer institutions. Other public consulting centers were used just as little with 1.3% as private consultancies with 0.8%. According to this survey, SMEs will rather make use of direct informal (31.8%) or formal contacts (19.4%) to other businesses as a source of information when it comes to innovations.

While the significance of supporting innovations has been recognized in Denmark as well as in Germany and new institutions have been established to provide this support, there are differences in kind and scope. Based on the data on the German–Danish comparison, which will be introduced in more detail

[1]With regard to the comparative analysis of innovation management in Danish and German SMEs it is significant that both countries are characterised by small and medium-sized companies: 99.7% of the Danish and 99.5% of the German companies in the non-financial sector of the industrial economy (NACE sections C to I and K) are SMEs with less than 250 employees in 2008 (Schiemann 2008, p 3). These companies provide work for 58% of all employees in Denmark and 63% of the German employees. They generate 64.8% of value added in the industrial sector in Denmark and 53.2% of the Germany value added (OECD STI 2008). The figures show that Danish SMEs are more productive than German businesses with less than 250 employees. For 2005 Eurostat found that 100 employees in Danish SMEs generate a value added of € 59 million, while only € 45 million are generated by 100 employees in German SMEs (Schiemann 2008). Regarding strategic investments in innovations we can see that in Denmark SMEs invest 9% of the "Industry Added Value" in research and development, while German SMEs invest only an average of 3% in this field. Comparing the output of "New-to-market product innovations" Danish businesses do better with 22% successfully innovating SMEs than the German SMEs with only 8% (OECD STI 2008).

[2]The demand regarding the initiation of networks and more transparency in the communication process ignores the dialectics of "strong" and "weak" ties: Burt rents can only be generated if information does not diffuse randomly. Therefore, brokers and mediators are highly interested in keeping up the information gradient (Gretzinger and Matiaske 2000).

later, initial descriptive analyses show distinctive differences: Danish SMEs use opportunities for consulting significantly more often, in particular the offers of private consultants. While roughly 16% of the SMEs call in private consultancies when it comes to innovations, this is only true for 7.5% of the German SMEs that were interviewed.

The question of why Danish/Scandinavian companies in the innovation process are more open towards consulting was investigated by Poulfelt and Payne (1994) They suspect cultural reasons or rather reasons in the difference in organization culture between Danish/Scandinavian and other European businesses. Ultimately, they ascribed the differences in communication behavior to cultural differences. According to that, employees in Scandinavian companies work more independently and more self-organized than those in other European or US-American businesses (Sounder and Jenssen 1999; Brodbeck, et al. 2000). Moreover, the innovation process in Scandinavia is run in a less authoritarian manner. This allows employees of Scandinavian businesses a more spontaneous communication behavior and to make new contacts autonomously, if it is appropriate (Brodbeck, et al. 2000).

Culture is certainly a significant influencing factor on the socialized behavior of individuals. Therefore, there is always the risk in cross-cultural comparative analyses that the analysis of economic, social and legal marginal conditions is terminated too early with reference to different mentalities. From an organization theory perspective, these references to cultural differences are in any case an unsatisfactory reasoning, as they allow little room for opportunities. It should be noted that so far there is hardly any indication for an explanation of the different usage patterns when it comes to opportunities for cooperation in the innovation process of Danish and German businesses. However, if Danish SMEs are more successful in dealing with the dilemma of *strong* and *weak* ties, this would be a good reason to take a closer look at the behavior of these organizations. It might moreover be useful to cast a glance at Denmark in order to improve the efficiency of the consulting system elsewhere as well. Business opportunities for increasing efficiency depend, however, on the set-up of organizational structures and behavior, and not in changing national cultures. In the empirical analysis we therefore want to examine potential differences in the cooperation behavior of Danish and German SMEs without deriving a hypothesis, for lack of a logical connection.

As mentioned before, it is often stated that the organizational structure in Denmark supports the process of keeping in contact much better. The power distance seems to be greater in Germany than in Denmark, and therefore one could expect that the process of developing networks and exploiting weak ties is better in Denmark. However until now there is no real evidence for the hypotheses that Danish SMEs are better integrated than German SMEs. So we decided not to state a strong and direct hypothesis. With regard to the country effect, our research is explorative. We expect a difference and we want to find out more about the theoretical background.

3 Empirical Study

3.1 Data Bases and Operationalization

The data-set of this study is based on postal (Denmark) and telephone (Germany) surveys on the innovation behavior of SMEs and on the utilization of the consulting system in both countries. In both countries two surveys were conducted: One in businesses, the other in public and private organizations offering innovation consulting services. According to the focus of this study only the business data are used here.[3]

The population of SMEs was limited by the target criteria location, size and industry. On the Danish side, businesses from Jutland and Funen were included, while it was SMEs from the federal states of Mecklenburg-Western Pomerania, Hamburg and Schleswig-Holstein in northern Germany. Businesses from the population do not employ less than 5 and not more than 500 members of staff and are from the goods-producing industry.[4] Both partial surveys were carried out based on random samples. The return rate of the postal survey in western Denmark was roughly 12%. In Germany, approximately 31% of the interviews with businesses from northern Germany could be used. Only members of executive management were interviewed.

Table 1 provides information about the distribution according to size and innovation behavior. Usable information is available for 759 SMEs in total, half of which are based in Denmark and Germany, respectively. The distribution between

Table 1 Size categories and innovation behaviour

Number of employees	Country				Innovation available		Total	
	DK		D					
5–9	165	43.5%	42	11.1%	101	20.5%	207	27.3%
10–49	121	31.9%	196	51.6%	202	41.1%	317	41.8%
50–99	40	10.6%	53	13.9%	67	13.6%	93	12.3%
100–199	29	7.7%	45	11.8%	61	12.4%	74	9.7%
200–499	15	4.0%	37	9.7%	46	9.3%	52	6.9%
≥500	9	2.4%	7	1.8%	15	3.0%	16	2.1%
Total	379	100.0%	380	100.0%	492	100.0%	759	100.0%

[3]The surveys were carried out within the scope of the Danish–German research project "Innovation behaviour of SMEs" of the University of Southern Denmark and the University of Flensburg, which was funded by the EU (duration 10/2002 – 03/2006). Field phases were in 2003. Surveys on the Danish side were carried out by the University, on the German side TNS Emnid was instructed to do the telephone survey (cf. in detail Dannenberg and Thaysen 2005).

[4]The industry classification is defined by the NACE-code numbers 15–41.003, excluding publishing 22.1–22.15.0. This corresponds mainly to the sectors of food, beverages and tobacco, textiles, wood and furniture, rubber and plastic, iron and metal, electronics, as well as means of transport.

size categories shows a significantly higher share of very small businesses with 43.5% of all Danish SMEs, compared to the German partial sample, where 11.1% of the businesses employ between five and nine persons. The few businesses with 500 and more employees are those that had slightly exceeded the limit at the time of the survey, deviating from the directories of the population. Micro-enterprises with less than five members of staff, which were registered in the directories with a larger number of employees, were left unconsidered in the evaluation and the telephone survey. According to their own information, approximately two-thirds of the businesses that were interviewed could record at least one innovation in the past 3 years. These 492 businesses are the data base for further analyses.

Table 2 lists the operationalizations of the variables that were used in the hypotheses (see appendix 1). In the survey we asked in detail about cooperation in the innovation process. One series of questions dealt in general with the cooperation, the last innovation process in the past 3 years being the anchor point. Two other series asked in more detail about the last successful resp. unsuccessful innovation in the time period. *Strong* ties with cooperation partners in the innovation process are operationalized into relations to customers and suppliers. The tie-groups are usually mentioned jointly in the underlying multiple answer ($r = 0.40$). In total 52.8% of the businesses cooperated solely with customers and suppliers in the innovation process. Accordingly, cooperation with public or private consultants are subsumed as *weak* ties. Apart from a few exceptions, these businesses have both *strong* and *weak* ties. The two consulting categories correlate with $r = 0.31$. In total 34.3% of the enterprises did not enter any partnership in the last innovation process. With 14.7% Danish SMEs utilized weak ties slightly more often in the innovation process than the German SMEs, where public or private consultancies were used in only 11.3% of the cases.

The variables regarding the contractual agreement and trust in the partner in the innovation process are obtained through questions which describe the relation with the cooperation partner in more detail. We surveyed whether the partner was checked by the SME *ex ante* or *ex post* with specific criteria and whether there was an explicit contractual relationship with the partner in the innovation process.

Table 2 Operationalizations

Name of variable	Operationalisation
"Strong tie"	Cooperation with customers and suppliers in the innovation process
"Weak tie"	Cooperation with public or private consultants in the innovation process
Size	Number of employees
Contract	1. Was the partner subjected to specific test criteria before entering the cooperation? (yes/no) 2. Was a contractually binding agreement entered with the partner? (yes/no) 3. Was the partner subjected to specific test criteria after the completion of the cooperation? (yes/no)
Trust	1. Does your partner trust you? (4 fully, 1 not at all) 2. Do you trust your partner? (4 fully, 1 not at all)
Hauschildt–Schlaak index	Novelty of the innovation (Likert scale, 7 items, Cronbach's $\alpha = 91/0.95$)

Furthermore, the trust relationship was reciprocally surveyed in self-assessment and the expected third-party assessment. This item set was subjected to a principal component analysis and was rotated orthogonally. As a result we receive two independent components, one of which depicts predominantly the contractual agreement, the other the trust relationship with the partner.

Another item set, which is known as the Hauschildt–Schlaak index, measures the degree of novelty of the innovation for the company. The items refer to the applied technology, channels of distribution, suppliers and production, the culture and structure of the organization and marketing costs (Hauschildt and Schlaak 2001). To determine an anchor point for this scale, the interviewees were first asked to describe in an open answer both the most successful and the least successful product innovation of the past 3 years. For each of these innovations, if available, we obtained the Hauschildt–Schlaak index. The reliability of the scale is remarkably high, with $\alpha = 0.91$ for successful innovations and $\alpha = 0.95$ for the unsuccessful innovations.

3.2 Findings

To test the hypotheses we exclude those datasets of businesses which *only* report weak cooperation ties. This way we lose six cases. This means that all remaining SMEs, which enter weak ties to consultancies in the innovation process, have *strong* cooperation relations at the same time. Technically speaking, these different cooperation forms are a perfect Guttman scale.[5]

For those cases that cannot be classified we can, based on the RDA, assume that they counteract a monopolized power relation by establishing alternative sources of supply. However, the dataset does not include the information to support this assumption sufficiently. With regard to Hypotheses 2 and 3, the remaining dataset corresponds exactly to the argumentation that was developed here. Only SMEs that have close relations to their partners in the cooperation process will also enter the risk of additional weak relations. Therefore, the available data can already be assessed as an indication for the conclusiveness of the presented arguments regarding the utilization of weak ties.

Binary logit estimations are applied for the modeling. Target variable in all models is the utilization of weak ties in dummy coding. Corresponding to the hypotheses we developed, the models successively take on the variables for business size as proxy for resource equipment, the indices for contractual agreements and trust between the cooperation partners as well as the country in dummy coding ($0 = \text{DK}$, $1 = \text{D}$). Extended models with additional control variables will not be

[5]Cooperation partners could be organised according to a Guttman scale or Mokken scale and correspondingly one could choose a regression model for ordinal target variables for the analysis.

Table 3 Probability of utilization of "strong" vs. "weak" ties (all enterprises)

Predictors	(1) Basic model	(2) + Contract	(3) + Trust	(4) + Country	(5) + Public consult	(6) + Private consult
Size	0.0467***	0.0487***	0.0489***	0.0511***	0.0255***	0.0380***
	(0.0010)	(0.0012)	(0.0012)	(0.0006)	(0.0020)	(0.0029)
Contract	–	−0.0262	−0.0263	−0.0361	−0.0144	−0.0148
		(0.2500)	(0.2480)	(0.1170)	(0.3010)	(0.4630)
Trust	–	–	0.0086	0.0127	−0.0031	−0.0002
			(0.7080)	(0.5760)	(0.8170)	(0.9910)
Country	–	–	–	−0.1020**	−0.0109	−0.1140***
				(0.0273)	(0.7000)	(0.0036)
Constant	−0.3990***	0.4050***	−0.4060***	−0.3540***	−0.2490***	−0.2910***
	(0.0000)	(0.00000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
n	323	288	288	288	288	288
LL	−154.24	−135.75	−135.75	−133.29	−72.61	−113.71
p	0.0010	0.0015	0.0044	0.0013	0.0151	0.0021
R^2	0.0323	0.0432	0.0437	0.0605	0.0657	0.0633

Logit: Marginal effects for all SMEs with at least one innovation and cooperation partners. Probability p in brackets

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

reported here, as the variables of organization demography, which have so far been considered, do not lead to findings that are fundamentally different.

Table 3 reports the findings for the last innovation process in the past 3 years.[6] The table shows the marginal effects, as those allow a direct interpretation of the direction and impact of effect. The signs of the marginal effects show the predictor's direction of effect, i.e. a positive sign indicates that the risk of the SME entering weak relations in the innovation process rises with a marginal increase of the independent variable. Along these lines it applies to the country dummy that the direction of effect needs to be interpreted with regard to the reference value – here Denmark. Therefore a negative sign implies that Danish SMEs will rather build up ties with consultancies than German businesses.

The results show that the model estimates are altogether significant throughout the analysis, but that explanatory contributions for the SMEs' decision behavior are, however, low. Pseudo R^2 values are between 3% and just above 6%. The variance explanation can hereby almost solely be referred back to the variables size and country. Compliant with the hypotheses, a better resource equipment of the business, represented here by business size, is accompanied by a greater usage of the consulting system. The variables of contractual agreement and trust in strong cooperation relations to customers and suppliers, which are significant from a theory perspective, do not influence the utilization of consulting in the innovation process according to these analyses. This holds also true if the consulting system is

[6]In the estimations we use multiple imputations (ICE Royston 2004; Van Buuren et al. 2006) to handle missing values. The results do not differ substantially, so we present the standard models.

not analyzed as a single unit with regard to the target variable, but separately for public and private consultancies. In contrast, the differentiated analysis shows clearly that the significantly higher utilization of the consulting system in Denmark can be referred back to the more frequent involvement of private consultancies in the innovation process. In this respect, German SMEs are comparatively reserved, as already mentioned in the description of the data.

Similar results can be recorded for the analyses of the most and least successful innovation of the past 3 years, which is compiled in Tables 4 and 5. First of all, it should be noted that nearly all SMEs that generally reported an innovation in the relevant time period also had a successful innovation. In contrast, a less successful innovation can only be found in roughly half of the SMEs with innovations.

As before, we successively extend our base model by the variables size, contract, trust and the dummy for the differentiation of the countries. Contrary to Hypothesis 4, the relevance of the innovation process, measured with the Hauschildt–Schlaak index, does not change the usage pattern of the consulting system by SMEs. Only in a differentiated analysis we do find a significantly higher utilization of public consulting institutions in the case of less successful innovations. Spontaneously, this effect could be interpreted in such a way that in innovation processes which are important but where success is jeopardized, public consultancies are called in as *friends in need*. However, this single finding should not be overrated. For the country dummy, on the other hand, we find a familiar pattern. In contrast to German businesses, Danish SMEs utilize the consulting systems significantly more often.

Table 4 Probability of utilization of "strong" vs. "weak" ties (enterprises with successful innovation)

Predictors	(1) Basic model	(2) + Contract	(3) + Trust	(4) + Country	(5) + Public consult	(6) + Private consult
Size	0.0445***	0.0422***	0.0421***	0.0446***	0.0257***	0.0325***
	(0.0043)	(0.0090)	(0.0093)	(0.0052)	(0.0021)	(0.0161)
Hauschildt–Schlaak	0.0012	−0.0044	−0.0046	−0.0028	−0.0056	0.0013
	(0.8760)	(0.5820)	(0.5640)	(0.7220)	(0.2400)	(0.8500)
Contract	–	−0.0322	−0.0322	−0.0426*	−0.0201	−0.0154
		(0.2070)	(0.2060)	(0.0951)	(0.1630)	(0.4860)
Trust	–	–	−0.0057	0.0003	−0.0077	−0.0089
			(0.8180)	(0.9910)	(0.5800)	(0.6700)
Country	–	–	–	−0.121***	−0.0136	−0.136***
				(0.0137)	(0.6310)	(0.0011)
Constant	−0.402***	−0.332***	−0.329***	−0.290***	−0.181**	−0.277***
	(0.0000)	(0.0026)	(0.0031)	(0.0082)	(0.0104)	(0.0038)
n	284	257	257	257	257	257
LL	−139.86	−123.58	−123.56	−120.59	−64.32	−101.79
p	0.0165	0.0252	0.0520	0.0084	0.0145	0.0051
R^2	0.0271	0.0348	0.0350	0.0582	0.0846	0.0696

Logit: Marginal effects for all SMEs with a successful innovation and cooperation partners. Probability p in brackets

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 5 Probability of utilization of "strong" vs. "weak" ties (enterprises with less successful innovation)

Predictors	(1) Basic model	(2) + Contract	(3) + Trust	(4) + Country	(5) + Public consult	(6) + Private consult
Size	0.0671***	0.0616***	0.0610***	0.0608***	0.0297***	0.0410***
	(0.0007)	(0.0022)	(0.0026)	(0.0025)	(0.0163)	(0.0088)
Hauschildt–Schlaak	0.0062	0.0071	0.0069	0.0079	0.0096*	0.0030
	(0.4750)	(0.4280)	(0.4400)	(0.3790)	(0.0774)	(0.6810)
Contract	–	−0.0174	−0.0175	−0.0330	−0.0023	−0.0147
		(0.5880)	(0.5840)	(0.3260)	(0.9190)	(0.5860)
Trust	–	–	0.0080	−0.0030	0.0214	−0.0343
			(0.8030)	(0.9250)	(0.3140)	(0.1710)
Country	–	–	–	−0.0928	−0.0104	−0.1160**
				(0.1720)	(0.8130)	(0.0357)
Constant	−0.541***	−0.534***	−0.530***	−0.498***	−0.392***	−0.345***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0007)
Observations	174	161	161	161	161	161
LL	−85.43	−77.54	−77.51	−76.58	−47.70	−60.47
P	0.0023	0.0104	0.0235	0.0236	0.0752	0.0085
R^2	0.0645	0.0657	0.0660	0.0773	0.0846	0.1081

Logit: Marginal effects for all SMEs with less successful innovation and cooperation partners. Probability *p* in brackets

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

In the case of less successful innovations this only holds true for private consultancies, though, and not anymore for the consulting system in general.

4 Discussion

The importance of innovations in SMEs for an economy that is characterized by small and medium-sized businesses like in Denmark and Germany motivates a policy promoting innovations. However, SMEs in an innovation process use much more the *strong* ties to customers and suppliers to initiate and enforce innovations than the *weak* ties to the consulting system. From the perspective of resource-oriented strategic management this cooperation behavior in the innovation process is coherent, as knowledge of potential or concrete innovations might diffuse via the *weak* ties and possibly drift to competitors. The study we present here also shows this decision behavior empirically: both Danish and German SMEs utilize the *strong ties* much more than the *weak* ties when choosing the cooperation partners in the innovation process.

In order to improve the utilization of the consulting system, a deeper understanding of the SMEs' cooperation behavior is essential. Here we argue with reference to the RDA that organizations will generally try to strengthen their external relations to other actors to avoid power dependencies and the influence associated with that. As a result, SMEs will only use the *weak* ties of the consulting system if they can control them or if they see a chance of evading power dependencies by using the

consulting system. Based on the data that were used, it is almost exclusively the first case that can be observed empirically: generally SMEs will only build relations to the consulting system if they have strong cooperation relations at the same time. In contrast, it is only in exceptional cases that relations to the consulting system are recorded if there are no strong cooperation relations at the same time.

Based on the RDA a number of arguments were developed to provide a better explanation of the cooperation behavior of SMEs. The first assumption is that the supervision of external relations depends on the resource equipment of the organization, i.e. larger organizations should rather see themselves as being able to enter weak relations than comparatively smaller businesses. While this hypothesis is well confirmed, the more specific hypotheses are not confirmed in the same way. The argumentation that those SMEs that cannot secure their *strong* cooperation relations with formal (test criteria or contracts) or informal (mutual trust) control mechanisms will rather enter *weak* ties is not supported by the data analyses presented here. It is rather the mere presence of *strong* cooperation relations that will suffice to enter also weak relations. Neither is our further argumentation that the novelty and the uncertainty of the innovation process that is linked to it influence the cooperation behavior confirmed by the multivariate analysis. Comparing Denmark and Germany, however, the results of the multivariate analysis show that Danish SMEs utilize the consulting system, especially private consultancies, comparatively more often than German SMEs.

Practically these findings imply that the consulting system has difficulties in reaching smaller SMEs. This means that a considerable effort is required from public consultancies in particular to support innovations in SMEs. Based on this study it could not be clarified to which extent the decision behavior of SMEs indicates how the consulting system might be improved in other ways. This implies a need for research, as the conditions under which SMEs would wish for and would utilize consulting need to be clarified. To answer these questions a more differentiated argumentation might be necessary which also deals directly with the relations between SMEs and consultancies, not only indirectly with the cooperation relations with other partners. This argumentation was tailored to the research strategy of secondary analysis that was pursued here and which also accounts for part of the limits of this study. Certainly, the response to more profound questions requires another, extended database which provides more information about the behavior of SMEs in the innovation process and the utilization of the consulting system.

Appendix

Questionnaire

1. With whom does your firm cooperate in the process of product development? (Strong Ties/weak Ties)
   (Multiple answers permitted)

(a) Customers
(b) Suppliers
(c) Private Consultancies
(d) Public Consultancies
(e) External Investors
(f) Competitors
(e) Other

2. How many employees does your company have? (Size)
   (a) Less than 5
   (b) 5–9 employees
   (c) 10–49 employees
   (d) 50–99 employees
   (e) 100–199 employees
   (f) 200–500 employees
   (g) More than 500 employees
3. Was your future partner subjected to specific test criteria before entering the cooperation? (Contract)
   (a) Yes
   (b) No
4. Was your cooperation partner subjected to specific test criteria during/after the process of cooperation? (Contract)
   (a) Yes
   (b) No
5. Is there a relationship of mutual trust? Does your partner trust you? (Trust)
   (a) Fully
   (b) Satisfactorily
   (c) Limitedly
   (d) No trust
6. Do you trust your partner? (Trust)
   (a) Fully
   (b) Satisfactorily
   (c) Limitedly
   (d) No trust

Novelty of innovation (Hauschild/Schlaak Index)

7. Regarding the least successful innovation of your company, please indicate whether each of the statements below applies, partly applies or does not apply.
   (a) The technology applied in the new product was really new for our enterprise.
   (b) The new product required us to use distribution channels we had not had much experience with before.
   (c) The behavior of the suppliers in charge of delivering the material for the new product was not predictable.
   (d) Most of the necessary production facilities were not available at our company beforehand.

(e) There was a great need to create a new organizational subunit and/or a separate team.
(f) Product development, launch and sales lead to a significant change in the organizational culture.
(g) Marketing costs per piece of the new product are higher than ever before.

Analysis of Inter-correlation

	Weak ties	Size	Hauschild–Schlaak (successful)	Hauschild–Schlaak (less successful)	Contract	Trust
Size	1.200					
Hauschildt–Schlaak, (successful)	−0.005	0.034				
Hauschildt–Schlaak, (less successful)	0.067	0.011	0.202			
Contract	−0.091	−0.1351	−0.295	−0.132		
Trust	0.015	−0.0257	−0.128	−0.006	−0.002	
Country	−0.087	0.134	0.133	−0.180	−0.211	0.056
n = 288 n* = 257 (without the cases of no successful innovation)						

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Organization of Knowledge Transfer in Clusters: A Knowledge-Based View

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Abstract In this paper, we develop a knowledge-based view on the organization of knowledge transfer in clusters. Starting from the information richness theory, we argue that tacitness of the partners' knowledge determines the information richness of the knowledge transfer mechanisms in clusters. We examine the following hypotheses: (a) If the cluster partners' knowledge is characterized by a low degree of tacitness, knowledge transfer mechanisms with a lower degree of information richness (e.g. email, intranet, documents, newsgroups) are used; (b) if the cluster partners' knowledge is characterized by a high degree of tacitness, knowledge transfer mechanisms with a higher degree of information richness (e.g. seminars, workshops, formal meetings) are used. We test these hypotheses by using data from the Green Building Cluster of Lower Austria. Using complexity, teachability and codifiability as measures for tacitness of the cluster partners' knowledge, the empirical results from Green Building Cluster in Austria partly support these hypotheses. Our results indicate that an increase in teachable knowledge results in the use of more knowledge transfer mechanisms with a lower degree of information richness, and an increase in complex, but articulable knowledge results in the use of more knowledge transfer mechanisms with a higher degree of information richness. In addition, we show that trust positively influences the use of all modes of knowledge transfer.

1 Introduction

Clusters are networks of firms in related industries within a given region (Porter 1998, 2000; Malmberg and Maskell 2002). The success of clustering depends on the complementarity of resources and capabilities of the cluster firms (Araújo et al. 2003; Windsperger 2006). Thus, firms will gain competitive advantage when the knowledge transfer is efficiently organized between the cluster partners (Maskell

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and Malmberg 1999; Calantone et al. 2002). In previous years, a large number of researchers in organization theory and management have examined knowledge transfer within and across organizational boundaries using the information (media) richness theory and the knowledge-based view of a firm. The first attempt was to answer the question of how to reduce ambiguity in order to facilitate the transfer of information, using the information richness theory (Daft and Lengel 1986; Russ et al. 1990; Dennis and Kinney 1998; Sheer and Chen 2004). The knowledge-based view of the firm (Barney 1991; Kogut and Zander 1992, 1993; Nonaka et al. 1996; Conner and Prahalad 1996; Grant 1996; Nickerson and Zenger 2004) argues that gaining competitive advantage by setting up networks requires effective mechanisms to facilitate interorganizational transfer of tacit and explicit knowledge (Zander and Kogut 1995; Inkpen 1996; Håkanson 2005).

In this paper, we develop a knowledge-based view on the choice of the knowledge transfer mechanism in clusters that integrates results from the information richness theory. We argue that the information richness theory offers a criteria ('information richness') to differentiate knowledge transfer mechanisms according to their information processing (or knowledge transfer) capacity. In clusters, knowledge transfer mechanisms with a relatively higher degree of information richness include seminars, workshops, conference meetings, visits and video conferences. Knowledge transfer mechanisms with a relatively lower degree of information richness include written documents, fax, email, intra- and internet and other electronic media. According to the knowledge-based theory, tacitness of partner knowledge determines the degree of information richness of the knowledge transfer mechanisms. The thesis of our paper is: The higher the degree of tacitness of the partners' knowledge, the more knowledge transfer mechanisms with a higher degree of information richness should be used to facilitate an efficient knowledge transfer between the cluster partners.

The paper is organized as follows: Section 2 reviews the relevant literature related to knowledge transfer in networks. In Section 3, we develop the knowledge-based view of knowledge transfer mechanisms and derive testable hypotheses. Finally, in Section 4 we test these hypotheses using data from the Green Building Cluster of Lower Austria.

2 Literature Review

Research on information and knowledge transfer in organizations started with the information richness theory in the 1980s (Daft and Macintosh 1981; Daft and Lengel 1984, 1986; Trevino et al. 1987; Daft et al. 1987; Russ et al. 1990; Sheer and Chen 2004). Recent studies extend this view to new electronic communication media (Lim and Benbasat 2000; Buchel and Raub 2001; Sexton et al. 2003; Vickery et al. 2004). According to this view, effective information and knowledge transfer requires a fit between task ambiguity/equivocality and 'richness' of the communication media. 'Information richness (IR)' consists of four attributes of the communication

mechanism: feedback capability, availability of multiple cues (voice, body, gestures, words), language variety, and personal focus (emotions, feelings). The more of these attributes a mechanism possesses, the higher the degree of IR, and the greater its capacity to handle ambiguity and hence its transfer capacity. Communication media with a relatively higher degree of IR refer to face-to-face interactions and team-based mechanisms (meetings, trainings, seminars, workshops, visits, video conferencing), while communication media with a lower degree of IR refer to written documents, such as manuals, reports, data bases, written instructions and electronic media.

Since the 1990s, many researchers in the field of the knowledge-based view of the firm have examined the problem of internal and inter-organizational knowledge transfer (Kogut and Zander 1992; Nonaka 1994; Szulanski 1995, 2000; Simonin 1999a, b; Argote 1999; Albino et al. 1999; Ancori et al. 2000; Argote et al. 2003; Bresnen et al. 2003; Nonaka et al. 2003; Gertler 2003; Jensen and Szulanski 2007; Szulanski and Jensen 2006; Haas and Hansen 2007; van Wijk et al. 2008; Paswan and Wittmann 2009). Starting from Polanyi's knowledge concept (Polanyi 1962), they investigated knowledge transfer in organizations and networks. According to the knowledge-based view of the firm, tacitness varies positively with the difficulty of knowledge transfer. However, most of this literature does not investigate the relationship between knowledge attributes and knowledge transfer mechanisms. Inkpen (1996), Inkpen and Dinur (1998) and Hong and Nguyen (2009) are exemptions. They go further by analyzing the relationship between knowledge characteristics and knowledge transfer mechanisms in multinational corporations. However, they do not develop a more general approach that explains the relationship between knowledge types and knowledge transfer mechanisms in networks. Furthermore, although a large number of cluster studies have been published in organization economics and management in the last decade, the problem of the organization of knowledge transfer between cluster partners remains largely unexplored.

To sum up, the existing literature has the following deficits: Firstly, it does not offer a theoretical framework for the explanation of the knowledge transfer mechanisms in inter-organizational relations, and secondly, it does not develop and test hypotheses about the design of knowledge transfer mechanisms in clusters. Starting from this gap, the objective of our paper is to develop a knowledge-based view on the choice of knowledge transfer mechanisms in clusters. Our main contribution to the literature is to combine the knowledge-based view with the information richness theory to explain the organization of knowledge transfer in cluster relationships. Furthermore, our study utilizes primary data from the Green Building Cluster of Lower Austria, which enables us to examine the factors influencing the choice of knowledge transfer mechanisms.

3 The Design of Knowledge Transfer Mechanisms in Clusters

According to the knowledge-based theory of the firm, the firm is a bundle of resources and capabilities that consists of a system of organizational routines for the creation and transfer of knowledge (Nonaka 1994; Grant 1996; Antonelli 1999;

Zach 1999). This view focuses both on explicit and tacit knowledge that must be created, processed and transferred. Tacit knowledge is the origin of competitive advantage, because it is highly personal, hard to formalize and, therefore, difficult to imitate (Nonaka et al. 1996). Derived from this knowledge-based view, we use the term knowledge transfer mechanisms for organizational routines that enable the transfer of explicit and tacit knowledge (Pedersen et al. 2003; Inkpen 2008; Jasimuddin 2007).

Which factors influence the choice of knowledge transfer mechanisms in networks? According to the knowledge-based view, the characteristic relevant for the determination of efficient knowledge transfer mechanisms is the degree of tacitness of knowledge. If the knowledge is explicit and thus codifiable, knowledge can be efficiently transferred by using knowledge transfer mechanisms with a lower degree of information richness (IR). If the knowledge is tacit and difficult to codify, higher-IR-transfer mechanisms are needed to process and transfer the less codifiable component of knowledge. This is compatible with Teece's view (Teece 1985, p 229): "Tacit knowledge is extremely difficult to transfer without...teaching, demonstration and participation". As tacitness of knowledge increases by degree, a larger knowledge transfer capacity and hence more higher-IR-knowledge transfer mechanisms are required for an efficient knowledge transfer. In addition, Berry and Broadbent (1987), Argote (1999) and Almeida and Kogut (1999) argue that high-IR-mechanisms facilitate both the transfer of tacit and explicit knowledge because of the complementarity between tacit and explicit knowledge (Roberts 2000).

To summarize the knowledge-based view on the choice of knowledge transfer mechanisms, we can state the following proposition: The higher (lower) the degree of tacitness of the partner-specific knowledge, the more knowledge transfer mechanisms with a higher (lower) degree of IR are needed to facilitate an efficient knowledge transfer between the partners.

Now we apply this approach to the organization of knowledge transfer in clusters. We start with an example of comparing three knowledge situations and ask the question which knowledge transfer mechanisms should be used (see Fig. 1).

First, we assume that the cluster partner's knowledge is codified in reports, manuals and databases. With a low tacitness-component, the knowledge can be easily transferred by using lower-IR-mechanisms (for example, postal mailings, fax, intranet, chat, online forum, newsgroups, email) (see FIT I in Fig. 1). *Second*, we assume that a large part of the partner-specific knowledge is tacit. In this case, most of the partner-specific knowledge and organizational capabilities reside within persons and groups of the cluster firms. With a high tacitness-component, the partner knowledge can be only transferred by using more higher-IR-mechanisms (for example, seminars, workshops, committees, meetings, video conferences) (see FIT II in Fig. 1).

If these alignment conditions are not fulfilled, the following inefficiencies may arise (Russ et al. 1990): (a) MISFIT I: If the partner-specific knowledge is mainly tacit, the knowledge cannot be efficiently transferred by using low-IR mechanisms. In this case, cluster partners are unable to understand and adequately apply the high

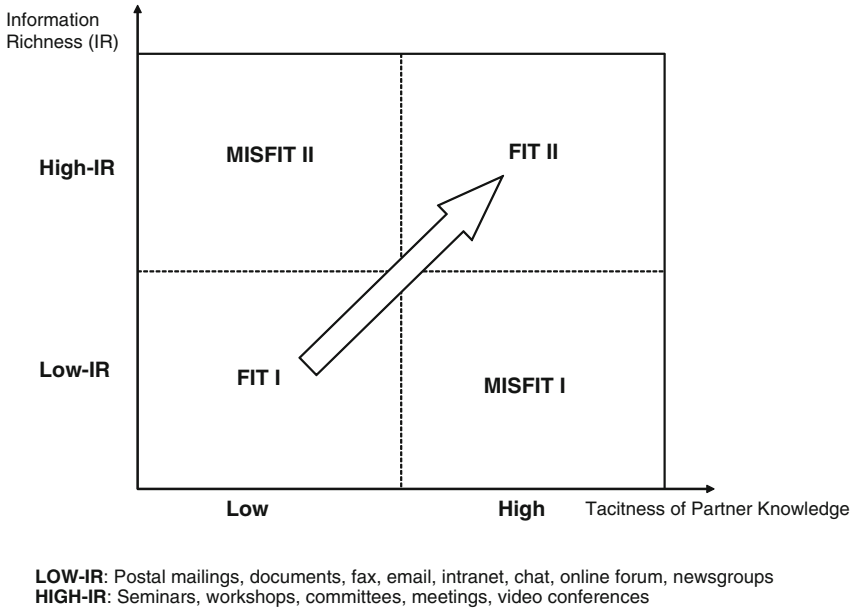

Fig. 1 Relationship between knowledge transfer mechanisms and knowledge attributes

tacitness-component of the other partner's knowledge, because it is based on organizational capabilities of employees and groups of the other partner's firm. (b) MISFIT II: If the partner knowledge is codifiable, it is not efficiently transferred by using high-IR mechanisms. Although high-IR-mechanisms facilitate the transfer of codifiable knowledge, it is not efficient because high knowledge transfer costs arise due to the high set-up costs of high-IR-mechanisms. In addition, due to behavioural uncertainty, the risk of information selection and manipulation increases under personal knowledge transfer mechanisms.

Third, we assume that the partner's knowledge is partly codifiable and partly tacit. Further, we assume that the explicit part is codified in manuals, reports, and databases, while additional partner-specific knowledge resides within managers, employees and teams at the cluster partner's firm. Although codified manuals, reports and databases exist, their utility for the cluster partners is relatively low because they cannot adequately apply the codified part of the partner-specific knowledge as this requires specific organizational capabilities. If, in this case, only lower-IR-knowledge transfer mechanisms are adopted, the partners are unable to adequately understand and apply the requisite partner-specific knowledge. Consequently, since a large part of the knowledge which is transferred to the partners is characterized by a higher degree of tacitness, low-IR-mechanisms are insufficient to facilitate the transfer of the requisite knowledge. In this case, both low- and high-IR-mechanisms are needed to efficiently transfer the partner-specific knowledge. Seminars, workshops and meetings would facilitate the transfer of the high

tacitness-component of knowledge and thereby also improve the understanding of the more explicit component of the partner knowledge.

As a result, the knowledge-based view on the organization of knowledge transfer in clusters can be summarized by the following hypotheses:

Hypothesis 1 (H1). *The use of knowledge transfer mechanisms with a higher degree of IR is positively related with the degree of tacitness of partner-specific knowledge.*

Hypothesis 2 (H2). *The use of knowledge transfer mechanisms with a lower degree of IR is negatively related with the degree of tacitness of partner-specific knowledge.*

4 Empirical Analysis

4.1 Sample and Data Collection

The empirical setting for testing these hypotheses is the Green Building Cluster of Lower Austria. This cluster is the new materials-independent economic hub for all areas of sustainable construction and living. It was established at the beginning of 2007, through a merger of the Wood Cluster of Lower Austria, founded in 2001, and the Green Building Cluster of Lower Austria, which was founded in 2003. The majority of the 175 partner companies are seated in Lower Austria, whereas a fewer number in the neighboring provinces and Salzburg. The main areas of focus of the Green Building Cluster of Lower Austria are (see http://www.ecoplus.at/ecoplus/cluster/beuc_en/BEUC_EN_R2.htm):

- Restoration and upgrading of older homes to low-energy home standards
- Living in comfort – healthy interior environments
- New multiple-level structures built to passive energy home standards

The cluster functions as a link between its partner companies and prospective clients (developers, municipalities, etc.) and its aim is to connect the existing national competencies in the area of sustainable building and living. The cluster management team is composed of architects and energy experts as well as professionals from the construction and interior furnishings industries. These experts are professionals involved in cooperative projects, R&D projects, and in general project management. They provide information, support and advice to the partner companies, regardless of the type of building product or construction style. Cluster partners profit from each other and work jointly on innovative and added-value oriented projects. This cross-linking of individual companies in the cluster makes it possible for the consumer to obtain a healthy, comfortable structure and equally suitable interior furnishings at an affordable price. Cluster management supports this networking by offering tailored consultation and qualification packages,

initiating and guiding innovative projects, and organizing joint presence on national and international markets.

We started our empirical work by obtaining the list of all network partners from ECOPLUS, a regional governmental institution in Lower Austria. ECOPLUS identified a total of 175 cluster firms in the Green Building Cluster in 2008. After several preliminary steps in the questionnaire development, including interviews with cluster partners at the Green Building Cluster of Lower Austria conference in St. Poelten, the final version of the questionnaire was sent out by postal mail and email to the general managers of the cluster companies in February 2008 and November 2008. General managers were judged to be the most suitable respondents, or key informants, as they are the top decision makers in the company regarding the organization of the knowledge transfer between the partner firms. Key informants should occupy roles that make them knowledgeable about the issues being researched (John and Reve 1982).The questionnaire took approximately 10 min to complete on the average. We received 48 completed responses – a response rate of 27.4%. The non-response bias was examined by investigating whether the results obtained from the analysis were driven by differences between the group of respondents and the group of non-respondents. Non-response bias was estimated by comparing early versus late respondents (Armstrong and Overton 1977), where late respondents serve as proxies for non-respondents. No significant differences emerged between the two groups of respondents. In addition, based on Podsakoff et al. (2003), we used Harman's single-factor test to examine whether a significant amount of common method variance exists in the data. After we conducted factor analysis on all items and extracted more than one factor with eigenvalues greater than one, we felt confident that common method variance is not a serious problem in our study.

4.2 Measurement

To test the hypotheses, the following variables are important: Information richness of knowledge transfer mechanisms, degree of tacitness of partner knowledge, and control variables (see Appendix).

4.2.1 Information Richness

Adapted from Daft and Lengel (1984) and Vickery et al. (2004), we differentiate the following knowledge transfer mechanisms in cluster relationships: Face-to-face (seminars, workshops, committees, formal and informal meetings); telephone and electronic media (emails, intra- and internet); written personal letters, formal documents and manuals; and numeric formal media (computer output). Face-to-face is the knowledge transfer mechanism with the highest information richness and numeric formal media with the lowest information richness. This hierarchy of

information richness is confirmed by empirical research (D'Ambra et al. 1998). Consistent with the information richness-hierarchy, we differentiate knowledge transfer mechanisms with a relatively higher degree of information richness (seminars and workshops, committees, formal and informal meetings, video conferences) and knowledge transfer mechanisms with a relatively lower degree of information richness (email, intra- and internet, chat discussions, online forum). Therefore, our study conceptualizes information richness in accordance with Daft and Lengel's approach. Information richness is measured by the extent to which the partner firms use email, documents, chat discussions, online forums, newsgroups, intranet, telephone, seminars, workshops, meetings, conferences and workshops, committees and videoconferences. The general managers were asked to rate the use of these knowledge transfer mechanisms on a seven-point scale. The higher the score, the higher is the company's use of a certain mechanism. Based on the information richness theory, we construct indicators for lower-IR-mechanisms (LIR) with intranet, chat discussions, online forum, newsgroups, email, internet, fax, formal letters and documents and for higher-IR-mechanisms (HIR) with seminars, workshops, committees, formal and informal meetings and video conferences (see Appendix).

4.2.2 Knowledge Characteristics

According to the knowledge-based view, tacitness of partner-specific knowledge determines the use of knowledge transfer mechanisms. Following Winter's taxonomy of knowledge (Winter 1987) and Kogut and Zander's argument (Kogut and Zander 1993; Zander and Kogut 1995), we use the following knowledge attributes to measure the latent construct of tacitness of knowledge: codifiability, teachability and complexity. Codifiability (COD) is the degree to which knowledge can be encoded and written down in manuals. When codifiability is high, the partner knowledge is considered more explicit. Teachability (TEACH) is the extent to which knowledge can be transferred through demonstration and participation. As Winter (1987), Teece (1985) and Håkanson (2007)point out, transfer of tacit knowledge, if possible at all, requires articulation (e. g. through demonstration and participation). Teachability is high when company knowledge can be taught to the cluster partner. However, if company knowledge cannot be taught due to its high degree of tacitness, the cluster partner cannot acquire and apply the requisite knowledge. For this reason, highly-tacit knowledge cannot be used and upgraded in cluster relationships. Kogut and Zander (1993, p 633) define complexity (COMPLEX) "as the number of critical and interacting elements embraced by an entity or activity". Similarly, Sorenson et al. (2006) define complexity in terms of the level of interdependence inherent in the subcomponents of a piece of knowledge (see Simonin 1999a, b). When the partner knowledge is more complex, it is considered more tacit. Applied to cluster relationships, complexity is high when the application of the partner knowledge requires a large number of heterogeneous, complicated and interdependent tasks, and when cluster partners have to master diverse

techniques in order to successfully apply the partner knowledge. To summarize, when the knowledge of the cluster firms is more codifiable, more teachable and less complex, it is considered less tacit.

Adapted from Zander and Kogut (1995), we use a battery of 14 items to measure codifiability, teachability and complexity of system-specific knowledge. We conducted a factor analysis to check for their dimensionality. The results of the factor analysis show that the items load on three factors referring to codifiability, teachability and complexity. Reliabilities of the final scales for COD, COMPLEX and TEACH pass the threshold of 0.7 (see Appendix).

4.2.3 Control Variables

Trust (TRUST): According to the relational view of governance (Dyer and Singh 1998; Poppo and Zenger 2002; Levin and Cross 2004; Gulati and Nickerson 2008; Mellewigt et al. 2007), trust may influence the use of knowledge transfer mechanisms in two ways: (a) Under the substitutability view, trust is a substitute for the use of formal knowledge transfer mechanisms (Gulati 1995; Yu et al. 2006). It mitigates the knowledge transfer hazards due to lower relational risk (Roberts 2000) and reduces the extent of formal knowledge transfer mechanisms (Lo and Lie 2008). Consequently, cluster companies are likely to use less HIR and more LIR when trust exists between the cluster partners, and use more HIR and less LIR when mistrust exists. (b) Under the complementarity view, trust overcomes communication barriers and facilitates knowledge sharing and increases the use of all knowledge transfer mechanisms (Seppänen et al. 2007; Blomqvist et al. 2005; Bohnet and Baytelman 2007; Liao 2009). Under a high level of trust, cluster partners use both more HIR and LIR because trust creates an incentive for intense and open communication. TRUST was measured with a four-items scale (see Appendix) (Cronbach alpha = 0.93).

SIZE: The number of employees is a proxy for the size of the firm. The larger the firm size, the more person-based HIR and the less information-based LIR are used.

4.3 Results

Table 1 presents the descriptive statistics for the sample in Lower Austria.

Table 1 Descriptive statistics

	Mean	Std. deviation	N
COD	1.9333	0.87843	48
TEACH	2.3500	0.94125	48
TRUST	3.4375	0.98641	48
COMPLEX	2.6632	0.92476	48
NUM_EMPLOYEES	30.21	54.950	48

Table 2 Correlations

	COD	TEACH	TRUST	COMPLEX	NUM_EMPLOYEES
COD	1				
TEACH	0.590	1			
TRUST	0.427	0.440	1		
COMPLEX	0.499	0.516	0.318	1	
NUM_EMPLOYEES	−0.051	0.265	0.050	0.179	1

To test hypotheses 1 and 2, we carry out a regression analysis. We conduct an OLS regression analysis with HIR and LIR as dependent variables, measuring the extent of the use of higher-IR-mechanisms and lower-IR-mechanisms. HIR refers to the use of seminars and workshops, committees, videoconferencing, formal and informal meetings between the cluster partners, and LIR refers to the use of intranet, chat discussions, newsgroups, internet, email, formal letters and documents. The general managers of the cluster companies were asked to rate the use of HIR and LIR on a seven-point scale. By averaging the scale values, we construct HIR- and LIR-indicators. The explanatory variables refer to complexity (COMPLEX), codifiability (COD) and teachability of knowledge (TEACH). Control variables refer to trust (TRUST) and the size of the companies (SIZE). Table 2 presents the correlations of the variables we use in the regression analysis. In addition, the variance inflation factors are well below the rule-of-thumb cut-off of 10 (Netter et. al. 1985). In summary, we do not find any collinearity indication.

4.3.1 Hypothesis 1: HIR

We estimate the following regression equation:

$$\mathbf{HIR} = \alpha + \beta_1\mathbf{TEACH} + \beta_2\mathbf{COMPLEX} + \beta_3\mathbf{COMPLEX} * \mathbf{TEACH} + \beta_4\mathbf{COD} + \beta_5\mathbf{TRUST} + \beta_6\mathbf{SIZE}.$$

According to the knowledge-based view, HIR varies positively with complexity (COMPLEX) and negatively with teachability (TEACH) and codifiability (COD). Additionally we include the interaction term TEACH*COMPLEX as the cluster partners are only able to transfer tacit knowledge if it is at least partly teachable (Winter 1987; Håkanson 2007). Furthermore, under the substitutability view, TRUST is negatively related with HIR, and under the complementarity view, TRUST is positively related with HIR. The larger the firm size, the more person-based HIR-knowledge transfer mechanisms are used. Table 3 reports the results of regression analysis for HIR. The coefficients of COMPLEX*TEACH is positive and significant. This is consistent with our hypothesis that an increase in tacit and articulable knowledge implies the use of more HIR. The coefficient of TRUST is

Table 3 Regression results for HIR

HIR	
Intercept	1.942*** (0.074)
COD	−0.063 (0.106)
TEACH	−0.032 (0.131)
COMPLEX	0.147 (0.127)
TRUST	0.310*** (0.086)
COMPLEX*TEACH	0.374** (0.184)
SIZE	−0.098 (0.083)
	F = 5.438
	Adj.R Square = 0.362
	N = 48

***$p < 0.01$; **p < 0.05; *$p < 0.1$; values in parentheses are standard errors

Table 4 Regression results for LIR

LIR	
Intercept	1.355*** (0.322)
COD	−0.017 (0.122)
TEACH	0.321** (0.119)
COMPLEX	−0.161 (0.105)
TRUST	0.170* (0.092)
SIZE	−0.003* (0.002)
	F = 4.276
	Adj.R Square = 0.258
	N = 48

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$; values in parentheses are standard errors

highly significant supporting the complementarity view of trust. Trust facilitates knowledge sharing and increases the use of HIR (Seppänen et al. 2007). Conversely, the coefficients of teachability (TEACH), codifiability (COD) and SIZE are not significant.

4.3.2 Hypotheses 2: LIR

We estimate the following regression equation for LIR:

$$\mathbf{LIR} = \alpha + \beta_1\mathbf{TEACH} + \beta_2\mathbf{COMPLEX} + \beta_3\mathbf{COD} + \beta_4\mathbf{TRUST} + \beta_5\mathbf{SIZE}$$

We expect that LIR varies positively with codifiability (COD) and teachability (TEACH) and negatively with complexity (COMPLEX). In addition, we expect TRUST is positively related with the use of LIR. The larger the size of the firms (SIZE), the more person-based HIR and less information-based LIR are used. Table 4 reports the results of the regression analysis for LIR. The coefficient of teachability

(TEACH) is positive and significant, which indicates that LIR supports the transfer of less tacit partner-specific knowledge. The coefficient of TRUST is slightly significant supporting the complementarity view of trust. Trust facilitates knowledge sharing and increases the use of both HIR and LIR. The coefficients of COMPLEX and COD are not significant. The negative coefficient of SIZE supports the view that the firms use less information-based LIR when the number of employees is large.

5 Discussion

In this paper, we have developed a knowledge-based view on the organization of knowledge transfer in cluster relationships. According to the knowledge-based view, the knowledge transfer between cluster partners is governed by more person-based HIR if the partner-specific knowledge is more tacit, and it is governed by more information-based LIR if the partner-specific knowledge is less tacit. Using complexity, teachability and codifiability as measures for tacitness of the cluster partners' knowledge, the empirical results from Green Building Cluster in Austria partly support these hypotheses. The results indicate that an increase in teachable knowledge results in the use of more LIR, and an increase in complex, but articulable knowledge results in the use of more HIR. Additionally, based on the relational view of governance, trust influences the organization of knowledge transfer between the cluster partners. Our data supports the complementarity view of trust: More trust facilitates information and knowledge sharing between the partners and hence increase the use of both LIR and HIR.

How does our approach extend the results in the literature? The major contribution of our study is the development of a knowledge-based view on the choice of knowledge transfer mechanisms in clusters. Our study utilizes primary data from the Green Building Cluster of Lower Austria enabling the estimation of factors the theory considers important to affect the organization of the knowledge transfer in clusters.

This study has some limitations: First, due to the small sample size the ability to generalize the results is limited. Further research analyzing data from other clusters with a larger number of cluster firms would help ascertain generalizability of our research results. Second, the measurement of the knowledge of the cluster partners is not without its own limitations. It is a first step to operationalize tacitness of knowledge by different knowledge attributes. Third, we have captured trust as a control variable at a rather general level. Conceptually, trust could take at least two forms (Lazzarini et al. 2008): Knowledge-based or belief-based trust related to the history of inter-organizational experience, and general trust related to the motivational characteristics of the partners. However, we did not differentiate between these two forms.

Appendix

Measures of Variables

Lower-IR-knowledge transfer mechanisms (LIR)	To what extent does the cluster company use knowledge transfer mechanisms with a lower degree of IR: (Intranet, chat discussions, online forum, newsgroups, email, fax, formal letters, existing documents) (1, no extent;. . .7, to a very large extent)
Higher-IR-knowledge transfer mechanisms (HIR)	To what extent does the cluster company use knowledge transfer mechanisms with a higher degree of IR: (Seminars, workshops, video conferences, committees, informal meetings, formal meetings) (1, no extent;. . .7, to a very large extent)
Complexity (COMPLEX) Coefficient alpha: 0.88	The general manager has to evaluate complexity on a 7 point scale (1,strongly disagree; . . .7, strongly agree): Complex 1: Cluster partners must master many diverse activities and tasks, in order to be able to apply the partner knowledge successfully Complex 2: The tasks and activities for the application of partner know-how are very difficult Complex 3: The tasks and activities for the application of the partner know-how are very heterogeneous Complex 4: The tasks and activities for the application of the partner know-how are very interdependent Complex 5: The partner know-how can be easily divided in separate tasks (reverse coded)
Teachability (TEACH) Coefficient alpha: 0.92	The general manager has to evaluate teachability on a 7 point scale (1, strongly disagree; . . .7, strongly agree): Teach 1: The cluster partners can easily learn the most important activities of the relationship through personal communication with employees of the partner firm Teach 2: The partners can easily learn the most important activities of the relationship through personal support provided by employees of the partner firm Teach 3: The employees of the cluster firms can master the new knowledge of the cluster partner through training Teach 4: Training to apply the new knowledge is a quick and easy job Teach 5: The cluster partners can easily learn the most important activities and tasks through job rotation between the cluster firms
Codifiability (COD) Coefficient alpha: 0.80	The general manager has to evaluate codifiability on a 7 point scale (1,strongly disagree; . . .7, strongly agree): Cod 1: Large parts of the business processes between the partner firms can be carried out by using information technology Cod 2: Critical parts of the business processes between the partners can be extensively documented in written form

(*continued*)

Trust (TRUST) Coefficient alpha: 0.93	The general manager has to evaluate trust on a 7 point scale (1, strongly disagree; . . .7, strongly agree): Trust 1: There is great trust between us and partners Trust 2: There is an atmosphere of openness and sincerity Trust 3: The mutual cooperation is on a partnership basis Trust 4: Information sharing between the partners exceeds the level stipulated in the contract
Firm size (SIZE)	Number of employees

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Influence of Network Maturity on Organisational Learning and Knowledge Transfer in Strategic Alliances

Ana Aleksić Mirić

Abstract The aim of this research is to investigate the importance of network age for learning and knowledge transfer among network members. The research is carried out through multiple exploratory case study analysis. It shows that network age per se does not have adequate power to explain learning processes occurring within a network. Age is an important factor of learning, but only as part of a broader concept associated with the evolution of the network, and therefore not directly connected with learning. We recognize this in defining the concept of network maturity. Network maturity is a function of network age, pre-existing experience in working together, and the development of social networks among the employees of organisations that form the network.

1 Introduction

The forming of networks [1] between companies and organisations of different kinds under conditions of a highly competitive environment, globalization, and important technological changes, has become an imperative in the business world. The end of

[1] In this paper we define a network as contract-based and ownership-based inter-firm linkages. Traditional contract-based relations between companies, buy-and-sell contracts occurring only once, will not be considered as networks. Non-traditional contracts in different functional areas, which involve forming contracts with the aim of performing certain business activities, will be analyzed in this work. We will also consider what Grant and Baden-Fuller (2004) define as strategic alliances: supplier-buyer partnerships, outsourcing agreements, technical collaboration, joint research projects, shared new product development, shared manufacturing arrangements, common distribution arrangements, cross-selling arrangements and franchising. Furthermore, ownership-based partnerships resulting either with or without forming a new entity will also be treated as networks, as long as they do not fall into the category of mergers and acquisitions. Mergers and acquisitions imply a complete subordination of one entity to the other and for that reason will be excluded from our understanding of networks.

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the millennium and the beginning of the twenty-first century has indicated, and now available empirical data confirm, that the further development of the world market moves in the direction of linking companies and their cooperation at different levels (Ohmae 1989; Li 2002; Evans et al. 2002). The research that has been carried out points to a number of reasons why organisations recognize network formation as beneficial to successful business (Kogut 1988; Hennart 1988; Yashino and Rangan 1995; Osborn and Hagedoorn 1997; Inkpen and Beamish 1997; Inkpen and Ramaswamy 2006). They suggest that companies decide to create networks in order to enter "forbidden" and otherwise unavailable markets, to expand strategic potentials, to share risks and costs, to obtain rare resources, to increase profitability, to decrease the number of competitors, to finance capital investments, to exploit existing and explore new opportunities: in other words, to achieve strategically important goals much faster, with significantly lower costs and greater flexibility. Recently researchers have started to emphasize organisational learning and knowledge transfer in particular as important reasons for network creation (Khanna et al. 1994; Lyles and Salk 1996; Inkpen 1996, 1998a, b; Larsson et al. 1998; Child 2003; Lyles 1988, 2003). This is, of course, due to the understanding that knowledge is the basic source of competitive advantage. The business world today is built on the assumption that a business can be better than its competitors if it knows more than they do. In the global race for success, companies often decide to enrich their knowledge and strengthen their competitive advantages through network formation.

When asked how they were progressing with organisational learning and knowledge transfer as they entered an inter-organisational network, two senior managers from different organisations responded as follows:

> Manager 1: "Well, we are progressing fine on the learning curve. You know, this is still a young network, and we need to be realistic about our expectations. We will learn more as we get to know each other better."
>
> Manager 2: "We are progressing great! The new network is a true source of innovation, and we are exploring new learning opportunities every day!"

Faced with answers like these, we might be puzzled as to when to expect the highest level of learning and knowledge transfer to occur in inter-organisational networks. According to the first manager, this is likely to happen in the later phases of network existence, not at the beginning. According to the second manager's logic, the network's youth is the true source of innovation, and consequently of learning. Therefore, the aim of this research is to investigate the following questions: how important is the age of the network for learning and knowledge transfer among the members of the network? Does it matter at all?

This paper challenges the importance of network longevity in learning and knowledge transfer among network participants, and affirms network maturity instead. We argue that longevity is an important factor of learning within a network, but only as part of a broader concept associated with the evolution of the network, and therefore not directly connected with learning. The existing literature does not draw on the difference between organisational age and organisational maturity,

especially in the case of complex organisational networks (such as strategic alliances, equity and non-equity joint ventures etc). Therefore the aim of this research is to explore this knowledge gap and to offer new insights into the existing literature on network management. This general aim is further developed into the following research questions: (1) is the network age or the network maturity of critical importance for organisational learning and knowledge transfer? (2) can younger partnerships be more mature that older ones, and consequently learn faster? and (3) what factors influence the difference between age and maturity of networks?

This paper is structured in accordance with its aim and its subject: we start with a review of the relevant literature on organisational learning and knowledge transfer, focusing particularly on the evolutionary perspective of organisational learning in strategic alliances; then progress to explaining the methodological approach and the design of the research, data and the results of the research. We conclude with research contributions and limitations.

2 Theoretical Framework

2.1 Organisational Learning and Knowledge Transfer

Knowledge is defined as "information that corresponds to a particular context" (Burton et al. 2006, p 92). This point of view is particularly important because it addresses the difference between information and knowledge. Knowledge as a construct is inevitably related to information: knowledge of any kind consists of mutually related and logically connected groups of information. On the other hand, not every piece of information can be considered as knowledge, but only those that contribute to the increase in the overall level of organisational knowledge (Nonaka 1991; Nonaka and Takeutchi 1995; Burton et al. 2006).

There are numerous typologies of knowledge. Winter (1987), for instance, suggests a typology which differentiates knowledge as (1) simple and complex, (2) teachable and not teachable, and (3) observable and not observable. Anderson (1983), on the other hand considers knowledge as declarative and procedural. Cummings (2001), as well as some other authors, states that the basic characteristic of knowledge, upon which we can classify different kinds of knowledge into different categories, is knowledge transferability. For a long time knowledge transfer has predominantly been understood as the movement of the existing technology or management practice into organisational settings for which such transfer represents a new knowledge input (Lindholm 1997). Nowadays, it is more common to define knowledge transfer as sharing ideas across boundaries both within and outside of an organisation. In that sense, knowledge is understood not only as technology but also as a wider concept. Among all classifications of knowledge, the most influential is the one given by Polanyi (1966). Polanyi defines two basic forms of knowledge within an organisation: explicit and tacit. Explicit

knowledge can be easily transferred through communication, while tacit knowledge can be transferred only through application and acquired through practice. The implicit logic is that people usually know more than they can show, explain or say (Polanyi 1966; Cummings 2001, p 18). Tacit knowledge is embedded within a specific context whereas explicit knowledge is accessed and achieved more easily. Knowledge can be embedded within an individual, group or organisational context, and accordingly knowledge can be analyzed and traced to these three different levels – individual, group and organisational.

Knowledge as a concept should be differentiated from the concept of learning. Learning is the process of knowledge accumulation through modification of existing and acceptance of new knowledge (Burton and Obel 2004). Knowledge is the result of the process of learning and, at the same time, the prerequisite for further learning. Basically, learning is a phenomenon that is predominantly studied and analysed at the individual level. The first experiments and research about learning focused on an individual, with the intention of finding out how an individual learns. Therefore the topics of learning and knowledge transfer are mostly grounded in the field of psychology. In management literature knowledge from the field of individual learning developed by psychologists has basically been used in two ways. Firstly, to understand how organisations learn, management scholars have used the analogy with individual learning. Secondly, individual learning has been used as a basis and presumption for organisational learning (Maier et al. 2001). The relationship between individual and organisational learning, as well as between organisational and individual knowledge, is a complex phenomenon (Cohen 1991). There is a certain agreement that efficient individual learning is a key to organisational learning, and that organisational learning can occur if, and only if, individuals within an organisation are ready to apply their knowledge (Maier et al. 2001). A simplified attitude to group and organisational learning could lead to the conclusion that these are simply a sum of individual learning. However, according to contemporary theory such simplification is unacceptable, and organisational learning is not and cannot be regarded as the simple sum of learning on an individual level. On the contrary, it represents a far more sophisticated and complex interpersonal process (Fiol and Lyles 1985; Huber 1991; Levinthal and March 1993; Miller 1996; Argote 1999). The relation between individual and organisational learning is a complex phenomenon, which depends equally on the involvement of both sides. On the one hand the employees' individual learning, as well as their interaction, is an important determinant of the total learning within an organisation, while at the same time the interaction of employees within an organisation and the exchange of information and knowledge in an organisational context influence the level of knowledge and learning on the individual level (Argyris and Schon 1985, 1996; Nonaka 1994, p17). The basic logic underlying this view is that although individual knowledge is the essence of any group and organisational knowledge, it would be a mistake to conclude that organisational knowledge is merely a cumulative result of what their members know, or as Hedberg (1981) states "...members come and go, and leadership changes, but organisations' memories preserve certain behaviours, mental maps, norms and values over time".

Early work on organisational learning is to a great extent related to the instrumental approach to individual learning. This learning approach suggests that learning changes behaviour in response to stimuli (Cyert and March 1963; Levitt and March 1988). Later authors recognized the importance of including behavioural as well as cognitive dimensions of learning. Today, the dominant approach recognizes both cognitive and behavioural aspects of learning, pointing to the fact that learning occurs on the cognitive as well as on the behavioural level (Argyris and Schön 1996). Argiris and Schön (1996) propose a very specific point of view on how organisations learn, including both behavioural and cognitive aspects of learning. Their approach proved to be very influential on the further development of thought on how learning within organisations is understood and analyzed. They recognize single-loop and double-loop learning. Single-loop learning assumes behavioural changes within an organisation. Cognitive changes are not included, implying that people change their behaviour in everyday organisational life, but do not change the way they look at organisation, its role in the business world, and the basic assumptions they have about its functioning. Single-loop learning was recognized earlier by Cyert and March (1963), as well as March and Olsen (1976). Double-loop learning, on the other hand, produces not only behavioural change, but also a "change in the values of theory-in-use, as well as in its strategies and assumptions" (Argyris and Schön 1996, p 21).

Recent research emphasizes the importance of the group (team) level of learning within organisations (Senge 1994; Argote et al. 1990; Edmondson 1999; Hargadon 1999; Wong 2002; Marquardt 2002). Learning in groups within organisations becomes an important segment of the analysis. The first perspective on group learning starts from the classical functional organisational perspective, pointing to the well-known silo-effect, when organisational units are limited by their functional perspectives and for that reason do not have at their disposal the knowledge available to other organisational units. Dixon (1994), however, warns about another danger of the functional approach to learning. Alienation and the lack of exchange of knowledge between organisational units result in problems in understanding their own information and its appropriate interpretation, simply because they cannot see the total picture. This second perspective points to the difference between learning that occurs within a group and learning occurring within teams. This perspective in fact makes the distinction between groups and teams as social systems. According to Marquardt (2002, p 42) there are three prerequisites for team learning: (1) a complex issue has to be addressed through collective insight, (2) innovative action is coordinated within a team and (3) team learning has the ability to encourage and stimulate learning in other teams. The research done by Wong (2002) indicates that teams can learn both in explorative and in exploitative way. Exploitative learning implies that in the process of problem solving, team members use their previous knowledge and experience extensively. In approaching a problem, they primarily start from the question of whether a team member was previously involved with a similar situation and whether that knowledge could be exploited for the purpose of solving the specific problem in question. On the other hand, the explorative or research approach to solving problems is based on

facing new and creative problems, while at the same time the team is trying to come to a new, totally unexplored approach and generate a new solution to a specific problem.

Finally, alliances represent a unique polygon for the investigation of organisational learning and knowledge transfer. Organisational learning and knowledge transfer represent one of the key reasons for forming strategic alliances in the modern environment. Research into organisational learning in strategic alliances was developed in the context of several clearly distinguished perspectives: general analysis of knowledge management in the alliances (Inkpen 1996, 1997, 1998a, b; Inkpen and Dinur 1998; Child 2003), the technological perspective of learning and knowledge transfer (Pucik 1991; Dodgson 1993; Hagendoorn 1993, Mowery et al. 1996; Dierkes et al. 2001, p 282), the cultural perspective (Luo 1997, Osborn and Hagedoorn 1997), the perspective of trust (Inkpen and Currall 1998; Muthusamy and White 2006), the evolutionary perspective (Parkhe 1991; Iyer 2002), the competition perspective (Khanna et al. 1994; Hamel et al. 1989; Hamel 1991), network perspective (Kraatz 1996; Kogut 2000; Zhao et al. 2005; Reagans, McEvily 2003; Inkpen and Tsang 2005) and the perspective of organisational fit and absorptive capacity (Cohen and Levinthal 1989; Lorange and Roos 1991; Szulanski 1996; Lane and Lubatkin 1998; Cummings 2001; Inkpen and Ramaswamy 2006). The research within each of the categories mentioned above basically followed one of two streams: (1) the authors analyzed the influence of a specific factor (technology, time, trust, etc)and its influence on organisational learning and knowledge transfer within the strategic alliance, or (2) the authors analyzed the reason why strategic alliances do not result in the transfer of knowledge and learning to the expected extent, i.e. the factors which caused the inhibition of learning and knowledge transfer. In this paper we are particularly interested in the evolutionary perspective and the influence of partnership longevity on learning and knowledge transfer in strategic alliances.

2.2 The Evolutionary Perspective of Organisational Learning in Strategic Alliances

An evolutionary perspective of learning within strategic alliances starts from the assumption that they are structured systems of well-established relationships, which gradually develop over a period of time. The underlying logic of this understanding is that the relationship between learning and age is linear, so the older a partnership is, the more knowledge will be transferred between the alliance partners, the more it will know, and the more it will be able to learn. For instance, in research that comprised almost 60 strategic alliances Faulkner (1995) identified direct interdependency between the developmental stage of an alliance and organisational learning.

When referring to an alliance evolution and learning, Child (2003) states that the relationship between the life cycle of a partnership and organisational learning

cannot be viewed in isolation from the aims of the partnership and the nature of cooperation between the partners. Child (2003), as well as Khanna et al. (1994), notes that learning within strategic alliances can take either the form of competitive or collaborative learning. The direct connection between learning and the life cycle of a partnership can be studied only in those partnerships in which there is a genuine devotion of both partners to mutual learning and further cooperation. If a partnership is seen as a short-term opportunity, the possibilities of such an analysis are limited. Competitive learning within strategic alliances is best illustrated by a situation in which one partner enters an alliance with the clear intention of learning as much as possible from the other partner, opposing in that way its individual learning to mutual learning within the alliance. Partners have to make their own organisational knowledge available to the other side, in order to enable any kind of learning from each other. Often partners within an alliance start behaving in an opportunistic way and follow the principle "learn as much as you can and run away!". In that case, during the process of cooperation, one or both partners may come to the conclusion that it is more lucrative to take from the partnership as much as they can as fast as they can, and then abandon the project and continue doing business independently. In this case, alliances lose their main role as the polygon for cooperation and mutual learning and become "learning races" (Khanna et al. 1994). Naturally partners never talk about this openly, but the very manner in which they behave clearly shows that the aim of an alliance is to internalize the other partner's skills and knowledge (Hamel 1991, p 86). This situation raises the issue of the short life of alliances and their success or failure. As already explained, an alliance is considered to be successful when the goals for which it was created are accomplished. However, in the process of setting the goals of an alliance, partners can take an opportunistic attitude, openly stating one desired goal while at the same time hiding the real goal, which they attempt to reach secretly. When an alliance fails or cooperation ends long before originally planned, the question arises whether it failed because one of the partners reached the goal – learned what was wanted, and consequently was not further interested in continuing to cooperate (Hamel 1991, Khanna et al. 1994).

Another approach can be recognized in the work of those who operationalize partnership longevity not in terms of partnership age, but in terms of developmental stages, such as in the work of Iyer (Iyer 2002) In Iyer's view, learning within alliances is of the evolutionary type: it changes together with the evolution of the partnership, its growing up and its development. Iyer's model identifies four developmental stages, along five learning dimensions: (1) environment, (2) skills, (3) goals, (4) tasks and (5) process, previously developed by Doz (1996). Iyer refers to the first stage as the stage of rising awareness and making decisions about the choice of a partner. He considers this stage to be essential for the creation of a strategic alliance. This is the stage in which partners learn most about the characteristics of external surroundings, especially in case of international strategic alliances. Iyer refers to the second stage as an exploratory stage. The relation between partners is still very loose and fragile, with an open possibility for both sides to give up the partnership in a relatively simple and fast way. Learning in this

stage is dominantly unilateral with the indications of mutual learning. This stage implies learning about external and internal surroundings, but at the same time does not imply a deeper insight into the skills and in-built partner's knowledge. The third phase is the phase of expansion. In this stage the level of the interdependence between partners increases. Learning is mutual at this stage and partners work together on the aims of the alliance and overcoming potential inhibitions to learning. The partners devote less and less attention to learning about external and internal surroundings, and more and more attention to the ways of creating new possibilities and access to new markets. The fourth stage is characterized by a considerable exchange of economic resources as well as by intensive communication between the partners and important social exchange.

Another approach to studying learning within strategic alliances from a dynamic (evolutionary) perspective can be found in the work of Ariño and de la Torre (1998). Relying on the work by Ring and Van de Ven (1994), as well as Doz (1996), the authors develop a collaborative model explaining how partnerships are formed, how they develop and how they end. They identify positive feedback loops as critical for the revolutionary process, the quality of the relationship established between the partners as a mediating variable in this process, as well as to the outcome of the evolutionary process, and point to the importance of establishing clear procedures for dealing with conflicts, whose existence prevents individual actions of the partners in a conflict situation and represents prevention of an undue ending to the partnership.

3 Research

3.1 Research Design

The research is based on a comparative analysis of three in-depth case studies. Multiple exploratory case study analysis was seen as an appropriate research approach as we wanted to examine phenomena in their real settings (Yin 1984; Eisenhardt 1989) and search for an answer to the research question, which can be summarized as: how important is network age for learning and knowledge transfer among network members? We applied the following techniques: interviews with managers, observation, and the analysis of historical data. The interviews were conducted in semi-structured form. In order to ensure validity of the content of the interview and to enable systematic data gathering during the interview procedure, we developed a questionnaire which in content met the research questions. All the interviews were conducted face-to-face. In total, 20 interviews were conducted. The interviews lasted from 45 to 210 min. Most of the interviews were conducted once, but in some cases it was necessary to go over the research questions once more. Further, the data-gathering phase also included collection and analysis of archival data. The archival data included various historical data about

the companies that created the network – contracts, manuals, bylaws, minutes from managerial meetings, press releases, and so forth. The method of observation was also applied where appropriate.

In the theoretical part of this research we outlined different approaches to the individual-organisational learning relationship. Having these different approaches in mind, in this research we were led by Hedberg's (1981) logic that organisational learning is not a simple cumulative result of the members' learning. Therefore, we analyzed individual-level learning, as well as organisational-level learning. The questions from the domain of organisational learning were defined so as to allow identification of functional areas within which learning occurred and those within which it did not; next the aim was to allow identification of organisational practices and routines which were improved, compared to those which remained unchanged, and, finally, to help us identify the type of learning that occurred in the investigated case.

In order to control other factors, the research was designed in such a way that the selected strategic alliances should belong to the same economy (operating in the same cultural, institutional, social and political context) and the same business (media). All three alliances were created by a Serbian organisation with a foreign partner from a EU country. The selection of like subjects allowed more precise control and clearly defined the frames for generalization of conclusions (as suggested by Eisenhardt 1989). Above all, it enabled control of factors deriving from local conditions of doing business and inter-industrial differences.

3.2 Research Settings

Hereafter is a brief overview of the three investigated cases.

Case 1 This partnership was created in 2002 by two renowned organisations that both have a respectable tradition and are leaders in their business. It was formed as a 55 equity-based strategic alliance between Serbia's oldest media company and a German media giant. However, during their long history they had never before cooperated in any circumstances. Each of the sides involved in the partnership had its own, individual aims for the partnership creation: the Serbian partner to get financial injection and the opportunity to obtain heavily needed capital, the German partner to get a market share in one more European country. The partners established certain strict rules of behaviour, primarily concerning the mechanisms of authority delegation.

Case 2 Another partnership between Serbian and German companies in the media business, created in the year 2003. The Serbian partner holds 45% of ownership, the German partner 55%. The willingness of the German partner to take over the remaining 45% of the ownership rights and in this way to obtain total control is plain.

Case 3 In this case we are considering a completely contract-based partnership between a fast growing Serbian company in the media business and a global media

giant, concerning a daily-based radio show. The companies decided to cooperate when faced with the challenge of declining popularity and a tremendous decrease in audience. In order for both to survive in the Serbian market, they needed to think about new ways of working and broadcasting the programme. This pressure brought about a new product – a new radio show. The companies did have some experience of working together in the past.

3.3 Findings

We will firstly focus on the behaviour of the dependent variable – organisational learning and knowledge transfer. The analysis of organisational learning was focused in such a way as to identify if any organisational learning and knowledge transfer occurred within the organisations that created partnerships. If the answer was positive, additional investigation was conducted as to identify functional fields within which knowledge transfer and learning occurred, as well as to differentiate changes in previously existing practices and acceptance of the new ones. The aim was to identify the type of learning that occurred.

3.3.1 Organisational Learning and Knowledge Transfer

Case 1 The creation of the partnership has not introduced any significant changes in the partners' internal organisation, nor has it radically changed the established way of doing business. Only a few employees were allotted different duties or new positions, while only some organisational units changed their organisational features. The analysis of mechanisms of integration shows that partners mostly rely on the use of top management meetings and the exchange of official documents. Direct communication via telephone or e-mail is used only in communication between certain managerial positions, while most communication between the partners is directed through the appointed representatives. Meetings between representatives of both partners are held exclusively at top management level, while visits of one partner's representatives to the locations of other partner, joint training sessions, employee rotation, mixed teams, and coordination mechanisms are not used. Nevertheless in this case, as in many others reported within literature, rotation of key managers or former managers and knowledgeable individuals showed as a very effective method of knowledge transfer. Organisational learning in the partnership was mainly characterized by exploitative learning within one circle. When new products were created, the process of learning was exploitative in nature and resulted from taking over the existing practice and ways of doing business. Products that showed to be very successful in other markets were taken over and their life circle was extended in this case by their implementation in the new market. To a certain extent there was a considerable level of individual learning; however, there were no mechanisms that would enable integration within the organization as a

whole, or the transfer of individual, group and organisational learning and knowledge. Generally speaking, there was no attempt at creating a larger number of opportunities for the partners to try joint accomplishment of these tasks. It can also be argued that what happened in this partnership is a kind of precise transfer of one partner's explicit knowledge, or, to interpret it in Nonaka's terms (Nonaka 1994), in knowledge combination. When saying that precise knowledge transfer occurred we assume that authority delegation and strict division of responsibilities between partners prevented free knowledge diffusion which could have been advantageous for explorative learning promotion (Table 1).

Table 1 Case 1 – examples of some changes and characteristics of the organisational learning

Change	Meaning	Learning
Separation of the positions of CEO and Editor in Chief	Formalization of the agreed upon authority delegation	Adaptive change; single loop learning, adaptive learning, lower level learning, exploitative learning
Changes in mezzo organization – changes in organisational units	Partnership implementation; Foreign partner's model taken over	Adaptive change; single loop learning; exploitative learning
Changes in micro organization – introduction of new positions	Partnership implementation; foreign partner's model taken over	Adaptive change; single loop learning; exploitative learning
Changes in the working procedures	Changed market approach; changes in the domain of selling; The most important outcome is an understanding of what brings profit and how business should be managed; different operating procedures; partnership implementation; foreign partner's model taken over	Generative change; double loop learning; exploitative learning
Introduction of new products	Incremental improvements of the existing products; foreign partner's model taken over	Adaptive change; single loop learning; exploitative learning
Introduction of new products – new types of advertisements	Partnership implementation; foreign partner's model taken over	Unsuccessful change; abandoned business idea. No real change; no learning
Technology	New hardware and software, new printing machine financed by a foreign partner; foreign partner's knowledge about the use of these technologies was not transferred. Domestic partner adopted existing working practices to match these technology platforms	Adaptive change; single loop learning

Case 2 This partnership exhibits the same pattern of behaviour as the previous one. Organisational learning was predominantly characterized by exploitative learning within the existing knowledge circle. One partner in this process was seen as the dominant source of knowledge, while the other took the role of a passive learner. Learning in these cases had the characteristics of a teacher–student relationship, in which managers from one company had the role of teacher to the managers and employees of the other company. The difference is that although Case 2 shows the same behavioural path as Case 1, it reports significantly lower achievements in knowledge transfer and learning. Partners did not learn to jointly execute marketing, R&D, or production operations, and only some of the employees directly involved with the partnership creation obtained new knowledge and improved individual knowledge depositories (Table 2).

Case 3 This partnership has a significantly different behaviour pattern. Organisational learning was predominantly characterized by explorative learning, double-loop learning between the partners who positioned themselves as equal. The partnership was created with a purpose to develop new product – new show intended to deal with the challenges of low publicity and interest of the audience. Learning as a partnership goal was positioned very high. Creation of the new show called for an intensive cooperation and exchange of ideas, not only while the

Table 2 Case 2 – examples of some changes and characteristics of the organisational learning

Change	Meaning	Learning
Separation of the positions of CEO and Editor in Chief	Formalization of the agreed upon authority delegation	Adaptive change; single loop learning, adaptive learning, exploitative learning;
Changes in mezzo organization	Partnership implementation; foreign partner's model taken over	Adaptive change; single loop learning, adaptive learning, lower level learning, exploitative learning;
Changes in micro organization – introduction of new positions	Partnership implementation; foreign partner's model taken over	Adaptive change; single loop learning, adaptive learning, lower level learning, exploitative learning
Changes in the working procedures	Different organization of market approach to selling advertisement space; different operating procedures; partnership implementation; foreign partner's model taken over	Generative change; single loop learning, adaptive learning, lower level learning, exploitative learning;
Introduction of new products	Partnership implementation; foreign partner's model taken over	Adaptive change; single loop learning, adaptive learning, lower level learning, exploitative learning
Technology	Foreign partner financed investment into information technology. New computers were bought	Adaptive change; no learning

partnership was in the phase of preparation, but during all the later phases of its development.

The interactive concept of the partnership and intensive contacts during its realization determined to a large extent interaction between individual and organisational learning. Individual learning of the employees resulting from teamwork automatically enabled the interaction between individual and team learning. The interaction between the employees and the flow of information and knowledge in an interactive inter-organisational context directly influenced the level of knowledge and learning on the individual level. As explained earlier in this paper, according to Hamel (1991), individual learning becomes collective when there are mechanisms for combining individual knowledge and when the sum of the knowledge affects all those who can benefit from that knowledge transfer. Introducing regular feedback on the performances enabled continuous instrumental learning through summing up impressions about the show. It also institutionalized the practice of rapid change in the work dynamics, the topics analyzed or the way of synchronizing the activities during the realization of the show, in case the activities applied proved to be inadequate.

In this partnership we can recognize a vivid learning activity in accordance with Nonaka's view (Nonaka 1994). Everyday virtual contacts, telephone communication and interactive adjustments of partners enabled continuous exchange of implicit knowledge. This knowledge was further coded through instructions, guidelines and operating procedures (Table 3).

3.3.2 Network Longevity Vs. Network Maturity

From this comparative case analysis we can derive several reasons why different learning patterns occurred. Our research exclusively focused on network longevity.

Network Longevity

The partnerships analyzed belonged to different age groups. We have not only based our analysis on the comparison of the partnerships' ages, but have also used Iyer's model (2002) to determine and compare the phases in the evolution. From the time perspective, the partnership in Case 1 is the oldest. When this research was carried out it was almost 7 years old. There were certain organisational inequalities within the organisation regarding cooperation with the foreign partner, due to the fact that some parts of organisation were strongly influenced by the partnership, while others were not. Taking into account only those parts of the organisation that were influenced by the partnership, this case would be categorized in the second phase of Iyer's life cycle-learning model of strategic partnerships. The partnership in Case 2 is relatively young – it was formed 5 years ago. In this case, just like in the first, some parts were influenced and changed by the partnership whereas others were not. Taking into account only those parts of the organisation that were

Table 3 Case 3 – examples of some changes and characteristics of the organisational learning

Change	Meaning	Learning
New product – new show	The show goes in vivo. Neither side had pre-existing experience in managing and executing the show of this kind. Completely changed standards of behaviour, and the way of thinking about how to execute the show as well	Interactive learning. Double-loop learning. Explorative learning
Changed organisational design	Although the partnership is operationalized through a lean structure in which mezzo level of organization practically does not exist, important adjustments in organization design have been made: new positions were introduced and the existing job descriptions were modified	Necessary to change standard way of thinking about how the work should be done – double loop learning
Changed working procedures	New ways of product delivery. All of the employees involved in the show consider it as a learning experience	Necessary to change standard way of thinking about how the work should be done – double loop learning
Overlapping authority	It was necessary to change standard way of behaviour and thinking about how the work should be done, to adjust while working, and to manage in vivo show in two distant studios. Shared management skills required	Generative learning

influenced by the partnership, this case could be categorized at the end of the second phase of Iyer's life cycle learning model. The partnership in Case 3 is only 1 year old. However, according to organisational and other standards, it can be categorized in the fourth stage of Iyer's life cycle.

Our results show that partnership age does not necessarily determine the phase in the development of the partnership, and that the relationship between learning and knowledge transfer is not direct and linear. This means that the level of learning that will be achieved through the partnership is not necessarily connected to the age of the partnership. In this case, younger partnerships achieved a higher level of organisational learning and more intensive knowledge transfer. As we analyzed the background factors that might have influence on the relationship between longevity and learning relationship, we noticed two factors as particularly important. In Cases 1 and 2 the companies that created an alliance did not have any kind of previous cooperation either on an individual or organisational level. In Case 3 the organisations had cooperated previously through joint education, seminars and workshops. Interviews revealed that their previous contacts were perceived to be

very important, because they prepared the employees and the organisations for the forthcoming partnership. Furthermore, the fact that several employees from one partner transferred to work for the other even before the partnership was created contributed to successfully overcoming all challenges partners faced in the implementation phase. These previous individual and organisational contacts contributed to the level of organisational readiness to accept the partnership and made their organisational networks more mature.

As a result, we conceptualize network maturity as an important network characteristic, which significantly influences learning processes within a network.

Network Maturity

Network maturity moderates the relationship between the network longevity and learning, making it non-linear. Learning in networks is highly influenced by previous contacts, or any kind of pre-existing cooperation between network members. It is also important if the employees from the organisations that formed the network had previous social contacts. When these previous individual or organisational contacts exist, the alliance is able to develop more mature learning behaviour and, as early as in the initial stage of partnership creation, partners can work together intensively on its operationalization, which has a positive impact on their future devotion to the alliance and its goals.

We summarize our findings from the case-based research:

1. The age of the network is not of essential importance for learning and knowledge transfer, but its maturity is.
2. Network maturity moderates the relationship between the network longevity and learning. Network maturity is a function of network age, pre-existing experience in working together, and the development of a social network among the employees of organisations that formed the network

$$\text{Maturity} = f\{\text{Age},\ \text{Experience},\ \text{Personal Network}\}.$$

3. Ceteris paribus, younger networks can be more mature than older ones if they have a positive inter-organisational experience with their network partners and/or previous social networks between the employees in the organisations that formed the network.

4 Concluding Remarks

Research results show that the youngest partnership achieved the highest stage of network development according to the evolutionary model, and that it was followed by the highest level of organisational learning and knowledge transfer. The other

two partnerships report a relatively similar pattern of behaviour towards network development, learning and knowledge transfer. Empirical investigation has shown that network age per se does not explain learning processes within a network. In our examples network longevity did not show to be a reliable indicator of the network progress, nor the stage at which a network is. Certainly, age is an important factor of learning, but only as a part of a broader concept associated with the evolution of the network and not in isolation. We call this broader concept the network maturity. The results of our case study analysis indicate that network maturity is a more important determinant of learning and knowledge transfer than network age. It is a function of network age, pre-existing experience in working together, and the development of a social network among the employees of organisations that formed the network

Limitations In the explorative case study we analyzed the problem of organisational learning in strategic alliances taking into consideration only one factor: partnership longevity. Although we believe that certain theoretical and practical results of this study represent a significant contribution to the existing body of knowledge, it is also important to highlight certain limitations. Firstly, this research is based on the analysis of three case studies. A study that covers a wider group of research subjects is needed in order to test the conclusions of our study and to show that our results are not only relevant for the investigated cases. Secondly, this research is based on the platform of one industry – media. The generalizability of our findings should be tested through the investigation of other industries. Finally, it is also very important to examine other factors that showed to be important for organisational learning and knowledge transfer in an alliance setting. Our research showed that among the most important ones are strategic orientation towards learning, i.e. strategic fit, and organisational compatibility, i.e. organisational fit.

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Part C
Cooperatives

Behavioral Logics and Governance of Cooperatives

Gemeinschaft and *Gesellschaft* in Cooperatives

Jerker Nilsson and George Hendrikse

Abstract A cooperative business consists of a cooperative society and a cooperative business firm. The society of members intends to control the business in such a way as to focus the business operations on its interests. The two organizational units tend, however, to follow different behavioral logics. Borrowing some core concepts from classical sociology, *Gemeinschaft* norms rule within the memberships, while *Gesellschaft* norms dominate the business firms. Thereby it may be difficult to accomplish alignment between the membership organization and the business organization in order to be competitive. This paper addresses the difficulties of following the different logics by exploring *Gemeinschaft* and *Gesellschaft* within agricultural cooperatives with a focus on the membership logics.

1 Introduction

A cooperative is a dual organization. It consists of a cooperative society and a business firm. The society, hierarchically organized with a board on top, owns and controls the firm. The firm exists in order to satisfy the desires of the cooperative society's members. Hence the two units are closely interlinked and mutually dependent upon each other.

At the same time the two organizational units may be quite different. The business firm operates on market conditions; hence it has to be as efficient as competing firms. The society has members who are not only businessmen, for example farmers, but also humans, which means that the society has social attributes. The interrelationships between the various members of the cooperative society and therefore also between the members and the society at large are often

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characterized in terms of trust, involvement, commitment, solidarity, loyalty and similar socio-psychological constructs. The literature on cooperatives abounds with treatments about cooperative ideology where also the concept of a specific cooperative value set is found (Hakelius 1999; Hogeland 2006).

This difference between cooperative societies and cooperative firms implies that there might be different behavioral logics behind the activities within the two types of units. If so there is either a risk for poor alignment between the two or that the alignment that takes place is on the conditions of one organizational unit at the expense of the other one. In any case there is a risk for inefficient operations. This may be detrimental as the two organizational units are like the two sides of the same coin. If the cooperative society is dominated by the business firm, there is a risk for members becoming uncommitted and losing their trust in the cooperative, and therefore the members reduce their trade, do not want to invest in the cooperative and refrain from controlling the firm. Similarly, if the cooperative society forces the firm to adapt to its own demands only, there is a risk that the firm does not become competitive enough.

While an investor-owned firm (IOF) has to consider only the business logics, a cooperative firm's success is contingent on the interplay between both logics, i.e. also the social attributes of the cooperative society. Hence King (1995, pp 1160–1161) states that

> . . . efficiency considerations alone cannot be the basis for institutional design, especially in a setting of high transaction costs and increasing concentration of market power. . . . [T]he primary strength of cooperatives has been in providing the infrastructure and service support systems needed to deliver and implement more technologies . . .

It may be that the problems that many agricultural cooperatives have been facing recently and currently face are rooted in the difficulties to unite the logics of cooperative societies and business firms. Some cooperatives have transformed into another cooperative organizational model, for example by introducing individual ownership by the members (Nilsson and Ohlsson 2007) or by restructuring their internal organization (Bijman et al. 2007). Others have disappeared due to mergers or acquisitions (Chaddad and Cook 2004; Van der Krogt et al. 2007). Some bankruptcies have taken place (Lang 2006). Other cooperatives have sold a part of their business activities to investors, thus getting a hybrid type of cooperative (Van Bekkum and Bijman 2006). Still others have converted into investor-owned firms.

The above-mentioned development may be explained with the help of property rights theory in line with Furubotn and Pejovich (1972). As a cooperative expands in order to be competitive, there will be increasing information asymmetry between the members and the professional management. Therefore the members will experience difficulties in monitoring the firm, and the management will control the residual rights. The commercial logics of running a large and complex business firm and the social logics within the membership are not aligned.

The various organizational models may be expressed as different governance structures, i.e. different constellations of control rights and income rights (Hendrikse 2005). They vary for example depending on whether producer interests or capital

interests guide the decision making and whether the decision making is centralized or decentralized. Hence, also the logics within the member organization versus within the cooperative business firm are embraced by the governance structures. Nevertheless, the question of what is included in the member interests, or the membership logics, is unresolved – what kind of logic exists as the members and the member organization evaluate the cooperative business? Hence with a well balanced governance structure, i.e. one that gives high-powered incentives to the members to monitor the firm, even large and complex cooperatives may thrive (Baron 2007).

This paper addresses the logics within the memberships of agricultural cooperatives. The aim of the study is to explore the logics that may be found within cooperative memberships, especially pinpointing the problems that might result in terms of poor alignment with the logics within the cooperative business firms.

The classification of logics used here is borrowed from classical sociology (Tönnies 1957). *Gemeinschaft* expresses human relationships characterized by closeness, kinship and friendship. *Gesellschaft* is a type of interaction that humans have with anonymous others. It is evident that these two logics vary considerably because agricultural cooperatives are very different from one another. They are found in different industries, different countries and cultures, and different time periods. For this sake the empirical basis for this study comprises several agricultural industries and different countries. Still, the findings can only be indicative.

The paper is structured as follows. Section 2 reports from six empirical studies within cooperative memberships, all indicating that the social forces are strong. The cases cover several countries and several agricultural industries. Following this is an account of a classical approach to explain different types of human interaction (or logics), for example the processes within the cooperative society and within the cooperative business firm. The subsequent Section 4 is an analysis of the six empirical studies in light of the different logics of human interaction. Some conclusions for future research on cooperatives are drawn.

2 Case Studies

2.1 Member Motive Variety

Member behavior in agricultural cooperatives has been subject to research in a large number of empirical studies. These studies report about farmers' motivational factors, attitudes, choice of business partners, and other behavioral constructs. In general these studies reveal that member behavior is complex and difficult to forecast.

A selection of studies is presented here. The choice of studies is based on a few conditions. First, they should be recent. Second, they should present a variety of

member behavior, i.e. different agricultural industries and different countries. Hence the six studies represent cooperatives in five countries, operating in five agricultural industries. All of them present the social forces within the membership – how members look upon the cooperatives as trading partners and their willingness to be involved in the cooperatives.

2.1.1 Swedish Forest Owners

In a study of Swedish forest owners' choice between cooperative and investor-owned business partners Enander et al. (2009) found that the forest owners often base themselves on personal relations to the representatives of the buying firms. Because the ownership of forest land represents substantial amounts of capital, the forest owners should reasonably be keen to get the highest possible price for their timber. It should be noted that forestry is regarded as an agricultural industry as a large share of Sweden's forest land is owned by farmers.

One possible explanation for the forest owners' behavior is that the calculation of prices is a complicated matter because no two trees are identical. Likewise, the forestry cooperatives and the investor-owned processors apply different pricing principles, whereby the forest owners have difficulties in comparing the prices. Moreover, while the investor-owned processors pay a flat price, the major cooperative also pays patronage refunds, a dividend that is difficult to know beforehand, as well as bonus shares.

Some forest owners even regard the buying firms' representatives as personal friends even though they must reasonably understand that these persons' interests are directly opposite to their own interests. A possible reason may be that conducting forestry operations involves considerable complexities for many owners so they are in need of assistance and advice.

An outside observer would believe that the forest owners, due to the difficulties in assessing the two optional buyer categories, would discuss with each other in order to obtain information. That is, however, not the case. On the contrary the forest owners hardly ever exchange experiences about different business partners. This is a sensitive issue and they do not want to jeopardize their relations with other forest owners.

If the forest owners are not affected by other forest owners' choice of business partners they are the more influenced by traditions. A large share of the respondents said that they have the same partner firm as their parents had. The business partners are inherited from one generation to the next.

All in all, the forest owners' behavior seems to be loaded with sentiments – about cooperative versus non-cooperative partners, relationships to the processing firms' representatives, relationships to neighboring forest owners, relationships to family, etc. When planning its operations the forestry cooperative has to take these behavioral traits into account and likewise in its running of the member organization and in all other exchange with the members.

2.1.2 Macedonian Dairy Farmers

Krstevska and Nilsson (2009) report about Macedonian dairy farmers' relationships with different types of buying firms. Dairy farms in Macedonia are divided into small and large farms. The small farms have only a few cows while the large farms may have 20 or more cows. The large farmers' behavior resembles that of dairy farmers in Western Europe. The processors have cool tanker trucks, which collect the milk at the farms every second day.

The small dairy farmers are different. Their handling of the milk is purely manual and they have no cooling equipment. Even though they deliver the milk to special collection stations in the villages twice per day, the quality of the milk becomes poor (contaminated by bacteria, high amount of cells, low on protein, etc.). This milk can not be delivered to a firm that processes the raw product to any value-added products. If this were to happen, the price would be extremely low. Instead the milk is sold to small processors in the villages where it is mainly made into yoghurt. These small dairies pay a fixed per liter price because they have no equipment for measuring quality.

There are social connections between the smallholders so they generally inform each other about everything they do. There are, however, also strong links between the smallholders and the yoghurt producers in the villages. These links contribute to preserve the trading pattern. Hence, no development takes place. Alternatively the dairy farmers (small as well as large) could have established a cooperative firm which would advice them about how to get better milk quality and to market the milk at a higher price. Such cooperatives are, however, not established since the farmers have little trust in one another and they also lack both capital to invest in a cooperative and skills to organize it.

In conclusion, the small dairy farmers are to a large extent driven by social forces, which contribute to preserve status quo, preventing the formation of a cooperative and the improvement of milk quality and the search for alternative processing firms.

2.1.3 Russian Agricultural Producers

Another study that concerns farmers' disinterest in cooperative organizations treats Russian experiences (Golovina and Nilsson 2009). Because the agricultural producers have no tradition of cooperative business the Russian government has instituted a number of marketing and supply cooperatives. A survey among the agricultural producers shows that these top-down organized cooperatives have meager survival chances.

The population of agricultural producers is extremely heterogeneous, comprising both former kolzhoses and sovzhoses (with a few thousand hectares) and household farmers (with about 1 ha on average). Hence the degree of trust within the memberships is extremely small. The cooperatives that the governmental authorities have established are about to fade away as the equity capital is being

lost. The chairman of the board is often one of the very large agricultural producers, and he has not the ability to unite the very heterogeneous membership – on the contrary his interest is to promote his own interests.

2.1.4 Members of a Swedish Farm Supply and Grain Marketing Cooperative

The board of directors of Sweden's largest agricultural cooperative faced problems as the members raised complaints about poor prices both when they bought farm inputs from the cooperative and when they sold grain to it (Nilsson et al. 2009). As a result the board launched a budget-cutting program, leading to the demise of the retail chain and the decrease in the number of silos. Moreover, the member organization was remodeled. The number of local wards was reduced and larger wards were created. The number of echelons in the organizational hierarchy was reduced and the number of elected representatives became fewer. Through these measures the cooperative succeeded to cut one-tenth of its total costs whereby it could improve the prices offered to the members.

This cost cutting process was, however, not positively received by the members. Both the silo plants and the retail outlets were the members' local connections to the cooperative. These plants had "always" existed and were important to preserve a living countryside, according to the members. The new member organization was considered to weaken the members' connection to each other and to the cooperative. A survey showed that the members had low trust in the cooperatives' leadership, and their commitment was low. Hence, the social forces within the membership and the economic interests of the members were contradictory.

Contributing to the low member commitment is the fact that this cooperative follows a specific governance structure. One-fourth of the cooperative's turnover is trade with the members – the rest is upstream and downstream activities with no connection to the farmers, also internationally. The cooperative has operations in 19 countries. The non-member related business operations are run as a profit-maximizing business. Thanks to the profits of these downstream and upstream operations the members get extremely good return on the investments in the cooperative. Nevertheless they feel that the non-member related operations dominate the cooperative to the extent that their interests are no longer taken into account.

2.1.5 New Zealand Dairy Farmers

In 2007 the board of Fonterra, one of the world's largest dairy cooperatives, proposed that the cooperative should be partly demutualized. In order to be able to exploit market opportunities the cooperative needed more capital, and the Stock Exchange was considered to be the best capital source (Rydberg 2009). Most members were, however, opposed to this remodeling plan. There is a strong cooperative tradition in New Zealand. For most dairy farmers Fonterra is the only

possible milk buyer. Hence, an opposition' was seen within the membership, and the board withdrew its proposal.

Contributing to this development is the fact that Fonterra has a "shadow board", Shareholders' Council, which worked against the proposal of the board. The Shareholders' Council enjoys the members' confidence much more than the Board. It was meant to be a "watch dog" when Fonterra was established as this cooperative would be extremely dominating in the New Zealand dairy industry.

2.2 Alignment of Member Society and Business Firm Motives

Many studies report about similar social driving forces among cooperative members (e.g. Jensen 1990; Hansen et al. 2002; Bhuyan 2007; James and Sykuta 2006; Österberg and Nilsson 2009). Some state that various economic factors are important for member commitment, loyalty, and other expressions of satisfaction (Fulton and Adamowicz 1993; Gray and Kraenzle 1998). However, others state that the cooperatives' service level as well as the cooperatives' ability to offer an assured market is just as important as the price levels (Burt and Wirth 1990; Misra et al. 1993), or sometimes even more important (Bravo-Ureta and Lee 1988; Cain et al. 1989; Jensen 1990; Klein et al. 1997).

Borgen (2001) conducted a study among members of Norwegian cooperatives. The farmers have a psychological attachment to their cooperatives. Their membership even contributes to providing "self-identification". In an investigation, covering Swedish members of agricultural cooperative within different industries Fahlbeck (2007) found that there is a preference for unallocated (collectively owned) capital. This may be interpreted as the members feeling like a collective.

Laursen (2005) found that members of different Danish cooperatives were generally satisfied with the cooperatives, even though these are of very large size. The largest agricultural cooperatives in Denmark seem to have succeeded in preserving strong member satisfaction even though they are working on world market conditions.

3 *Gemeinschaft* and *Gesellschaft*

The empirical observations presented above may be analyzed in terms of *Gemeinschaft* and *Gesellschaft*. These two concepts originate from classical sociological theory, coined by the German pioneering sociologist Ferdinand Tönnies in 1887. The concepts have been translated into English as "community" and "society" (Tönnies 1957) but these terms do not cover the original German terms very well so *Gemeinschaft* and *Gesellschaft* are most often used also in English language texts.

Gemeinschaft and *Gesellschaft* are ideal type concepts. They may exist in their extreme form in real life but there is also a host of intermediary forms.

3.1 Gemeinschaft

Gemeinschaft implies interaction between humans who know each other more or less and, above all, who care for each other. Hence it most often concerns interaction within relatively small groups. It is typical that the group of founders of a cooperative society consists of a few individuals who are well acquainted, and thus have trust in each other. It is, however, not necessary that *Gemeinschaft* occurs only in small groups. The number of individuals could even be quite large, for example within a social class, where a specific class consciousness exists. Therefore, one may find *Gemeinschaft* also in large cooperative memberships as well as in churches and social classes.

Within a *Gemeinschaft*, the motivation is the individuals' *Wesenwille* which has been translated into "essential will". The *Gemeinschaft* members are members of the group because the membership is self-evident to them. The driving force is hence almost instinctive and organic. The membership gives satisfaction in itself and is thus self-fulfilling. To the extent that a member of a *Gemeinschaft* does no longer find his or her membership satisfactory, he or she will leave the group, and vice versa. Because of this *Gemeinschaft* groups tend to be homogeneous in respects that are important to the members.

Tönnies identified two types of *Gemeinschaft*. One is cooperatives *(Genossenschaft)* which implies community between all participating actors on an equal basis. The other subgroup is authority *(Herrschaft)* which implies that there are natural or elected leaders within the group, for example priests within a religious community. It seems that Tönnies had sympathies for the cooperative category as the entire book has been seen as an expression of his worries about the increasing dominance of *Gesellschaft* formations in Germany of his time, and he hoped that the growing consumer cooperative movement was a promising development.

3.2 Gesellschaft

Gesellschaft concerns human interaction when the actors are unknown and anonymous to one another. *Gesellschaft* interaction is more likely to occur within large groups of individuals. Hence it may characterize the interaction within large cooperative memberships, including the members' attitudes towards the cooperative society and the cooperative firm. Just as the case is with *Gemeinschaft, Gesellschaft* is found in both large and small groups of individuals. It occurs, for example, when an individual buyer and an individual seller are negotiating with each other.

The driving force behind *Gesellschaft* was called *Kürwille* by Tönnies, or "conditional will" or "arbitrary will". It implies that the individual exhibits a calculative behavior. An individual who acts according to *Kürwille* separates

means from ends and is thus able to choose efficient means to reach his or her goals. Hence, the behavior is future directed, purposive and instrumental.

3.3 From Gemeinschaft to Gesellschaft

Gemeinschaft and *Gesellschaft* are opposing each other. An individual who acts according to *Wesenwille* in a *Gesellschaft* setting will have problems, and vice versa. For this reason the balance between the two modes of interaction determines the degree of success of an individual or organization may get. An actor must know the balance between the two interaction types and act accordingly, or the actor must choose a setting that is suitable for a specific way of acting.

The problems of conflicting *Gemeinschaft* and *Gesellschaft* are aggravated as the two are often organizationally related to each other and thus they affect each other. This is the case of cooperative organizations, comprising both a cooperative society and a cooperative business firm. Tönnies devoted much thought to a similar relationship, namely that between the people and the state.

Many researchers, including Tönnies himself, state that the balance between the two types of human interaction is successively changing. *Gesellschaft* is constantly gaining ground on behalf of *Gemeinschaft*. This pattern could, however, not be the entire truth as that would imply that over the years all human interaction would be of the *Gesellschaft* type.

The solution to this apparent paradox must reasonably be that new *Gemeinschaft* organizations are being established all the time, but these new establishments are so small that they are hardly visible to observers. *Gemeinschaft* organizations, which are successful, tend to grow whereby they take on more and more *Gesellschaft* attributes. For example, it is a widespread observation that cooperatives, in order to be competitive, expand and merge, and so the membership organizations become large and get bureaucracy attributes. In several Western European countries there is a wave of small newly established cooperatives as a reaction to the continuing growth of the large cooperatives. "Countervailing powers" are in operation. These newly established and small cooperatives are generally characterized by substantial *Gemeinschaft*.

The difficulties in preserving *Gemeinschaft* are the core of Michels' study of the German social democratic movement (Michels 1968[1911]). As the Party expanded, the organization could no longer preserve its democratic ideals. Instead a small elitist group will grasp the control. Michels considered this to be an inevitable development in all democratic popular movements, and so he coined the concept "the Iron Law of Oligarchy". Michels' study has often been cited by critics of cooperative organizations.

A similar development is reported by Stryjan (1989) when he investigated the development of the Israeli *kibbutzim*. For this form of cooperative organization to survive, a constant "reproduction of the membership" is necessary, otherwise the

Gesellschaft attributes will squeeze out the *Gemeinschaft* attributes. The *kibbutzim* are successively losing ground.

4 Analysis

The six studies presented above are here subject to interpretation in terms of the *Gemeinschaft-Gesellschaft* taxonomy. All the studies indicate that members of cooperative societies do not always behave in accordance with the assumptions of *homo oeconomicus*. They are rather *homo sociologicus* even though the border line between these two conceptions of human behavior is often diffuse.

The Russian agricultural producers would benefit from cooperative organizations, and so would the Macedonian smallholders in the dairy industry. If these actors were to behave rationally – in line with *Gesellschaft* norms – they could perhaps establish some cooperatives. The fact that the level of trust between the farmers is low prevents them from taking any initiative in the direction of cooperative formation. To the extent that the Russian agricultural producers and the Macedonian smallholders have good reasons for their distrust in other producers their behavior does not express *Gemeinschaft* behavior but rather *Gesellschaft* behavior. Given the conditions in these two countries it is likely that they have good reasons to doubt the trustfulness of other farmers.

The situation is more complex in Russia than in Macedonia as the Russian agricultural producers actually have cooperatives, established by the governmental administration. The fact that these cooperative were founded by governmental bodies and not by the producers is crucial. The producers' trust in government is strongly influenced by their experiences from the Soviet era, which is to say that the producers are due to have little sympathy for the top-down organized cooperatives. These firms are not considered to belong to the producers.

On top of this, the heterogeneity among the Russian agricultural producers is extreme, so the prospects for trust, commitment and loyalty are minimal. The producers are members because they want to reap the benefits from governmental investments in the cooperatives, not because they believe in cooperative business – actually they have very little knowledge about cooperatives. Hence, one may conclude that the Russian agricultural producers have no *Gemeinschaft* relation to the cooperatives. The same is true for the Macedonian small dairy farmers. Under such conditions any future for cooperative business does not exist.

The opposite condition holds true for the New Zealand dairy farmers. Being a member of Fonterra contributes to the self-identification for the dairy farmers. Contributing to this is the fact that the farmers might be in a vulnerable position if Fonterra were no longer controlled by the farmers. The cooperative tradition in New Zealand is so strong that the dairy farmers want to keep on owning and controlling Fonterra and deliver their milk to this cooperative.

The situation in the largest Swedish cooperative in the farm supply and grain marketing industry is complex. On the one hand the members demand the best possible prices from their cooperative, i.e. a *Gesellschaft* attribute. On the other hand they also want the cooperative to be small and personal – a *Gemeinschaft* demand. The two requirements do not go hand in hand. This may be an outcome of the fact that the organization is split up into two – one member-business organization and the dominating profit-maximizing organization. The logics within these two parts are widely disparate so the members do not know which kind of organization their cooperative is.

The cooperative has become so large and so diversified that the members have difficulties to identify themselves with it. It has expanded so much upstream and downstream that the members no longer understand the business activities. The international business activities are difficult for the member to apprehend.

As many of the locally based silo plants were closed and the local retail outlets were closed the members felt that the cooperative had abandoned them. These operations constituted the heart of the business, according to the members. The members demand *Gemeinschaft* while they are acting according to *Gesellschaft* norms, i.e. demanding better prices. An explanation to this seemingly contradictory behavior is that they do not understand the complex structure of the cooperative organization. The members want decentralization but the business logics require centralized decision-making.

The consequence of a complex structure of the cooperatives is also seen in the case of the forestry cooperative case. The forest owners might have the goal of getting as much as possible for their timber *(Gesellschaft)*, but as they are bewildered by the complexities as concerns pricing principles they resort to socially contingent behavior *(Gemeinschaft)*. The members might want to behave according to *Gesellschaft* norms but due to the difficulties of doing so they rather behave according to *Gemeinschaft*.

5 Conclusions

Behavior of cooperative business and investor-owned firms differs. *Homo Sociologicus* features in the orientation of members may clash with the orientation of their business firm in a cooperative, whereas this interaction will most likely be different when the business firm is investor-owned. At first glance, cooperative members, being humans of flesh and blood, may seem to behave "irrationally'. However, cooperative members behaving according to *Gemeinschaft* norms may also be seen as rational in a *Homo Oeconomicus* sense. Belonging to a social group and being influenced by social relationships may be rational for the individual. Hence, it seems that *Homo Sociologicus* and *Homo Oeconomicus* are siblings. Like so often siblings often fight but still they tend to support one another.

For this reason researchers when studying cooperatives should acknowledge the complexity that exists in cooperative businesses. The balance between

Gemeinschaft (Wesenwille) and *Gesellschaft (Kürwille)* is hard to know beforehand, hence empirical studies are important. Therefore behavioral theories are valuable and so are empirical studies of the behavior of cooperative members and potential members.

As concerns topics for research it must be stressed that cooperative organizational models must be prioritized. The discussion above indicates that there may be conflicts between the member organization, where *Gemeinschaft* is often prevailing, and the cooperative business firm where *Gesellschaft* is due to rule. Additionally, the researchers should understand the mechanism that *Gesellschaft* is expanding on the behalf of *Gemeinschaft* in cases where *Gesellschaft* organizations are successful. The present trend of large cooperatives having problems to maintain their *Gemeinschaft* attributes is indicative. On the other hand, new and small cooperatives are continuously being established, based on *Gemeinschaft* conditions.

Researchers must find ways whereby the members' quest for *Gemeinschaft* may be balanced with their *Gesellschaft* relationship to the co-operative (incentive alignment). Each cooperative organizational model implies different combinations of *Gemeinschaft* and *Gesellschaft* (incentive structures). The issue of centralization versus decentralization of decision making is essential. Which effects do different governance structures have for the cooperative members?

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The Role of Social Capital in the Development of Community-Based Co-operatives

Richard Lang and Dietmar Roessl

Abstract Based on a network model of social capital, we derive a set of hypotheses on the formation of social capital among activists engaging in community-based co-operatives for public service delivery. The hypotheses are subsequently tested in a large-scale questionnaire survey in Austria. The results of our study support the findings of Granovetter (1973) and Burt (2001) on the importance of weak ties and structural holes in social networks. On the one hand, critical resources for a community-based co-operative can be found in the acquaintance networks rather than friend or family networks of residents. On the other hand, the paper identifies co-operatives as a suitable form of organising community-based initiatives. Its flexible and open network structure allows the bridging of structural holes within and outside the community, which facilitates necessary information and resource flows. Our analysis provides valuable insights for policy makers concerned with fostering community engagement through co-operatives. Furthermore, the authors contribute to the debate on social capital and its relation to civic participation and the community context.

1 Introduction

Local partnership structures have been part of the debate on public sector reform and public downsizing in Austria only since the late 1990s (Hammerschmid and Meyer 2005). Similar to the situation in other European countries (e.g. Enquete-Kommission 2002; Taylor 2007; Pestoff 2009), Austrian municipalities are increasingly seeking the support of their citizens in the delivery of public services (e.g. childcare and care for the elderly, education, recreational facilities) (Moedlhammer 2009), at the same time, re-emphasising the role of co-operatives as a possible

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governance structure for citizen participation (e.g. Hofinger and Hinteregger 2007). Despite of the high potential co-operative governance structures contain for public service delivery, their importance is not widely acknowledged (Somerville 2007). In order to evaluate its suitability for community-based service delivery, one has to look at the distinctive nature of co-operatives as social capital-based organisations which is reflected in their governance principles (mutual self-help, democratic control, voluntary and open membership, community orientation etc.) (Valentinov 2004; Somerville 2007; ICA 2009). We consider this value-based conception especially fruitful to understand the rising phenomenon of local community organisations engaging in the field of public service. Therefore, we refer to community-based co-operatives as organisations based on co-operative principles regardless of their legal form (Mayo 1997; Somerville 2007).

When emphasising the importance of community participation, policy makers often refer to Putnam's work (2000) and his collective concept of social capital (Lelieveldt 2008; Lederer 2009). However, critical for establishing a community-based organisation is whether individuals who become involved can access and mobilise a wide range of resources embedded in their personal networks (Bekkers et al. 2008).

Thus, our paper tries to answer the following research question: "How can the social capital of residents of rural communities in Austria be described and what are possible effects for the development of community-based co-operatives?" In a first step, we develop a multi-dimensional model of social capital which serves as a framework for the subsequent empirical analysis of social networks in small Austrian municipalities. In a second step, using qualitative data from focus groups with community activists (Mayring 2008), we derive a set of hypotheses that are tested in a large-scale questionnaire survey, using alternative measurement instruments for social capital. Finally, we discuss the implications of these findings in the context of the development of community-based co-operatives.

2 Theoretical Background

2.1 Defining Social Capital

As a result of its widespread use in various disciplines and practical fields, social capital has become a heuristic concept generating controversy about its definition, conceptualisation and measurement (Lin 1999; Lin and Erickson 2008). Prominent researchers in the field, however, agree that social capital refers to investments of individuals in social relations and expected returns (cf. Bourdieu 1983/1986; Coleman 1991; Burt 1992; Lin 1999; Portes 1998; Putnam 2000). While there is also broad consensus that social capital can be seen as an individual or a collective asset, confusion arises from a purely macro level of analysis. "[E]xtending the notion of social capital beyond its theoretical roots in social relations", or even

equating it with collective assets such as trust or norms, leads to major conceptualisation and measurement problems (Lin 1999, p 35). In measuring social capital items of different levels of analyses are often mixed, so that it becomes unclear whether social capital is conceptualised as an individual or collective asset (Portes 1998). If social capital is seen as a collective asset, discriminating trust between individuals from collective trust becomes particularly difficult (Shapiro 1987). Thus, Lin (1999) suggests that meaningful research on social capital has to be based on a social network view. This fundamental insight leads us to a definition of social capital as access to resources embedded in social networks and their purposive mobilisation by individuals "to enhance expected returns of instrumental or expressive actions" (Lin 1999, p 39).

2.2 *The Formation of Social Capital*

Based on the above definition, Lin (1999, p 41) proposes a conceptual model of social capital (Fig. 1) that consists of three blocks of variables which are interconnected:

1. The first block represents structural variables that affect the individual's access to social resources and their mobilisation. These structural elements mediate the extent to which individuals can accumulate social capital (Lin 1999). Structural variables are also responsible for the unequal distribution of access to, as well as embeddedness, and mobilisation of social resources. Thus, in order to develop an understanding of the formation of social capital among potential members of

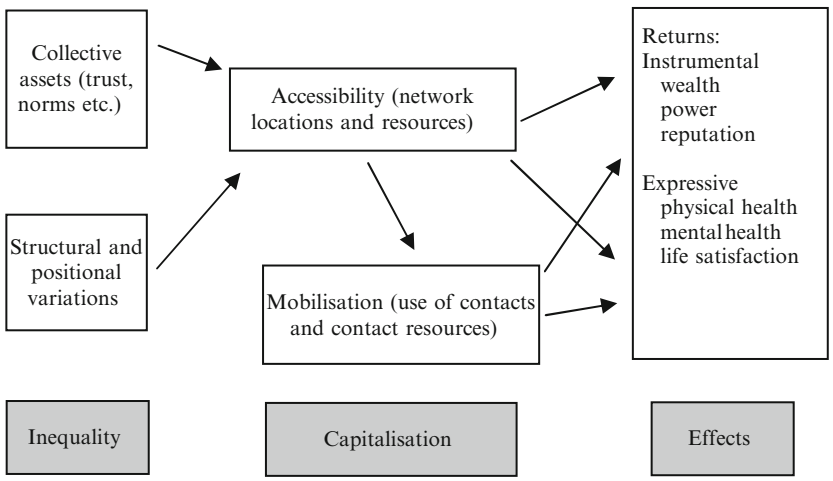

Fig. 1 Model of social capital (Lin 1999, p 41)

community-based co-operatives, we need to consider the social structure of a community, as well as a resident's position in the social structure.
2. The second block of variables refers to the features of an individual's social network that determine access to and mobilisation of embedded resources (e.g. number and diversity of contact resources, strength of ties, network location, use of contacts), altogether, measuring social capital.
3. Finally, the third block proposes possible effects or returns for social capital. Lin (1999, p 35) distinguishes between returns on instrumental and expressive actions. Instrumental returns refer to economic wealth, political power and reputation. Each of them "can be seen as added capital" for the ego (Lin 1999, p 40). As for expressive actions, social capital leads to a consolidation of resources already possessed in the areas of physical health, mental health and life satisfaction.

3 Qualitative Research and Development of Hypotheses

Within the framework of a multi-level research project we investigate the conditions for civic engagement in community-based co-operatives. In the initial stage of this study, we carried out focus group discussions with community leaders in three small municipalities, two in Austria and one in Germany. Using this qualitative data, and putting it into the context of earlier studies in this field, we derive a set of hypotheses on the formation of social capital among activists in community-based co-operatives.

3.1 Social Capital and Community-Based Co-operatives

In community-based co-operatives, local politicians and citizens try to establish an adequate public service offer, e.g. for childcare or care for the elderly, which can no longer be sufficiently provided by the local municipality on its own. Hence, effective citizen participation plays an important role for the success of these organisations, promoting a culture of self-help rather than a culture of dependency (Mayo 1997). The current debate in Austria has also re-emphasised co-operatives as alternative forms of public service delivery (e.g. Hofinger and Hinteregger 2007). With its democratic governance structures and commitment to self-help, the co-operative represents a suitable form to organise citizen participation in public service delivery (Somerville 2007). As long as the organisation is based on co-operative principles and therefore constitutes a democratic member-based organisation, the actual legal form is secondary (Spear 2004). Co-operatives build upon the distinct social and ethical values which are mutually shared by their

members, providing the substance for a co-operative governance structure (Somerville 2007). In contrast to the governance mechanisms hierarchy, market or hybrid forms of these two, the crucial resource of co-operatives is thus the social capital available in the community (Valentinov 2004):

First, critical for the development of a community organisation is whether the citizens who initially become involved can access complementary resources through their own personal networks (Bekkers et al. 2008). The sustainability of co-operatives depends on their ability to mobilise community resources that could otherwise not be accessed to deal with specific public service issues (Bovaird 2007). A wide range of resources is needed to set up a community-based co-operative, such as financial support, human capital, political contacts, or access to technological know-how. In contrast to an established organisation with a solid resource base, new ventures more heavily rely on their social capital to identify opportunities and acquire complementary resources (Burt 1992).

Second, mobilization, coordination and allocation of embedded resources among co-operative members primarily depend on the relationship quality, reflected by the strength of ties. The reliance on strong personal relationships is generally associated with eliminating opportunistic behaviour and thus, facilitating mutual adaption and need satisfaction among co-operative members (Somerville 2007 referring to MacPherson 1995). Our data collected from focus groups with community activists suggest that personal networks of neighbourhoods provide access to crucial resources for establishing a community-based co-operative. Nevertheless, family and friend networks (strong ties) seem to cover only a limited number of resources. High prestige social capital which enhances instrumental actions such as fundraising can often only be accessed through the acquaintance network (weak ties). Thus, we propose the following main hypothesis with respect to the community co-operatives:

Hypothesis 1 (H1): *In small communities, access to resources relevant for public service delivery is provided through the acquaintance network (weak ties) rather than through friends or family members (strong ties), thus, building a basis for community based co-operatives.*

3.2 The Community Context and Social Capital

Provided that hypothesis 1 holds true, it is worthwhile testing whether social capital depends on context variables. According to Lin's model of social capital (Lin 1999), structural variables cause variations in the degree to which individuals can access social capital. Empirical evidence shows that network composition is especially influenced by geographical location, in a way that personal networks in rural areas differ from those in urban settings in terms of diversity and density (Beggs et al. 1996; Enns et al. 2008). Onyx and Bullen (2000, p 38) describe the social capital found in rural areas as "bonding social capital", pointing to higher degrees

of mutual trust and support found among residents in smaller communities than in urban areas. The qualitative data from our focus groups, collected in municipalities of rural areas, give support to this effect of location on social capital described above. The results also suggest that smaller and more isolated neighbourhoods facilitate the expansion and also diversification of personal networks. Therefore, we propose the following hypothesis:

Hypothesis 2 (H2): *The community context has a positive effect on an individual's social capital in ways such that a higher level of community connectedness provides potential members of community-based co-operatives with access to different occupations and wider access to high status occupations.*

3.3 Participation in Community-Based Co-operatives and Social Capital

While community-based co-operatives rely on the social capital of their members to acquire valuable external resources, the growing internal resource base makes them, in return, more attractive for potential members. Empirical evidence shows that membership in volunteer organisations leads to an enhanced and also more diversified social capital (Fischer 1982; Putnam 2000; Stricker 2007). In line with this argumentation, our empirical data from focus groups suggest that membership in a voluntary organisation provides access to neighbours with different occupational prestige.

Hypothesis 3 (H3): *Membership in volunteer organisations affects social networks of members in ways such that it provides them with access to both, low prestige and high prestige social capital. As it is a special form of volunteer organisation the same holds true for membership in a community-based co-operative.*

4 Methods

4.1 Sampling Frame and Response Rates

In order to test the three hypotheses, we analyse data from a survey conducted in March 2009 in six small municipalities in rural areas of the two Austrian provinces, Lower Austria and Vorarlberg, with an average population of 2,898 inhabitants. A total of 1,932 households were selected from a national database as a random sample resulting in a total of 227 (11.7%) returned questionnaires (166 questionnaires from Lower Austria and 61 from Vorarlberg). This analysis is based on those questionnaires with no missing items with respect to the relevant variables for our research question resulting in a dataset comprising of 196 questionnaires. Compared to Germany, community-based co-operatives are a rather new phenomenon in

Austria, with hardly any cases for empirical research. Thus, the primary purpose of the survey was to examine the pre-conditions for such partnership models in an average Austrian municipality.

4.2 Variables and Measures

4.2.1 Community Context

The community context was assessed by a series of questions on the *connectedness of the respondents' neighbourhood* (Coleman 1991; Portes 1998; Onyx and Bullen 2000; Magee 2008). The items *familiarity*, *friendliness* and *solidarity* were measured directly by asking respondents: "To which extent do you agree with the following statements about the people in your neighbourhood? People know each other, are friendly to each other and support each other?" In addition, two indirect measures of neighbourhood connectedness were used. To measure trust within the community, we asked respondents: "Imagine you go grocery shopping in the village and notice that you don't have any money with you. Would a fellow citizen spontaneously lend you 10 euros?" To assess the level of *reciprocity* among respondents, we asked: "What do you think about the following statement: If I help someone to move to another house, I expect this person to help me too later." We used four-point scales ("completely agree", "inclined to agree", "inclined to disagree" and "completely disagree") to measure all the mentioned items.

4.2.2 Social Capital

Social capital was operationalised using a *position* (Lin and Dumin 1986; Lin and Erickson 2008) and a *resource generator* (Van der Gaag and Snijders 2005; Van der Gaag et al. 2008). While both measurement instruments are based on the same theoretical approach to social capital (cf. Lin 1999), they emphasise different, complementary aspects of access to embedded resources (Van der Gaag et al. 2008). By measuring access to different occupations and different occupational status, the position generator is especially useful for the characterisation of social networks that enhance returns on instrumental actions (Van der Gaag et al. 2008, p 27). However, social capital that provides access to higher occupational prestige does not necessarily enhance returns on expressive actions, such as personal support. Therefore, measuring specific domains of social capital with the resource generator is expected to be more suitable (Van der Gaag and Snijders 2005; Van der Gaag et al. 2008).

As for the mobilisation or actual use of social resources, Bian (2008, p 84) highlights that this element of Lin's conceptual model of social capital is difficult to assess through empirical studies. In fact, separating access and use within a study of

social capital avoids confounding influences related to the personal context, such as individual needs (Van der Gaag et al. 2008).

The position generator in our questionnaire presented respondents with a list of ten occupations. This list can be assumed to be representative for Austria, covering a range of prestige classifications (Ganzeboom and Treiman 1996; Van der Gaag et al. 2008). Furthermore, respondents were asked if they had someone with this profession as relatives, friends and acquaintances to obtain a better understanding of the strength of ties in their social networks, as emphasised by Granovetter (1973) and Burt (2001). The social capital measures calculated from the position generator were *highest accessed prestige*, *range in accessed prestige*, *number of different positions accessed*, *average accessed prestige* and *total accessed prestige* (Granovetter 1973; Burt 1992; Lin 2002; Van der Gaag et al. 2008). In addition, two domain-specific measures were calculated: *high prestige* and *low prestige social capital* (Van der Gaag and Snijders 2005).

In the resource generator section of the questionnaire, respondents were presented a list of 17 items referring to different domains of social resources (Van der Gaag and Snijders 2005; Van der Gaag et al. 2008). Respondents were asked if they had access to a resource through relatives, friends and acquaintances in order to assess the nature of ties. From the resource generator the *total number of resources accessed* (Van der Gaag et al. 2008) and, adapted from Van der Gaag and Snijders (2005) and Landhaeusser (2008), four domain-specific social capital measures were calculated: *personal support social capital*, *personal skills social capital*, *prestige and education related social capital*, and *marginalised social capital*.

4.2.3 Participation and Community-Based Co-operatives

Participation was measured by assessing a respondent's actual *participation in civic life* and his or her *commitment to community participation* (Putnam 2000; Magee 2008). As for the level of civic participation, respondents were asked if they had ever volunteered for civic organisations within the community and if they had leadership experience in a civic organisation.

The respondent's commitment to community participation was measured by his or her commitment to community development, to community volunteering and to community-based co-operatives. A four-answer scale was used to assess each of these items. Finally, we asked the respondent whether he or she was willing to volunteer for a community-based co-operative.

5 Results

5.1 The Community Context

An overview of the basic measures of community connectedness for the municipalities in our survey is provided in Table 1. According to the findings of Onyx and

Table 1 The community context (n = 196)

Community connectedness (%)	
Very familiar neighbours	48.6
Very trusting neighbours	35.3
Very friendly neighbours	34.4
Very supportive neighbours	21.6
Very strong neighbourhood reciprocity	18.1

Bullen (2000) on small communities in rural areas, we would expect to see a high degree of trust and mutual support among residents. In fact, our results indicate moderate levels of neighbourhood connectedness. While respondents' neighbourhoods seem to be of a very familiar (48.6%), very trusting (35.3%) and very friendly character (34.4%), intense neighbourhood support (21.6%) and reciprocity (18.1%) are reported substantially less.

5.2 Levels of Participation

Overall, the results summarised in Table 2 are in line with the findings of Onyx and Bullen (2000) that civic participation plays an important role in the life of residents in rural areas. About two-thirds of respondents have already been active in voluntary organisations, with one-third also having leadership experience. Volunteer experience within their own community is reported by 44% of respondents. Furthermore, 30% of respondents are highly committed to community-based development with 28% highly committed to volunteering in a concrete community-based project. In contrast, only 16% show a high commitment to volunteer for the community in general, and only 13% are willing to take over a leadership role in community development.

5.3 Social Network Characteristics

A description based on the results of the position generator (Table 3) provides us with a first insight into respondents' social network structures. From Table 3 we can see that compared to the average access to the occupations listed (67.9%), the occupation of lawyer marks an outlier, although it seems to be a fairly underrepresented occupation in the municipalities in our sample. The high diversity of occupations accessed is highlighted by the social capital indicators calculated in Table 4, with respondents reporting an average access to 6.7 out of 10 occupations. Besides, the means of the number of accessed high (3.0) and low (3.6) prestige occupations are fairly similar, which shows that, on average, respondents have access to a variety of occupations, both high and low prestige positions. In addition, the mean average accessed prestige (52.12) and the mean of highest accessed prestige (79.93) indicate that respondents, on average, have access to resources

Table 2 Levels of participation (n = 196)

Civic participation (%)	
Volunteer experience	67.8
Volunteer experience in the community	43.6
Leadership volunteer experience	35.0
Commitment to participation (%)	
High commitment to community-based development	30.0
High commitment to community-based co-operatives	28.4
High commitment to volunteering for the community	16.1
High commitment to leadership in community development	12.9

Table 3 The position generator items and responses (n = 196)

"Do you know anyone in your community who is a/an..."	Prestige	% yes	Relationship (%)		
			Acquaintance	Friend	Family member
High prestige social capital					
Lawyer	85	18.7	14.2	4.6	2.0
Doctor	85	68.7	54.4	9.8	3.3
Legislator	70	73.0	47.4	20.4	9.5
Business professional	69	78.9	43.8	31.2	13.5
Teaching professional	69	75.1	40.8	29.9	16.1
Low prestige social capital					
Shop salesperson	43	85.1	54.5	25.4	11.3
Machinery mechanic	34	71.2	48.3	17.6	10.3
Hairdresser	29	71.4	52.8	14.7	2.8
Cleaner	29	67.1	49.3	14.5	4.3
Labourer in construction	23	70.0	47.1	17.1	11.4
Average	54	67.9	45.3	18.5	8.5

Table 4 Social capital measures from position and resource generator (n = 196)

	Total network Mean	Acquaintance network Mean	Friends network Mean	Family network Mean
Position generator				
No. of positions accessed	6.68	4.47	1.89	0.80
Total accessed prestige	342.73	226.81	99.71	42.95
Average accessed prestige	52.12	51.65	53.80	54.44
Highest accessed prestige	79.93	76.30	65.40	62.08
Range in prestige	52.52	45.59	18.84	15.82
High prestige social capital	3.06	1.95	0.96	0.44
Low prestige social capital	3.62	2.53	0.93	0.38
Resource generator				
No. of resources accessed	11.40	5.59	4.90	4.39
Prestige and education related social capital	3.42	2.06	1.17	0.84
Personal support social capital	4.12	1.42	2.15	2.18
Personal skills social capital	3.11	1.63	1.30	1.25
Marginalised social capital	0.72	0.54	0.16	0.09

that possibly lead to high returns in the context of instrumental actions (Van der Gaag et al. 2008).

Tables 3 and 4 also provide us with information on the strength of ties respondents have to fellow community members with different occupations. From Table 3, we see that across the board most respondents state that their acquaintance network provides them with access to all of the occupations listed in our position generator (45% on average). The relevance of these weak-tie relationships is further highlighted by the average number of positions accessed, as shown in Table 4: On average, 4.5 occupations are accessed through the acquaintance network, compared to only 1.9 through friends, and 0.8 through family members. There are similar distributions for the tie strength as far as access to high and low prestige occupations are concerned. So far, our results support Granovetter's hypothesis of "the strength of weak ties" (1973) with acquaintances providing the widest access to occupations, also within the high and low prestige segment, and the friend and family network only covering a low range of occupations.

The results of the resource generator, displayed in Table 4, provide us with a slightly different picture of the network structures found in our sample, however, generally pointing in the same direction. On average, out of a maximum of 17, respondents access 11.4 different resources, which is an indicator for both social capital volume and diversity. As we can see from Table 4, in accordance with our findings from the position generator and with earlier studies (Erickson 1996 for Canada, and Van der Gaag 2005 for The Netherlands), with a mean of 5.6 accessed resources, the most diverse social network seems to be those of acquaintances. However, the resource generator provides us with more detailed data on the diversity of social networks as it tells us something about the access of respondents to specific social resource collections (Van der Gaag et al. 2008).

Prestige and education related social capital represents a first collection of resources that is associated with high status persons and high returns in instrumental actions, and is thus closely related to most position generator indicators (Van der Gaag and Snijders 2005). Table 4 shows that respondents access, on average, 3.4 out of 6 resources in this domain. In the literature, access to prestigious resources is often also associated with weak ties (Granovetter 1973; Lin 2002). Together with our findings based on the position generator the data from the resource generator (Table 4) lends support to our hypothesis 1 that access to prestige and education related resources is provided through weak ties rather than friend or family networks.

A second group of resource items can be associated with personal skills which mainly refer to "communication related activities", such as motivating people or writing a newspaper article (Van der Gaag and Snijders 2005, p 23). The data displayed in Table 4 suggest that the widest access to personal skills social capital is provided by the acquaintance network.

The third social capital domain is about personal support activities which have both, an instrumental and expressive character (Van der Gaag and Snijders 2005). From the results presented in Table 4, we see that friends and family members give access to more personal support resources than acquaintances.

Adapted from Landhaeusser (2008), a fourth domain, marginalised social capital refers to social resources linked to disadvantaged groups within the community. From Table 4, we can see that most of the relationships to socially disadvantaged community members can be described as weak ties.

Finally, we have investigated relationships among different social capital indicators calculated for our sample. As displayed in Table 5, most social capital measures from the position generator are positively correlated to those from the resource generator, which is similar to what Van der Gaag and Snijders (2005) found for the Netherlands. Personal networks with higher accessed prestige and a wide range in accessed prestige also provide access to a variety of resources and also domain-specific resources (Van der Gaag et al. 2008).

5.4 *The Relationship Between Community Context, Social Capital and Participation in Community-Based Co-operatives*

In order to test the remaining hypotheses 2 and 3 on the connections between community context, social capital and participation, we have constructed a correlation matrix which is displayed in Tables 6–9. As can be seen in Tables 6 and 7, four measures of neighbourhood togetherness (familiarity, friendliness, support and trust) are overall positively correlated to social capital measures from the position generation, which are all indicators for network diversity based on prestige and occupations among community members. These results lend to support our hypothesis 2 that the community context positively affects residents' social capital diversifying access to different occupations and high status occupations. However, the same measures for neighbourhood connectedness show a less significant and positive correlation to domain-specific social capital measures from the resource generator. Surprisingly, as Table 7 shows, measures for neighbourhood characteristics are less connected to prestige and education related social capital. This finding suggests that access to high prestige positions within the community does not

Table 5 Correlations between social capital measures from position generator and resource generator (n = 196)

Position generator measures	Resource generator measures			
	No. of items	Prestige and education	Personal skills	Personal support
Highest accessed prestige	0.354**	0.363**	0.233**	0.289**
Range in prestige	0.510**	0.482**	0.399**	0.304**
Number of positions	0.732**	0.715**	0.572**	0.468**
Average prestige	−0.163*	−0.101	−0.188**	−0.011
Total prestige	0.720**	0.705**	0.551**	0.461**
High prestige	0.671**	0.662**	0.485**	0.445**
Low prestige	0.674**	0.653**	0.559**	0.432**

Pearson correlations: $^{**}p \leq 0.01$, $^{*}p \leq 0.05$

Table 6 Community context and position related measures of social capital (n = 196)

Neighbourhood connectedness	No. of positions	Total prestige	High prestige	Low prestige
Neighbourhood familiarity	0.258**	0.251**	0.233**	0.248**
Neighbourhood friendliness	0.267**	0.266**	0.228**	0.241**
Neighbourhood support	0.255**	0.253**	0.246**	0.234**
Neighbourhood trust	0.431**	0.412**	0.379**	0.427**
Neighbourhood reciprocity	0.140	0.133	0.110	0.118

Pearson correlations: $^{**}p \leq 0.01$, $^{*}p \leq 0.05$

Table 7 Community context and resource related measures of social capital (n = 196)

Neighbourhood connectedness	No. of resources	Prestige and education	Personal skills	Personal support
Neighbourhood familiarity	0.235**	0.212**	0.260**	0.262**
Neighbourhood friendliness	0.195*	0.178*	0.223**	0.214**
Neighbourhood support	0.182*	0.168*	0.200**	0.227**
Neighbourhood trust	0.333**	0.290*	0.302**	0.301**
Neighbourhood reciprocity	0.271**	0.199**	0.129	0.258**

Pearson correlations: $^{**}p \leq 0.01$, $^{*}p \leq 0.05$

necessarily mean access to specific resources that are related to occupational prestige. In terms of specific resource collections our analysis rather indicates that the connectedness of smaller, rural communities, in the first place, enhances personal support and personal skills social capital.

According to Putnam (2000), the level of civic participation is strongly and also positively connected to the stock of social capital within a community. However, Magee (2008) points out that by applying a very broad definition of social capital, Putnam has overlooked potential trade-offs between measures for civic participation, social capital, and neighbourhood connectedness.

As can be seen in Tables 8 and 9, all three of our measures of civic participation (general volunteer experience, volunteer experience in the community, and leadership volunteer experience) are positively and significantly related to frequently used network diversity measures from the position generator (number of positions accessed) and the resource generator (number of resources accessed). Table 9 also shows a positive correlation between civic participation and domain-specific social capital indicators, suggesting the strongest relation to personal support social capital. Thus, we would assume that civic participation plays a significant role in diversifying a volunteer's personal network. Our results also lend support to hypothesis 3 that civic participation provides volunteers with access to both, low prestige and high prestige social capital. Nevertheless, the data from Table 8 suggest that effects on access to specific groups of occupations depend on the location and the individual's position within a volunteer organisation. Thus, while general volunteer experience more significantly relates to access to high prestige social capital, occupying a leadership position in a community based co-operative is significantly connected to the access to low prestige occupations.

Table 8 Participation and position related measures of social capital (n = 196)

	No. of positions	Total prestige	High prestige	Low prestige
Civic participation				
Volunteer experience	0.216**	0.224**	0.257**	0.167*
Volunteer experience in the community	0.286**	0.282**	0.274**	0.268**
Leadership volunteer experience	0.241**	0.212**	0.154	0.265**
Commitment to participation				
Commitment to community-based development	0.223**	0.203**	0.165*	0.242**
Commitment to community volunteering	0.228**	0.226**	0.230**	0.220**
Commitment to community-based co-operatives	0.191**	0.183*	0.165*	0.187**

Pearson correlations: $^{**}p \leq 0.01$, $^{*}p \leq 0.05$

Table 9 Participation and resource related measures of social capital (n = 196)

	No. of resources	Prestige and education	Personal skills	Personal support
Civic participation				
Volunteer experience	0.278**	0.197**	0.239**	0.307**
Volunteer experience in the community	0.280**	0.229**	0.250**	0.270**
Leadership volunteer experience	0.274**	0.168*	0.257**	0.235**
Commitment to participation				
Commitment to community-based development	0.284**	0.212**	0.194**	0.266**
Commitment to community volunteering	0.365**	0.284**	0.247**	0.343**
Commitment to community-based co-operatives	0.209**	0.145*	0.168*	0.240**

Pearson correlations: $^{**}p \leq 0.01$, $^{*}p \leq 0.05$

6 Implications

The findings described above need to be put in the specific context of community-based development and related organisations. In contrast to religious organisations or sports clubs, community-based co-operatives, especially in the area of local infrastructure development, are of an instrumental rather than expressive nature (Gordon and Babchuk 1959). In this respect, we would assume that community-based co-operatives, especially in early stages, benefit from members who have potential access to social capital that is related to instrumental actions. According to Lin (1999) and Van der Gaag and Snijders (2005), access to high prestige or

prestigious social capital can enhance outcomes in instrumental actions, be it fundraising, recruiting or political lobbying for a community-based co-operative.

As can be seen from Table 4, the results of the position generator suggest that residents in our sample report a broad access to high prestige occupations. The results from the resource generator point in the same direction. Nevertheless, our social network analysis also shows that access to prestige related social capital is mostly restricted to the acquaintance networks of respondents. Therefore, underscoring the argumentation of Granovetter (1973), weak ties play a significant role when setting up a community-based co-operative. According to Burt (2001), we would further assume that members who are able to bridge structural holes within a municipality are important for a community-based co-operative.

As can be seen from Tables 8 and 9, civic participation is positively and significantly correlated to different domains of social resources. Furthermore, as for the position generator indicators, volunteer experience is slightly higher correlated to personal support and personal skills social capital than to prestige related social capital. It is also striking that in our sample, measures of civic participation are positively and significantly correlated to low prestige social capital. These findings suggest that in return for volunteering in a community-based co-operative residents not only get a more diversified social network. Based on these results, we can also assume that they get potential access to embedded resources that are especially considered valuable in expressive actions, such as personal support which positively impacts the individual's life satisfaction (Lin 1999).

Finally, our results suggest that co-operatives could actually be a suitable organisation form for citizen participation in the field of public services. In early stages, as for any other young and resource-scarce venture, a community-based co-operative needs to acquire external and complementary resources (Burt 1992). The flexible and open network structure of co-operatives allows bridges to members of other networks within and outside the community, facilitating necessary resource exchanges. In later stages, however, a closed network structure characterised by strong ties could be useful to maintain a certain resource base, also enhancing social cohesion (Lin 1999). A community-based co-operative in the maturity stage might be of a more expressive nature, providing members and volunteers with social opportunities, thus, enhancing their life satisfaction (Gordon and Babchuk 1959).

7 Discussion, Limitations and Conclusion

We have investigated the relationship between community characteristics, social capital and participation in community-based co-operatives. Using a position and a resource generator tool, we have measured potential access to different domains of social resources and the strength of ties in social networks of rural communities in Austria. The results presented in this paper should also be read with some caution. As far as the connection between civic participation and social network characteristics is concerned, further research is needed to reduce concerns about our assumption on the

direction of causality. Secondly, the reliability of our results is of limited scope due to a rather small sample size. Thirdly, the nature of the data base and the absence of a control group do not allow us to directly address all our research questions, e.g. we could not measure the correlation between social capital and the factual development of community-based co-operatives but merely the correlation between social capital and the commitment to such co-operatives. Likewise, we could not address the impact of this organisational form on the formation of social capital directly but just the impact of membership in volunteer organisation on social capital. By analogy, we conclude that this holds true for community-based co-operatives as well.

Our results support the argument of Granovetter (1973) that new and complementary social resources, needed for community-based development, can only be accessed through weak ties within a neighbourhood. Thus, following Burt's argumentation (2001), residents who are able to bridge different networks and thus provide access to prestige and education related social capital in the community are important for the development of community-based co-operatives. We see that those residents who show a high commitment to community-based development also have ties to resources relevant for community-based co-operatives. Because of the existing structural holes between individuals with complementary resources, co-operatives have to mobilise social capital that crosses social and political boundaries within the community.

Furthermore, we found evidence that membership in volunteer organisations is positively correlated to access to critical domains of social capital. Thus, an important target group for community-based co-operatives are residents who already have volunteer experience. Further research is needed in terms of measuring access to resource-rich positions that are located outside the community.

In emphasizing the value-based conception of co-operatives the paper contributes to the literature, stressing that co-operatives cannot be captured by applying the hierarchy-market paradigm. Co-operatives in the delivery of public services build on the resources their members can access, thus representing rather "Gemeinschaft" than "Gesellschaft" (Toennies 1963, Nilsson and Hendrikse 2010). In this sense, our findings support the argument of Valentinov (2004), that co-operatives can only be understood as social capital based organisations. Furthermore, our analysis provides valuable insights for policy makers concerned with fostering community engagement through co-operatives.

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