Introducing ‘Economics and Management of Networks’

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The design and management of networks, such as alliances, franchising chains, cooperatives, joint ventures, venture capital relations and virtual organizations, have become very important research topics in the field of organizational economics and management in the last decade (Hendrikse 2003; Nooteboom 1999; Grandori 2004; Baker et al. 2004; Windsperger et al. 2004; Blair and Lafontaine 2005; Robinson 2005). The second international conference on Economics and Management of Networks (***EMNet***) took place at the *Corvinus University Budapest* from September 15 to September 17, 2005. ***EMNet***-conferences serve in promoting communication among researchers in economics and management of networks and should provide a forum to present current research and to discuss issues of common interest, such as relevant developments in organizational economics and management. A selection of theoretical and empirical papers from areas in economics and management of franchising, strategic alliances and cooperatives are published in this book.

The current trend in economics and management of networks is twofold: On the one hand, there is a strong tendency toward theoretical approaches developed in economics and management, such as property rights theory, agency theory, signalling theory, screening theory, transaction costs theory, resource-based and organizational capability theory, social exchange theory, tapered integration theory and population ecology theory. On the other hand, there is also a strong tendency toward the application of new research methods, such as agent-based modelling, cointegration analysis, data envelopment analysis, case study methods, time series studies as well as survival analysis.

Starting from this status of research the current book has two aims: First, the book emphasizes research in economics and management of networks as a theory-driven field by offering new theoretical perspectives on governance structure issues in franchising, alliances, venture capital relations and cooperatives. Second,

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the book is an effort to present new research results on efficiency and performance of franchising networks and joint ventures as well as on entrepreneurship and strategic issues in franchising and cooperatives. The book is structured as follows:

Franchising

- Plural form and governance structure issues
- Efficiency and performance measurement
- Entrepreneurship and strategic management issues

Strategic Alliances

- Governance structure issues in R&D-networks, inter-firm networks in the sports industry, investor-investee relations, and in global professional service firms
- Performance of joint ventures

Cooperatives

- Strategic and governance structure issues

Franchising

Franchising is a widespread organizational form viewed today as a source of economic dynamism and employment. It is tackled here through plural form, governance, performance, entrepreneurship and strategic issues.

Plural Form

Plural forms organizations are becoming increasingly more popular in retail and service chains as well as in the academic literature. Hendrikse and Jiang highlight positive externalities whereas Ehrmann and Spranger point out the positive influence of the plural form on the franchisor's profit. Perrigot and Cliquet present a first attempt by comparing this organizational form in two countries.

Hendrikse and Jiang model plural form franchising from an incomplete contracting perspective along the lines of Hart and Moore (1990). Plural form franchising is special because there are two decision rights regimes within one chain, i.e. local managers as employees of company-owned outlets and managers as employers/entrepreneurs of independent outlets, as well as different income rights for these two classes of network members. Compared to previous research (e.g. Shane 1998; Lafontaine and Slade 2001; Dant and Kaufmann 2003), they argue that not locational or other differences between units are necessary for the emergence of plural form franchising, but positive externalities being specific for the plural form. Their results are compatible with the synergistic view of plural form (Bradach 1997; Cliquet 2000).

Ehrmann and Spranger examine ownership structures of franchise chains and evaluate their impact on franchisor profit. Specifically, they compare pure and plural forms of franchising. Empirical results of this study indicate the superiority of company-owned businesses over franchised units in generating franchisor profits. In addition, plural systems compensate for losses from franchising with profits from company units and outperform purely franchised competitors in overall profitability. Despite a clear financial inferiority of franchise outlets, franchisors do not convert plural structures into wholly-owned chains.

Perrigot and Cliquet compare the degree of plural form, as measured by the rate of company-owned units in franchise networks, between US and French retail and service networks. They show some important differences between US and France: Plural form is more broadly used in France than in the US, perhaps due to the difference in the territory area or for tax or social cost reasons. Plural form is more broadly used in the retail sector than in the service sector, perhaps due to the greater involvement of the franchisees towards their customers in the service sector. They conclude that the determinants of the plural form seem to vary according to the market characteristics; these results may support the monitoring cost hypothesis based on the agency theory.

Governance Structure Issues

Franchising has fascinated scholars for a long time as far as governance structure is concerned. Windsperger and Yurdakul add an ownership right approach and Azevedo and Silva the notion of portfolio of governance mechanism. Cochet, Dormann and Ehrmann show that chains counterbalance the loss of control inherent to autonomy with relational governance mechanisms. Ehrmann and Spranger emphasize a need for cooperation in the franchisor-franchisee relationships despite the freedom to behave opportunistically.

Windsperger and Yurdakul argue that previous studies in franchising research (Brickley et al. 1991; Lutz 1995; Shane 1998; Affuso 2002; Lafontaine and Shaw 2005) do not explain the governance structure of franchising firms as an institutional entity. This study fills this gap in the literature. According to the property rights view, an efficient governance structure of the franchising firm implies allocation of residual decision rights according to the distribution of intangible assets between the franchisor and the franchisee and transfer of ownership rights according to the distribution of residual decision rights. Windsperger and Yurdakul empirically investigate the influence of intangible knowledge assets on residual decision rights by using a logistic and ordinal regression model and the relationship between residual decision and ownership rights by using a simultaneous equation model on a sample of 83 firms from the Austrian franchise sector. The empirical results are supportive of the hypotheses.

Azevedo and Silva argue that the appropriate design of franchise contracts depends not only on the features of the transaction between franchisor and franchisees, but also on other transactions undertaken by the franchisor, particularly in upstream contracts, a hypothesis known as 'governance inseparability' (Argyres and Liebeskind 1999). Moreover, certain institutional environment features that affect the choice of governance mechanisms in the supply chain may indirectly influence the design of franchise contracts. In order to examine this hypothesis, they present a discrete structural analysis of 21 case-studies of food franchises in France and Brazil. Their main findings are that (a) firms choose a portfolio of governance mechanisms to govern their set of transactions, (b) upstream and downstream governance mechanisms are complementary, and (c) quality regulation and competition policy restrains upstream governance mechanisms, having an indirect effect on the design of the franchise contracts.

According to *Cochet, Dormann and Ehrmann,* franchisee autonomy not only fosters system-wide adaptability and outlet-owners' motivation but also raises the costs from agency problems present in franchisee-franchisor dyads. Advancing upon the understanding of agency issues involved in franchising, they test the argument that chains counterbalance the loss in control inherent to autonomy with relational governance mechanisms. The empirical results provide strong support for this hypothesis. In addition, they show that relational governance becomes more important the weaker agents' incentives are aligned with the interests of the entire network. The moderating effects of five franchisee characteristics influencing goal congruencies were considered: multi-unit ownership, age of the relationship, geographic distance, economic success, and the level of perceived intra-chain competition.

Ehrmann and Spranger analyse various forms of power and explain their asymmetrical allocation in the franchising network. They demonstrate how franchisors restore shifts in power that seem to disorder the desired balance by performing contractual, financial and organizational adjustments. The nature of these measures suggests that franchisors should cooperate with agents despite their freedom to behave opportunistically. According to the empirical results, the better a franchisor is able to credibly alleviate a franchisee's fear of being exploited by principal opportunism, the stronger the growth generated in the entire franchise system that embraces both the company-owned and the franchise arms.

Performance and Efficiency in Franchising

Measuring performance in franchised networks calls for specific methodologies depending on the definition given to the performance concept. Dant, Kacker, Coughlan and Emerson suggest a cointegration analysis, and Barros and Perrigot implement a DEA approach.

Dant, Kacker, Coughlan and Emerson present a cointegration analysis of the correlates of performance in franchise channels. Their investigation of the correlates of performance contributes to the extant literature in three specific ways. Foremost, they attempt a systematic assessment of the relative effects of a series of firm decision variables on performance. Specifically, they evaluate the impact of four categories of drivers of performance. Besides three covariates, a total of eleven hypotheses focused on drivers of performance are investigated. Second, they utilize three different operationalizations of the dependent variable, performance, in their investigation. Finally, they estimate their empirical models using nine years of longitudinal panel data aimed at deciphering the effects associated with the set of predictor variables using cointegration analysis, a relatively new and advanced approach to modeling long term relationships between economic variables in panel data. The results show that seven out of eleven hypotheses were supported by the data using the system size operationalization of performance.

Barros and Perrigot examine the franchising network efficiency from the franchisor point of view through a DEA approach (Data Envelopment Analysis). Two main indicators of the franchisor revenues are used: The on-going franchising royalties and the franchising fee. Data concern the first 150 franchising networks of the Entrepreneur's 25 Annual Franchise 500® ranking (2004). The findings indicate that most of the networks are under-efficient and one of the main reasons for this stems from scale efficiency. In addition, a particular network is studied in depth. Four hypotheses are empirically tested.

Entrepreneurship and Strategic Management Issues

Tuunanen views franchising as an entrepreneurship activity being able to bring dynamism to small businesses, and Torikka shows the impact of training in this entrepreneurial process. Croonen investigates franchising as a strategic alliance between the partners under the exploration/exploitation trade-off. Croonen's view constitutes a link with the next part of the book.

Tuunanen's study takes an entrepreneurship viewpoint to franchising. To create a conceptual background, Tuunanen reviews past franchising literature and analyzes prior studies considering franchising as entrepreneurial activity. The current Finnish Entrepreneurship Policy Programme was utilized to explore the domain of entrepreneurship and franchising. The question is, how is franchising linked to the aims of the Entrepreneurship Policy Program and how could franchising potentially be used to foster SME activity in the Finnish economy? The literature analysis showed that prior franchising studies have rarely regarded franchising as a form of entrepreneurship. Likewise, theories explaining the birth, growth and survival of franchising are rather distant from entrepreneurship. However, recent franchising enquiries have taken an approach that comes closer to entrepreneurship. Franchising is a rapidly growing form of business and its importance in the economy increases. Tuunanen's investigation indicates that franchising has multiple features overlapping with the present small business policy agenda.

Torikka examines the impact of the Finnish franchisee training program on the creation of franchised businesses. The Finnish franchisee training program was a unique training since it was government financed and provided to prospective franchisees by a third party. The organizing parties were the Finnish Employment and Economic Development Centres and a private consultation company specialized in franchising. The training program aimed to find people interested in becoming franchisees and to give them the essential skills and knowledge a franchisee needs. In total more than 200 trainees completed the ten programs held in 1999-2001. Those trainees comprise the initial sample of this follow-up study. The purpose of the study is to analyze the effectiveness of the franchisee training program as a part of the career decision-making process of the trainees. The results are interesting and encouraging – the impact of the training program was positively associated with becoming a franchisee or a stand-alone business owner.

Croonen investigates the complexity of how and why franchise partners as strategic alliance partners interact with each other given March's exploration/exploitation trade-off (March 1991). Croonen presents a research model that distinguishes five types of responses that partners may adopt in their relationships. The empirical part consists of a case study which focuses on two 'strategic change trajectories' (SCTs) in a franchise system in the Dutch drugstore industry. This paper discusses what responses franchisees adopted in a reaction to the introduction of these SCTs by the franchisor, what responses the franchisor adopted toward these franchisees in turn, and why both partners adopted these responses. The paper concludes by adding a new response type to the current response typology, and by providing insight in why franchise partners adopt certain responses.

Strategic Alliances

Strategic alliances, such as R&D networks, inter-firm alliances in the winter sports industry, investor-investee relations in the private equity sector and the network structure of international audit firms, are examined through governance and performance issues at the national and international level.

Governance Structure Issues

Arranz and de Arroyabe analyse governance structures used to organize partnerships in R&D networks emphasizing the degree of administrative and social factors they embody. They characterize the forms of governance in terms of the applicability of the technology managed in the networks. To do so, a set of factors were selected and grouped into two categories. Structural or administrative factors selected have been planning criteria, decision-making and organization of activities. The social factors chosen were the degree of cohesion and openness of network. These forms of governance were tested in a sample of European R&D networks where firms and research organizations were involved during the period 1990- 1999. Their findings show that two kinds of networks exist in which administrative structures as well as the openness and cohesion of the R&D network have different relevance in governance structures.

Bocquet presents a model of inter-firm network in the case of the winter sports industry that is based on two theoretical perspectives of networks: The first one is the transaction costs tradition (Williamson 1991) which considers the network as a hybrid form. The second one is the French theory of conventions (Favereau 1989) yielding another vision of inter-firm network as a collective and non-contractual governance structure. With these two conceptions, they construct two business network archetypes: In the star network, actors seek efficiency and are linked by bilateral contractual agreements. By opposition, the community network aim at creating new productive solutions where "scattered" actors are engaged in a learning process. Multilateral and non-contractual relations are guiding their path. Bocquet shows that these two networks are complementary. Thus, skiing resorts can no longer be seen as autonomous organizations with spatial boundaries. Their frontiers are extended to the contractual or conventional arrangements which characterize the new winter sports industrial organization.

Nisar analyses the influence of financial institutions and investor behaviour on company management practice. Nisar examines these investor-investee relationships, drawing upon eight private equity fund case studies and eight case studies of portfolio companies funded by private equity finance. The findings empirically confirm the importance of organizational structure for the process of investor engagement ('engagement approach'). Nisar shows that independent and more specialized investors are much more involved with their companies than captives. Experienced and knowledgeable partners are also more likely to offer advice and support services. Nisar also finds examples of investor influence in company management in areas such as strategy, human resource management and performance evaluation.

According to *Lenz and James*, the organizational structure of international audit firms can be characterized as a specific form of a strategic network (Sydow 1993). Networks of audit firms are a prime example of hybrid governance structures between markets and hierarchies and are organized by contractual relationships between legal and economically autonomous partnership entities from different countries. Lenz and James describe the governance structure of international audit firm networks and analyse how coordination and incentive problems, e.g. hold-up and moral hazard situations, are dealt with in these network structures. They argue that exclusive rights, referral work, brand names, network-specific investments, and profit pooling are means to ensure that network members cooperate.

Performance of Joint Ventures

Larimo investigates the impact of foreign parent, target country and investment specific variables on the performance of international joint ventures. Based on the literature review (e.g. Robson et al. 2002; Reus and Richie 2004), Larimo develops fourteen hypotheses of the impact of foreign parent, target country, and investment strategy specific variables on performance. The empirical part of the paper is based on a sample of over 720 international joint ventures established by more than 130 Finnish companies in over 60 foreign countries during period 1970-2001. The study is the first large scale study focusing on IJV performance of firms originating from any of the Nordic countries (sample size over 250 cases). The most significant variables are the international experience and the degree of diversification of the Finnish firms, unit unrelatedness, and the individualism dimension of culture.). In addition, Larimo shows that the results depend on the selected measures of performance, such as longevity, survival, and stability.

Cooperatives

Last but not least, cooperatives are studied through governance and strategic issues.

Strategic and Governance Issues

Hendrikse and Smith use an agent based simulation to better understand strategic portfolios of cooperatives. Hu, Huang, Hendrikse, and Xu discuss the organization form of cooperatives in China in a global economy.

Hendrikse, Smith and de la Vieter ask the question why the diversification profiles of cooperatives and investor-owned enterprises differ. They focus on the relationship between the orientation (perspective and cognition) of the agents in different governance structures and the evolution of the diversification portfolio. The limited cognition/bounded rationality of individuals and organizations inevitably entails that only a few aspects of the world can be grasped, while many others are ignored. They adopt a partitioning approach in an agent based simulation environment, using the methodology of cellular automata, in order to capture by the notion of orientation the stylized facts formulated by Teece et al. (1994).

Hu, Huang, Hendrikse and Xu examine the organization of the new farmer specialized cooperatives in China. Are Chinese cooperative organizations a feasible organizational form to the organization of farmers in an increasingly global agri-food supply chain? They address this question from the perspective of systems of attributes (Milgrom and Roberts 1995), like decision rights, income rights, quality control systems and branding. To answer this question, they use the data (a) regarding the historical development of farmer cooperatives in China, (b) regarding the membership composition of a sample of 66 farmer cooperatives in the Zhejiang province; and (c) regarding the various attributes (governance, quality control system, and strategy) of a watermelon cooperative in this province. The data indicate that cooperatives exhibit substantial heterogeneity, in terms of farmers being member and skewness in the distribution of control rights. Human asset specificity in terms of establishing and maintaining relations and access to markets seems to be more important than physical asset specificity in accounting for governance structure choice in the current institutional setting.

References

Affuso L (2002) An Empirical Study on Contractual Heterogenity within Firms: The 'Vertical Integration-Franchise Contracts' Mix, Applied Economics 34, 931 – 944

Argyres NS, Liebeskind JP (1999) Contractual Commitments, Bargaining, and Governance Inseparability. Academy of Management Review 24: 49–63

Baker GP, Gibbons R, Murphy KJ (2004) Strategic Alliances: Bridges Between "Islands of Conscious Power". Working Paper, Harvard Business School.

Blair RD, Lafontaine F (2005) The Economics of Franchising, Cambridge, Cambridge University Press.

Bradach JL (1997) Using the Plural Form in the Management of Retail Chains. Administrative Science Quarterly. 42: 276-303

Brickley JA, Dark FH, Weisbach, MS (1991) An Agency Perspective on Franchising. Financial Management 20: 27 – 35

Cliquet G (2000) Plural Forms in Store Networks : A Model for Store Network Evolution. International Review of Retail, Distribution and Consumer Research 10: 369 - 387

Dant RP, Kaufmann P (2003) Structural and Strategic Dynamics in Franchising. Journal of Retailing 79 : 63 - 75

Favereau O (1989) Organisation et Marché. Revue Française d'Economie 4(1) : 65 - 99

Hart OD, Moore J (1990) Property Rights and the Nature of the Firm. Journal of Political Economy 98: 1119 - 1158

Hendrikse GWJ (2003) Economics and Management of Organization. McGraw Hill, London.

Lafontaine F, Slade M (2001) Incentive Contracting and the Franchise Decision. In: Chatterjee K, Samulelson W (eds) Game Theory and Business Applications. Kluwer Academic Press, pp. 133 – 188

Lafontaine F, Shaw KL (2004) Targeting Managerial Control: Evidence from Franchising. RAND Journal of Economics 36: 131 - 150

Lutz NA (1995) Ownership Rights and Incentives in Franchising. Journal of Coporate Finance: Contracting, Governance and Organization 2: 56 – 74

March JG (1991) Exploration and Exploitation in Organizational Learning. Organization Science (1): 71-87

Milgrom P, Roberts J (1995) Complementarities and Fit: Strategy, Structure, and Organizational Change in Manufacturing. Journal of Accounting and Economics 19:179-208

Nooteboom B (1999) Interfirm Alliances: International Analysis and Design. Routledge.

Robson M, Leonidou L, Katsikeas C (2002) Factors Influencing International Joint Venture Performance: Theoretical Perspectives, Assessment, and Future Directions. Management International Review 42: 385-418

Reus T, Richie W III (2004) Interpartner, Parent, and Environmental Factors Influencing the Operation of International Joint Ventures: 15 Years of Research. Management International Review 44: 369-395

Robinson DT (2005) Strategic Alliances and the Boundaries of the Firm. Working Paper, Fuqua School of Business, Duke University, May.

Shane S (1998) Explaining the Distribution of Franchised and Company-owned Outlets in Franchise Systems. Journal of Management 24: 717 - 739

Sydow J (1993) Strategische Netzwerke - Evolution und Organisation. Wiesbaden

Teece DJ, Rumelt R, Dosi G, Winter S (1994) Understanding Corporate Coherence, Theory and Evidence. Journal of Economic Behavior and Organization 23:1–30

Williamson O (1991) Comparative Economic Organization: The Analysis of Discrete Alternative. Administrative Science Quaterly 36: 269-296

Windsperger J, Cliquet G, Hendriske G, Tuunanen M (eds) (2004) Economics and Management of Franchising Networks. Springer: Heidelberg, New York