# Design and Management of Interfirm Networks: An Introduction

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**Abstract** The design and management of interfirm networks has become a very important research field both in economics and management in the last two decades. The current book presents new theoretical perspectives and empirical results on the design and management of franchise networks, cooperatives, alliances, and clusters.

The design and management of interfirm networks, such as franchise chains, cooperatives, alliances, joint ventures, and licensing, has become a very important research field in organizational economics, strategic management, organization theory, and industrial marketing in the last two decades (Nooteboom 1999; Gulati 2007; Baker et al. 2008; Ménard 2013; Ehrmann et al. 2013; Hendrikse et al. 2015; Windsperger et al. 2015; Lusch et al. 2016; Hendrikse et al. 2017; Aarikka-Stenroos and Ritala 2017; Koch and Windsperger 2017). The current book addresses theoretical and empirical perspectives on the design and management of franchise networks, cooperatives, alliances and clusters by focusing on the following topics:

1. *Franchise networks*: Innovation in plural form franchise networks; role of peer trust in franchise networks; business model innovation in franchising; organizational innovation through microfranchising; CSR and competitive advantages

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of franchise chains; institutional influence of the franchise business model on competitiveness of healthcare clinics; principles for the design and management of fair Franchise Advisory Councils; and decision model for franchisee location
2. *Cooperatives:* Horizon and portfolio investment constraints in cooperatives; member heterogeneity and exit in cooperatives; demographic, economic, and institutional factors as determinants of farmers' decisions to participate in cooperatives; and opportunistic and cognitive differences between a cooperative and an investor-owned group
3. *Alliances:* Determinants of collocation for supplier-client knowledge-based coordination; tensions and governance in industry-university alliances; co-evolution of clusters and the role of trans-local linkages; effects of cluster cooperation on value creation; oligopolistic interaction and the choice between exports, FDI and strategic alliances; and public-private partnerships in the healthcare sector

A first version of the papers was initially presented at the eighth international conference on Economics and Management of Networks (***EMNet***—https://emnet.univie.ac.at/) that took place at the University of Havana, from November 15 to November 17, 2018, in Havana, Cuba.

The book is structured in three parts:

*Franchise Networks*
*Cooperatives*
*Alliances*

## 1 Franchise Networks

The study of *Nguyen and Cliquet* deals with the role of organizational forms in the innovation process of retail and service chains and more specifically within plural form networks. The authors examine how the degree of organizational mix, measured by the PCO (proportion of company-owned outlets) chosen by network operators, can influence the innovation climate considered as important criterion for innovative organization evaluation. It is hypothesized that the effects of plural form on the innovation climate are mediated by the mutual learning between franchise and company-owned outlets. Results from French networks support the mediation hypothesis and provide evidence that equilibrium in the proportion of franchised and company units is related to a high level of mutual learning, thereby positively influencing the network climate for innovation. Overall, this study contributes to the franchise literature by exploring the role of plural form as governance mechanism for creating a positive innovation climate in the franchise network.

*Croonen and Hamming* contribute to franchising research by developing an integrative theoretical framework on antecedents and consequences of peer trust. The authors conduct a systematic literature review on the antecedents and consequences of co-worker trust within organizations and translate these insights to a franchising context to propose their integrative framework on antecedents and consequences of franchisees' peer trust. The framework distinguishes four types of antecedents of peer trust: franchisee (i.e., trustor) characteristics, peer (i.e., trustee) characteristics, franchisor characteristics, and franchise network characteristics. Moreover, they distinguish three types of consequences of peer trust: perceptual/attitudinal outcomes, behavioral outcomes, and performance outcomes. Finally, avenues for future research on peer trust in franchise networks and potential implications for franchisors regarding the management of peer trust are discussed.

Successful franchisors build formats, devise systems, and develop network expansion models which accommodate the unique characteristics of the business and the prevailing market conditions as well as wider social trends. The study of *Di Lernia and Terry* challenges the standard franchising paradigm and suggests that there are four distinct franchising models—business format franchising, brand franchising, quasi-franchising, and flexible franchising—and presents a taxonomy to accommodate them. The focus of the study is on *flexible franchising*—a new franchise model which eschews the formulaic uniformity of conventional franchising and explicitly and intentionally embraces and incorporates as its integral feature the franchisee's flexibility to bring his or her own brand of entrepreneurship to the franchised business. The development of flexible franchising in practice is examined through case studies on two innovative Australian franchise systems.

The study of *Nunes, Silva, Fadairo, and Seas* deals with the economic rationality underlying organizational innovations in franchising and the rationale behind them. Using Brazilian primary data, they show that spatial distribution of microfranchised units is sensitive to the sector of activity. The results suggest that labor-intensive activities are suitable for microfranchised units in less populated municipalities. In addition, the empirical results indicate that the spatial distribution of microfranchising reflects network growth. Larger networks, in terms of number of units as well as territorial extension, are more likely to be present in smaller markets than smaller networks. Older networks (incumbents) that had a business experience prior to franchising tend to concentrate their franchised units in densely populated areas, while entrants that adopted microfranchising from their foundation target unexplored markets in less populated municipalities.

Although corporate social responsibility (CSR) is a widely researched topic, there is a lack of its application in the franchise literature. The integration of CSR into the franchise business model is vital as it affects the franchise firm's growth and survival. Based on resource-based and organizational capabilities theory, *Jell-Ojobor* explains how CSR strategy impacts the creation of intangible brand name assets as critical source of competitive advantage and hence increased financial performance of franchise firms. Using data from Austrian franchise firms, the results show that the CSR dimensions, such as economic, legal, ethical, and philanthropic responsibility, have a positive impact on the creation of brand name assets. Specifically, philanthropic responsibility strategy has the greatest impact on brand name assets, followed by legal, ethical, and economic responsibility strategy. Overall, this is the first study in franchising which explains the strategic role of CSR.

*Gorovaia, Sanfelix, and Puig* use insights from the institutional theory to study the competitiveness of healthcare clinics in Spain. The environment of the healthcare services is highly institutionalized: professional associations are state agents responsible for the extensive regulation. Recently emerged franchise chains become subject for imitation by creating institutionalized routines from within and increasing competitive pressures for other industry players. While the sector is dominated by the independent doctors, franchise organizations are becoming more popular and show steady growth rates. The franchise business model in the healthcare is evolving: while the core activity—provision of a healthcare service—cannot be standardized, as the independent judgment of a healthcare professional is legally protected, franchise chains standardize management of the healthcare clinics to achieve efficiency and economies of scale. The survey of the healthcare professionals in Spain shows how professional associations and franchise chains impact the field and provide empirical support to the hypotheses.

Franchise Advisory Councils (FACs) form an important managerial instrument for franchisors to create and/or maintain franchisees' trust in the fair and effective functioning of their franchising networks. *Croonen and Bleeker* build on procedural fairness theory and insights from studies in trade journals to develop a theoretical framework with seven core principles that affect franchisees' perceptions regarding the fair management of their FACs. These core principles are the consistency principle, the bias-suppression principle, the accuracy principle, the correctability principle, the representativeness principle, the ethicality principle, and the interactional principle. For each core principle, the authors distinguish specific managerial principles that help in fulfilling it. As a result, they present an extensive framework with principles for the design and management of fair FACs ('the fair FAC framework').

*García-Castro and Mula* present a franchisee location model applied to fast food restaurants. The methodology is based on research of environmental factors that influence the choice of the site. A GIS software, the determination of gravity centers, and a multicriteria matrix give a precise idea about which locations could be chosen; then an analytic hierarchy process (AHP) enables an assessment of every location alternative. An empirical application is offered in the city of Alicante in Spain.

## 2 Cooperatives

Cook (1995) formulates five problems which provide a challenge for cooperatives: free rider problem, horizon problem, portfolio problem, control problem, and the influence cost problem. He has argued that these problems stem from member heterogeneity. These five problems have been researched extensively. The study by *Franken and Cook* provides empirical evidence regarding two of these problems: the horizon and portfolio problem. The horizon problem entails that cooperatives will underinvest in long-term projects. The source of the problem is the limited transferability of ownership rights and member heterogeneity. Old members have a disincentive to contribute to long-term investment strategies, for example, brand promotion, market research, and new product development, because the productive life of the asset is longer than their remaining membership period. They will therefore support investment opportunities with a shorter productive life of assets than the efficient one. This logic is appealing, but various conceptual articles regarding the horizon problem have formulated arguments to question the relevance of horizon problem. For example, old members may transfer their farm to one of their children. Franken and Cook use mail surveys of three agricultural cooperatives to determine the relevance of this problem in cooperative practice. They characterize three horizon problems, i.e., the current obligation horizon problem, the classic short-term horizon problem, and the wait-to-receive horizon problem. They find some evidence for the first two horizon problems and strong support for the third horizon problem.

The portfolio problem of cooperatives captures that the diversification decision of a cooperative is influenced by the farm portfolio of members. Members tie often a substantial fraction of their farm portfolio to one cooperative because they have usually a limited number of crops and each crop is handled by one cooperative. Members will try to establish their desired farm portfolio by influencing the diversification decisions of a cooperative. Franken and Cook distinguish a vertical portfolio problem and the classical (lateral) portfolio problem. All three cooperatives show evidence of the vertical portfolio problem, and one cooperative shows strong evidence of the lateral portfolio problem.

*Hoehler* starts with the observation that members of cooperatives are becoming increasingly diverse and heterogeneous in terms of their farms, personal, and product characteristics. It has been argued repeatedly that this is problematic for cooperatives. A prominent example is the homogeneity hypothesis of Hansmann (1996). Increasing heterogeneity should therefore result in many members leaving the cooperative. However, this is not what happens according to Hoehler. She illustrates this claim with the cases of the cooperatives DMK and Arla. A theoretical framework is developed to formulate new hypotheses for the effect and meaning of member heterogeneity. It is inspired by the model of Hirschman (1970) and various behavioral and collective action concepts. The framework formulates hypotheses regarding cooperative exit based on performance, perceived fairness, cooperative identification, voice, loyalty, proportion of rational egoists, and the number and quality of alternatives.

*Tefera and Bijman* analyze the changing role and membership of cooperatives in the malt barley sector in Ethiopia. The sector has changed due to the entry of foreign brewers in the Ethiopian brewing industry. New standards did arise regarding quality, volume, and timing. Consider first the changing role of cooperatives. Cooperatives play an important role for farmers to benefit from the new opportunities by becoming more business oriented. The authors organize their data by distinguishing various roles of cooperatives.

First, the traditional role of cooperatives in the malt barley chain was the input supply function, i.e., the distribution of inputs to farmers. The entry of foreign brewers has had an impact on the input supply as well as the output marketing function of cooperatives. The results show that cooperatives facilitate the technical trainings regarding productivity and quality improvement, and organize farm management trainings, which have a positive impact on yield as well as on malt barley quality. Farmers receive price premiums of up to 20% due to the upgrading of products. The benefits materialize only when the participants are linked to brewers and malt factories.

Second, foreign brewers encourage also that cooperatives develop their output marketing function. Capacity building and management trainings provided by brewing companies enhance the management of malt barley cooperatives, which in turn improve their marketing orientation and performance. Low performance of the cooperative in marketing services was mainly attributed by the respondents to weak organizational capacities, low educated leaders, limited financial means, and a difficult relationship with the Union of 90 primary cooperatives.

Third, in modern supply chains characterized by contractual arrangements and quality requirements, cooperatives perform also a brokering role. They provide services such as collecting and distributing market information, contract negotiation, bargaining with buyers, and aggregating, transporting, and storing grains. This supports their participation in the emerging malt barley supply chains, which has a positive impact on farmers' income and livelihoods.

The membership of cooperatives has changed due to the above developments. Cooperative members differ from non-members. Members of marketing cooperatives have better access to extension services, a more entrepreneurial attitude, and show more innovativeness than non-members. Cooperative membership is biased toward farmers with more productive resources in terms of larger livestock holdings, farm size, and malt barley area and has significantly more contact with extension services than non-members. The distance to the market has a positive effect on the probability of cooperative membership. Membership has a positive effect on malt barley production and product quality and hence on malt barley prices. Cooperative membership has a positive impact on food crop income and total farm income.

*Saïsset and Codron* investigate the governance of organizations in the French apple industry by comparing a cooperative and an investor-owned group. The authors are inspired by the transaction cost economics approach of Williamson (1985). The subsequent development of hybrid organizational forms by Ménard (2013) is used to describe and classify the two apple groups. The cooperative is characterized as a hybrid with a strategic center, while the investor-owned group is characterized as an information-sharing hybrid.

Another development regarding transaction costs economics as initiated by Williamson is the governance of bounded rationality. Williamson distinguishes asset specificity, frequency, and uncertainty as attributes of transactions and adopts the behavioral assumptions of opportunism and bounded rationality. He highlights the implications of the behavioral assumption of opportunism in his research, but is rather silent on bounded rationality. A prominent example of the cognitive branch of transaction costs economics is Nooteboom (2009). *Saïsset and Codron* contribute to the development of the cognitive governance of organizations. It results in identifying transaction complexity as a fourth attribute of transactions. This is relevant in the apple industry due to the increase in sanitary requirements. The cognitive governance implications for the two apple groups are analyzed.

## 3 Alliances

*Miller and Weigelt* examine the impact of client niche market position and task complexity on the governance of supplier-provided knowledge work. Besides client firm size and location, the decision to collocate knowledge-based tasks depends on whether the focal client firm and its supplier need to work together closely, either so the supplier can incorporate the client's specialized knowledge about its internal operations and customers or for ongoing customization of the service to support complex operations. However, collocation of services involving software is less likely when remote service is facilitated by broadband internet infrastructure. The authors demonstrate that client positioning in the product market affects the services it receives from suppliers. Niche positioning requires specific client knowledge, such that collocation is the more efficient way to customize the supplier's product. Their findings also affirm the relationship between client task complexity and tighter governance of supplier-provided knowledge work, consistent with prior work on alliance design. They show that greater task complexity leads to collocation of supplier-provided knowledge work. In conclusion their research highlights that in knowledge-based services, particularly, entire teams may be placed at the client's location for a period of time, especially at the start of an engagement or when a new project begins.

*ten Hoor and Estrada* investigate tensions and governance in industry-university (IU) alliances. In their research they explore how these tensions emerge and can be effectively managed through an exploratory study of two IU alliances in the energy sector. Based on their cases, four types of dissimilarities (i.e., orientation-based, routine-based, administrative, and personal) are identified that may lead to different types of tensions (i.e., orientation, routine, transaction, and distinctive), which in turn may be addressed through different governance mechanisms (i.e., communication, flexibility, contracts, and hierarchy). Their exploratory framework provides initial insight into the connections between inter-partner dissimilarities, tension, and governance in the formation phase of IU alliances. They identify the presence of what they refer to as distinctive barriers, barriers that (1) are related to dissimilarities between industry and university partners in the alliance, but (2) do not seem to be specifically apparent in all IU alliances. They argue that these barriers can be managed through hierarchy. They conclude with the hope that future studies in the field can build upon and extend their framework to further explore the links between dissimilarities, tension, and governance in IU alliances. In addition, managers involved in the formation of these alliances should make use of their framework to timely detect problematic dissimilarities that can lead to tensions in the alliance and, thus, anticipate tension in the process of alliance design.

*Mariotti, Yaqub, and Haider* examine trans-local relationships and their changing dynamics over time, particularly emphasizing their knowledge flows. The underlying proposition is that the clusters are not isolated entities and that inter-cluster ties are as significant as local ties in sustaining the co-evolution of clusters. They use historical and retrospective analyses to study the interlinkages between the

NASCAR cluster and the UK's motorsport industry. Their findings highlight that the structure of the interfirm ties between the two clusters has evolved over time with a marked increase in the number of linkages established and the transfer of more sophisticated knowledge and components. At the same time, the research highlights some impediments that have delayed the transition of the NASCAR cluster to a more open entity. The authors propound that co-location and proximity are poor indicators of the structure of clusters and that the inter-cluster linkages play an important role in their co-evolution.

*Kuczewska, Morawska, and Tomaszewski* investigate the effects of cluster cooperation which might affect company value creation. Their study has been developed among companies cooperating and competing within two Polish business clusters: aviation and fish products. They argue that the rise in productivity co-occurs with the geographic concentration of entities, but is independent from strengthening of isolation with relation to other entities. The mere presence of the geographical concentration of enterprises is not enough to reveal the benefits of cluster cooperation affecting productivity. The closeness of formal and informal relations between enterprises and research centers and R&D organizations does not affect building relations between entities. In extreme cases, it negatively correlates with productivity. Hence the conclusion is that a strong concentration and specialization of entities in a certain region does not always result in a highly functioning cluster with global extensions but either in the development of cluster initiatives or an earlier stage of formal cluster development. They conclude that cooperation between specialized and geographically concentrated entities shows benefits affecting the increase in productivity. However, the enterprises' awareness of them benefiting from cluster cooperation, or the formalization of a cluster, is not an essential factor in the process of achieving additional benefits affecting value creation.

*Morasch* examines the role of oligopolistic interaction for the choice between exports, foreign direct investment, and strategic alliances. The decision over exports vs. foreign direct investment (FDI) is usually discussed in an extension of the so-called Melitz model where firms with heterogeneous costs compete in a monopolistically competitive industry. The present paper starts from a situation where a potential foreign entrant would be just indifferent between exports and FDI in such a setting. However, by assuming oligopolistic interaction, strategic considerations are also taken into account. It is shown how the strategic impact of lower marginal cost makes FDI more attractive in a Cournot setting, while exports are preferable under price competition in a market with differentiated goods. Beyond that it is also explored how a strategic alliance with a local incumbent could be a superior alternative for market entry.

The public sector has modified its financing methods, going from traditional debt instruments to new tools based on partnerships with the private sector. These are alliances between the public and the private sector regarding infrastructure investments, where the private partner cooperates in providing, managing, and financing services and structures that were traditionally a responsibility of the public sector. These collaborations are called 'public-private partnerships', and they have now become a commonly used investment strategy for all public administrations.

In their study, *Colasanti, Frondizi, Meneguzzo, and Rossi* analyze public-private partnerships, first at a more general level and then by considering their application to the healthcare sector, providing a state of the art of relevant experiences in Latin America.

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