George W. J. Hendrikse
Gérard Cliquet
Thomas Ehrmann
Josef Windsperger *Editors*

Management and Governance of Networks

Franchising, Cooperatives, and Strategic Alliances

Springer

Contributions to Management Science

More information about this series at http://www.springer.com/series/1505

George W.J. Hendrikse • Gérard Cliquet •
Thomas Ehrmann • Josef Windsperger
Editors

Management and Governance of Networks

Franchising, Cooperatives, and Strategic Alliances

Springer

Editors

George W.J. Hendrikse
Rotterdam School of Management
Erasmus University
Rotterdam, The Netherlands

Gérard Cliquet
CREM
University of Rennes 1
Rennes, France

Thomas Ehrmann
Institute for Strategic Management
University of Münster
Münster, Germany

Josef Windsperger
Department of Business Administration
University of Vienna
Vienna, Austria

Contents

List of Contributors

Cristian Adasme-Berríos Faculty of Social Science and Economy, Department of Economy and Administration, Universidad Católica del Maule, Talca, Chile

Hachemi Aliouche Rosenberg International Franchise Center, Peter T. Paul College of Business and Economics, University of New Hampshire, Durham, NH USA

Laure Bonnaud French National Institute for Agricultural Research, UR RiTME, Ivry-sur-Seine, France

Zouhair Bouhsina French National Institute for Agricultural Research, MOISA, Montpellier, France

Sofiane Bouzid Institut des Sciences de l'Homme, Lyon, France

Fabrice Cassou CREM UMR CNRS 6211, University of Rennes 1, Rennes & IRGO, Université de Bordeaux, Bordeaux, France

Magali Chaudey GATE Lyon-St Etienne, University of Lyon, Saint-Etienne, France

Gérard Cliquet Institute of Management of Rennes (IAE), Université de Rennes 1, Rennes, France

Jean-Marie Codron French National Institute for Agricultural Research, MOISA, Montpellier, France

Gabriela Cofre-Bravo Faculty of Agrarian Science, Department of Agricultural Economics, University of Talca, Talca, Chile

Michael L. Cook University of Missouri, Columbia, MO, USA

Thomas Ehrmann Institute for Strategic Management, University of Muenster, Muenster, Germany

Alejandra Engler Faculty of Agrarian Science, Department of Agricultural Economics, University of Talca, Talca, Chile

Muriel Fadairo GATE Lyon-St Etienne, University of Lyon, Saint-Etienne, France

Dominique Bonet Fernandez IPAG Business School, CRET-LOG, Aix-Marseille Université, Paris, France

Jasper Grashuis University of Missouri, Columbia, MO, USA

Raymond Guillouzo CIAPHS, University of Rennes 2, Rennes, France

Hongdong Guo China Academy for Rural Development, Zhejiang University, Hangzhou, China

Ilir Hajdini Department of Business Administration, University of Vienna, Vienna, Austria

George W.J. Hendrikse Rotterdam School of Management, Erasmus University Rotterdam, Rotterdam, The Netherlands

Julia Höhler Institute of Agribusiness Management and Food Economics, Justus Liebig University Giessen, Giessen, Germany

Albert Kagan Concordia College, Moorhead, MN, USA

Helge Klapper Department of Business Administration, University of Vienna, Vienna, Austria

Rainer Kühl Institute of Agribusiness Management and Food Economics, Justus Liebig University Giessen, Giessen, Germany

Zvi Lerman Department of Environmental Economics and Management, The Hebrew University of Jerusalem, Jerusalem, Israel

Cary Di Lernia The University of Sydney Business School, University of Sydney, Sydney, NSW, Australia

Qiao Liang China Academy for Rural Development, Zhejiang University, Hangzhou, China

Frédéric Perdreau COACTIS Lyon-St Etienne, University of Lyon, Saint-Etienne, France

Rozenn Perrigot Graduate School of Management (IGR-IAE), University of Rennes 1, Center of Research in Economics and Management (CREM UMR CNRS 6211) and Center in Franchising, Retail & Service Chains, Rennes, France

Paulus Rommer Department of Business Administration, University of Vienna, Vienna, Austria

David Sedik Regional Office for Europe and Central Asia, Food and Agriculture Organisation of the U.N. (FAO), Budapest, Hungary

Odile Streed Concordia College, Moorhead, MN, USA

Andrew Terry The University of Sydney Business School, University of Sydney, Sydney, NSW, Australia

Muhammad Akib Warraich Graduate School of Management (IGR-IAE), University of Rennes 1, Center of Research in Economics and Management (CREM UMR CNRS 6211) and Center in Franchising, Retail & Service Chains, Rennes, France

Josef Windsperger Department of Business Administration, University of Vienna, Vienna, Austria

Yining Xu China Academy for Rural Development, Zhejiang University, Hangzhou, China

Muhammad Zafar Yaqub Faculty of Economics and Administration, Department of Business Administration, King Abdulaziz University, Jeddah, Kingdom of Saudi Arabia

Management and Governance of Networks: An Introduction

George W.J. Hendrikse, Gérard Cliquet, Thomas Ehrmann, and Josef Windsperger

Abstract There are many types of interfirm networks, like cooperatives, franchise and retail chains, joint ventures, strategic alliances, and financial networks. This raises the issue of the relative efficiency of management and governance of a network. The current book addresses theoretical and empirical perspectives on the management and governance of franchising networks, cooperatives, and strategic alliances.

There are many types of interfirm networks, like cooperatives, franchise and retail chains, joint ventures, strategic alliances, and financial networks (Gulati 2007; Baker et al. 2008; Provan and Kenis 2008; Zaheer et al. 2010; Goyal 2015; Windsperger et al. 2015). This raises the issue of the relative efficiency of management and governance of a network. The current book addresses theoretical and empirical perspectives on the management and governance of franchising networks, cooperatives, and strategic alliances by focusing on the following issues:

1. Strategic groups in the franchising sector, control and performance of franchise chains, franchising strategies for Indigenous entrepreneurship, social entrepreneurship and franchising, and franchising in the education sector
2. Strategic and governance issues on food cooperatives, analysis of ownership and investment complementarities in farmer cooperatives, development of a novel

G.W.J. Hendrikse
Rotterdam School of Management, Erasmus University Rotterdam, Office T08-56, PO Box 1738, 3000 Rotterdam, The Netherlands

G. Cliquet
Institute of Management of Rennes (IAE), Université de Rennes 1, 11, rue Jean Macé, CS 70803, 35708 Rennes, France

T. Ehrmann
Institute for Strategic Management, University of Muenster, Leonardo-Campus 18, 48149 Muenster, Germany

J. Windsperger (✉)
Department of Business Administration, University of Vienna, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria
e-mail: josef.windsperger@univie.ac.at

typology of US farmer cooperatives, innovations in cooperatively organized breeding, uniformity in collective entrepreneurship in food retail cooperatives, and characteristics and empirical findings of cooperatives in China and Kyrgyzstan

3. Development of dynamic capability model of alliance portfolio management, analysis of the antecedents of relationship phase affect in alliances, and the role of hybrids in the safety management in the fresh produce sector

The first version of these papers was initially presented at the seventh international conference on Economics and Management of Networks (*EMNet*) that took place at the Faculty of Economic and Management Sciences (EMS) at the University of the Western Cape from December 3–5, 2015, Cape Town, South Africa.

The book is structured in three parts:

Franchising
Cooperatives
Strategic Alliances

1   Franchising

Bouzid, *Chaudey*, *Fadairo*, and *Perdreau* analyze the French franchising sector, based on the strategic group approach (Combs et al. 2004). The authors use a 4-year panel dataset from the French Federation of Franchising, for the period 2010–2013, and apply sophisticated statistical and supervised learning models. The authors conduct a multidimensional statistical analysis (Principal Components Analysis and Ascending Hierarchical Clustering), highlighting three factorial axes and five clusters. Five main strategic groups of franchisors are distinguished in the French system, characterized by specific strategies and performance outcomes.

Hajdini, *Klapper*, *Rommer*, and *Windsperger* examine the determinants of franchisor performance by focusing on the moderating role of control as transaction cost savings and value-creating mechanism. In line with the resource-based view (Barney 1991), they argue that intangible resources of the franchisor (brand name) and the intangible resources of the franchisees (local market knowledge, human resource management, quality control, and administrative capabilities) will positively impact franchisor performance. Based on the transaction cost view (Williamson 1991), they show that environmental uncertainty is negatively related to franchisor performance. Although the resource-based view and transaction cost economics have been extensively used in previous literature, no study examined the moderating role of control on the impact of resource-based and transaction cost variables on franchisor performance. The authors use cross-sectional data from the franchise sector in Germany to empirically test the hypotheses.

Di Lernia and *Terry* analyze the franchising strategies for Indigenous entrepreneurship in Australia. Australia's Indigenous population faces disparities which tarnish Australia's image as "the lucky country," a life expectancy markedly less

than non-Indigenous Australians, lower education standards, poorer health, and greater unemployment, and the list goes on. Having developed a culture which enabled first Australians to survive and, indeed thrive, for over 60,000 years in all areas of Australia's massive landmass and challenging climate and conditions, Australia's original inhabitants have faced their greatest challenge in the form of European invasion and settlement just over 200 years ago. Successive Australian governments have made relatively little progress in dealing effectively with the challenges faced by Indigenous Australians living within, and alongside, modern Europeanized and increasing Asianized Australia. This study considers the potential role of franchising in supporting Indigenous entrepreneurship.

Aliouche and *Bonet Fernandez* focus on Algeria as the case study to demonstrate the practical application of social entrepreneurship and franchising in an emerging country. Though Algeria has invested heavily in large-scale government-sponsored employment programs, unemployment—especially among the youth—remains stubbornly high, leading to a number of serious social and security problems (criminality, drug usage, suicides, illegal emigration, terrorism, etc.). The authors argue that social entrepreneurship combined with franchising has the potential to foster quickly a large number of social entrepreneurs, leading to the creation of a large number of sustainable jobs, especially among the educated youth in Algeria and, by extension, in many emerging countries.

The aim of the study of *Warraich* and *Perrigot* is to assess how customers perceive franchising in the education sector in Pakistan. More specifically, the research questions are the following: (1) according to the customers, what are the differences between franchised schools and public schools?; (2) what are the customer perceptions regarding the main characteristics of franchising in the education sector?; (3) what are the customer perceptions regarding social achievements of these franchised schools and chains?; and (4) according to the customers, what are the opportunities and challenges associated with franchising in the education sector? The authors adopt a qualitative approach with 17 face-to-face interviews conducted with customers of franchised schools in Pakistan, including parents and students.

2 Cooperatives

Streed, *Cliquet*, and *Kagan* analyze the specificities and key points of differentiation of natural and organic food cooperative members versus customers of private natural food retailers. This is accomplished by identifying and comparing behavioral, attitudinal, and lifestyle characteristics of members and nonmembers in regard to organic food and sustainable practices such as buying local. The results reveal that food cooperative members are for the most part more "idealistic" than nonmembers but also identify a duality between idealism and pragmatism among members that could trigger serious governance issues (Ashforth and Reingen 2014).

Consequently, recommendations in terms of target market, positioning, communication, customer experience, and governance are provided.

According to *Grashuis* and *Cook*, the long-term economic viability of the farmer cooperative mode of organization is often assumed to be jeopardized by an equity constraint. To inform possible solutions, the farmer cooperative is conceptualized as an independent firm comprising a system of attributes, thus facilitating a better understanding of the dual function of organized farm producers as both patrons and capitalists. The authors place emphasis on the hybrid assignment and configuration of claim rights to find possible complementarities between ownership and investment so as to loosen the equity constraint. Based on survey data on US farmer cooperatives, *Grashuis* and *Cook* analyze multiple configurations of membership access, ownership transferability, equity redeemability, preferred stock provision and ownership, and up-front capital contribution in relation to the desire to patronize and the obligation to capitalize the cooperative. Consequently, they inform constitutional responses to rapid developments in the agri-food industry, which force farmer cooperatives to find additional equity for necessary growth in scale and scope.

Grashuis and *Cook* use survey data on 371 US farmer cooperatives to study the diffusion of traditional and novel ownership structures. The authors argue that the existing typology of claim right configurations is an imperfect representation of the current population of US farmer cooperatives, which is interpreted as strong evidence of much ownership structure adaptation in the last decade. Using 12 ownership structure characteristics, an updated typology is proposed with classic structure variations in which equity redeemability is allowed, as well as new hybrid discoveries which combine different characteristics. Introduced are the Classical Investor Cooperative, a structure common to small local multipurpose cooperatives; the Proportional Trader Cooperative, which is adopted by several large dairy and supply cooperatives; and the Proportional Investor Cooperative. *Grashuis* and *Cook* use multiple pairwise comparison method to reveal significant differences in the competitive scope, the organizational size and type, as well as the capital structure of classic and hybrid ownership structures. Future research is recommended to further investigate claim right characteristics to inform complementarity between ownership and investment, which is necessary to ensure the long-term economic viability of each farmer cooperative.

Höhler and *Kühl* examine the innovation activity of cooperatives in dairy cattle breeding and especially the links between profitability, organization, and innovation in the case of Germany. The cluster analysis suggests a positive effect of network activity and innovation activity on the profitability of breeding companies. The results imply that network organizations should be supported by the members. The insights on small cooperatives with a high number of shares per member reveal a second way that could combine the benefits of networks and small cooperatives: the establishment of networks and their splitting in strategic groups with a size-related distribution of shares per member.

Cassou, *Cliquet*, and *Perrigot* argue that entrepreneurship can be either individual, collective, or both. Cooperatives and independent associated networks and

groups of retail and service stores pool their means. Curiously, there has been a lack of research on retail cooperatives. The objective of this research is to show how these organizations, whose cooperators have a dual status (they are both customers and co-owners of the cooperative), can face the uniformity challenge (Bradach 1997) as efficiently as franchise networks do. The findings highlight the existence of various centralized, decentralized, and mixed processes. This research suggests a model for managing uniformity in food retail cooperatives.

Xu, *Hendrikse*, *Guo*, and *Liang* address the question whether Chinese cooperatives are different from Western cooperatives. Five cooperatives in Zhejiang Province are described, and they are evaluated from various perspectives. The authors show various differences between cooperatives in China and the Western world. Specifically, they highlight aspects of the political and the economic environment, such as the farmland system, the cooperative law, the financial support and intervention from the government, the limited education of most farmers, and the substantial capital requirements in order to have a successful cooperative.

According to *Lehrman* and *Sedik*, most cooperatives in Kyrgyzstan are production cooperatives—successors of former collective farms. There are hardly any "pure" service cooperatives, although a survey conducted as part of this study reveals that production cooperatives partially fulfill the function of service cooperatives by providing farm services also to nonmembers. Most respondents highlight difficulties due to shortage of inputs and inadequate access to farm machinery, including the lack of machinery leasing options. Difficulties with product sales, access to financial sources and veterinary services were highlighted with lower frequency, but still by more than 20% of respondents. These are precisely the problem areas that service cooperatives are designed to overcome. Respondents indicate that cooperatives play a positive role in rural life: they improve service delivery to farmers and the perceived well-being is higher for cooperative members than for outsiders. In addition, formal cooperation as manifested in membership in cooperatives is very limited among the farmers surveyed. Informal cooperation is much more widespread, and the substantial gap between the frequency of formal and informal cooperation (8 and 22% of farmers surveyed, respectively) clearly suggests that there is a large potential for development and adoption of service cooperatives in Kyrgyzstan.

3   Strategic Alliances

Guillouzo presents a dynamic capability model of alliance portfolio management (Helfat et al. 2007). Researches have demonstrated that alliances contribute to the improvement of the firm's performance via savings in coordination costs, access to new resources and competencies, the development of new activities and new markets, or the reinforcement of the competitive position. The increasing contribution of the alliances to the turnover and the organization of the activities of the firm make the portfolio as a key strategic asset. The author presents an integrating

model which takes the multidimensional nature of alliance portfolio management into consideration. Specifically, *Guillouzo* develops an emerging approach based on the concept of dynamic capabilities (Teece et al. 1997) using business intelligence, networking, alliance management, and absorptive capabilities.

The aim of the study of *Yaqub* is to extend the interfirm exchange relationships literature by examining antecedents of the transitions that take place in the life cycles of business relationships. While making an appeal to the relational exchange theory, transaction cost economics, (network) bargaining power theory, and the organizational control model, Yaqub proposes a (theoretical) model that takes an account of the antecedents of changes that take place in the firms' states of affect during different phases of the development/evolution of their exchange relationships with other firms. It has been theorized that the varying extents of relational governance, relationship quality, interorganizational commitment, relational investments, behavioral uncertainty, bargaining influence, and perceived control affect changes in the affective states of exchange partners across different phases/ stages of development/evolution of their exchange relationships. The study sets an agenda for the future research to regard (phases of) business relationship life cycle as a (behavioral) outcome construct and explain its antecedents instead of merely considering it as a moderating condition as has been done in the interfirm relationships' literature in the last few decades.

According to *Codron*, *Engler*, *Adasme*, *Bonnaud*, *Bouhsina*, and *Cofre-Bravo*, managing the pesticide safety risk to provide markets with safe fruits and vegetables leads to the development of diversified and more integrated relationships between growers and their buyers. The work is a case study of the hybrid forms underlying such relationships. It presents an analytical framework, drawing on transaction cost theory, positive agency theory, and property rights theory with a special focus on the model proposed by Ménard (2013), positioning the hybrid forms along the two dimensions of decision rights and strategic resources. The case studies confirm that the level of centralization increases with the buyer's commercial reputation, the level of customer safety requirements, and the level of asset specificity, which is embedded in the technical assistance and training provided by the buyer to the growers.

References

Ashforth BE, Reingen PH (2014) Functions of dysfunction: managing the dynamics of an organizational duality in a natural food cooperative. Adm Sci Q 59(3):474–516

Baker GR, Gibbons R, Murphy KJ (2008) Strategic alliances: bridges between islands of conscious power. J Jpn Int Econ 22:146–163

Barney JB (1991) Firm resources and sustained competitive advantage. J Manag 11:791–800

Bradach JL (1997) Using the plural form in the management of retail chains. Adm Sci Q 42:276–303

Combs JG, Ketchen DJ, Hoover V (2004) A strategic groups approach to the franchising-performance relationship. J Bus Ventur 19:877–897

Goyal S (2015) Networks in economics: a perspective on the literature. Cambridge-INET working paper series no: 2015/05

Gulati R (2007) Managing network resources: alliances, affiliations and other relational assets. Oxford University Press, Oxford

Helfat CE, Finkelstein S, Mitchell W, Peteraf MA, Singh H, Teece DJ, Winter SG (2007) Dynamic capabilities: understanding strategic change in organizations. Blackwell, Oxford

Ménard C (2013) Hybrid modes of organization: alliances, joint ventures, networks, and other 'strange' animals. In: Gibbons R, Roberts J (eds) The handbook of organizational economics. Princeton University Press, Princeton, pp 1066–1108

Provan K, Kenis P (2008) Modes of network governance: structure, management, and effectiveness. J Public Adm Res Theory 18(2):229–252

Teece DJ, Pisano G, Shuen A (1997) Dynamic capabilities and strategic management. Strateg Manag J 18:509–533

Williamson OE (1991) Comparative economic organization: the analysis of discrete structural alternatives. Adm Sci Q 36(2):269–296

Windsperger J, Cliquet G, Ehrmann T, Hendrikse G (2015) Interfirm networks: franchising, cooperatives and strategic alliances. Springer, Heidelberg

Zaheer A, Gözübüyük R, Milanov H (2010) It's the connections: the network perspective in interorganizational research. Acad Manag Exec 24(1):62–77

Part I
Franchising

Strategic Groups in the French Franchising Sector

Sofiane Bouzid, Magali Chaudey, Muriel Fadairo, and Frédéric Perdreau

Abstract We provide a picture of the French franchising sector, based on the strategic group approach. We use a recent 4-year panel dataset from the French Federation of Franchising, for the period 2010–2013, and sophisticated statistical and supervised learning models. Five main strategic groups of franchisors are distinguished in the French system, characterized by specific strategies and performance outcomes. We first survey the literature dealing with strategic groups and then conduct a multidimensional statistical analysis (Principal Components Analysis and Ascending Hierarchical Clustering), highlighting three factorial axes and five clusters. We test the stability of network behaviors with a classification model. Finally, we observe and comment on the differences in strategic group performances.

1   Introduction

In the economic and strategic management literature, a connection between the terms "franchising" and "strategy" is most often made in the context of the study of franchising as a strategy for network expansion or performance. This fundamental issue has generated a vast literature dealing with "franchising *versus* owning," in other words with the choice for franchising *versus* vertical integration. As emphasized by Combs et al. (2011), the works which justify franchising as a strategy have

S. Bouzid
Institut des Sciences de l'Homme, 14 Avenue Berthelot, 69363 Lyon Cedex 7, France
e-mail: sofiane.bouzid@ish-lyon.cnrs.fr

M. Chaudey (✉) • M. Fadairo
GATE Lyon-St Etienne, University of Lyon, Rue Tréfilerie, 42023 Saint-Etienne Cedex 2, France
e-mail: magali.chaudey@univ-st-etienne.fr; muriel.fadairo@univ-st-etienne.fr

F. Perdreau
COACTIS Lyon-St Etienne, University of Lyon, 6 Rue Basse des Rives, 42023 Saint-Etienne Cedex 2, France
e-mail: frederic.perdreau@univ-st-etienne.fr

been developed within two main analytical contexts. Thus, for many authors,[1] franchising, as an organizational strategy, is a way to handle agency costs, such as the costs of monitoring outlets which are geographically distant from the headquarters. This explanation of franchising is a complement to the resource-scarcity view.[2]

However, alternative proposals for the links between franchising and strategy can also be found in the literature. For example, institutional theory highlights the influence of "the isomorphic pressures arising from the environment" (Barthélemy 2011) on decisions. This approach thus suggests that the differences in franchising network strategies result from the institutional environment.

The issue of international expansion is another field in the literature which links the concepts of franchising and strategy. Studying retailers' expansion in foreign markets in the light of internationalization theories, Picot-Coupey et al. (2014) show that, in the clothing retail sector, franchising is mainly used as an expansion mode rather than an entry mode. These authors suggest that franchising is a way to expand a network in foreign markets once knowledge and competences have been acquired via other entry modes. Jell-Ojobor and Windsperger (2014) develop an analytical model which integrates several theoretical perspectives in order to set out the various modes of international governance which can be perceived in franchising, referring to wholly owned subsidiaries, joint venture franchising, area development franchising, and master franchising. Finally, the literature dealing with the organizational choices of franchised chains emphasizes the interest of plural-form networks, which include a proportion of company-owned outlets. Most of the empirical work on plural forms in franchising has been developed in line with Bradach's (1998) model (Dant et al. 2008; Cliquet and Pénard 2012). In this seminal work, Bradach (1998) studies US restaurant chains and shows that a mix of franchised and company-owned units, i.e., a plural form, can create synergies and enhanced the overall chain performance. A primary conclusion is that this organizational form helps the networks face strategic challenges. Hence, the distinction between pure franchising and plural-form networks, which can be dominantly franchised or company-owned, reveals three different strategies (Dant and Kaufmann 2003).

As Combs and Ketchen (1999) have argued, these different analytical contexts may be related to the existence of several types of franchise strategies, thus suggesting the adoption of a configurational approach in reference to Meyer et al. (1993). "Configurations" are groups of firms with a common organizational profile. Finally, the relationship between franchising and strategy has generated work on "strategic groups," similar to Meyer et al.'s configurations and defined, in reference to Porter (1980), as sets of firms in an industry that display similar competitive profiles. Given that this methodological paper is based on the concept of strategic

---

[1]Brickley and Dark (1987), Norton (1988), Minkler (1990), Brickley et al. (1991), Barthélemy (2008), Mitsuhashi et al. (2008), Barthélemy (2011), and Combs et al. (2011)

[2]Oxenfeldt and Kelly (1969), Caves and Murphy (1976), Lafontaine and Kaufmann (1994), Carney and Gedajlovic (1991), Combs and Ketchen (1999), Combs et al. (2004), and Castrogiovanni et al. (2006)

groups, we provide a survey of the relevant literature in the following section. Within this review, Combs et al.'s (2004) clustering of franchise networks will be seen to be an important resource. As mentioned by Combs and Ketchen (1999), configurations or strategic groups can be derived either theoretically or inductively. Both approaches are of interest: however, since there is a significant background literature on network strategies, we choose to structure the French franchise networks based on theoretical considerations and less with reference to network strategies (Cliquet 2008; McIntyre and Huszagh 1995).

The aim of this paper is to combine the study of three issues concerning franchising networks: strategy, clusters, and performance. We do this through observing French networks, with reference to the stability of franchising clusters over time. In this exploratory and methodological paper, we first provide a picture of the French franchise system and the related network strategies. To complete the picture and assess the external validity of our classification of network strategies, we address the issue of performance by looking at franchisor operational and financial performance among the different strategic groups. Hence, this paper is an extension of and a contribution to a deeper analysis of strategic group and performance, in two principal respects: First, the study is carried out in the French context, on networks drawn mainly from unlisted franchisors. Secondly, we address the issue of strategic group stability over time. Our results show that the strategy which supports better performance also aims at the minimization of agency costs and seeks to achieve a high franchise rate. The best-performing cluster includes the networks which favor the most complex strategies. The clusters which are most stable in terms of network behavior display average performance. The more unstable clusters display the weakest network performance.

The paper is organized as follows. We survey the literature dealing with strategic groups in Sect. 1. Section 2 presents the dataset and the study variables. We use a 4-year panel dataset from the French Federation of Franchising regarding the period 2010–2013. In Sect. 4 we conduct a multidimensional analysis which distinguishes the relevance of three factorial axes and five clusters. Comments are provided regarding the five corresponding strategies. Section 5 sets out the analysis of performance, and Sect. 6 concludes.

2 Background Literature on Strategic Groups

2.1 Strategic Groups and Franchising

Defined as a statistical technique for classifying observations into similar sets or groups, cluster analysis is a useful tool to examine the relationships between strategy, environment, organization, and performance. Thus, this approach is relevant for analyzing franchise networks and their strategies. For our purposes, the relevant organizational configurations are groups of firms sharing a common profile along conceptually distinct variables (Meyer et al. 1993; Miller and Mintzberg

1983). The analysis of organizational configurations can be conducted under many headings and methodologies, such as organizational typologies (Miles and Snow 1978), taxonomies (Galbraith and Schendel 1983), or strategic groups (Hatten and Schendel 1977; Caves and Porter 1977). A strategic group is a set of firms that use a similar strategy and emphasize similar strategic dimensions, resulting in homogeneous competitive actions within an industry (Caves and Porter 1977; Cool and Schendel 1987; Porter 1980). Our adoption of the concept of a strategic group supposes that industry members can be classified into groups based on certain key characteristics such as strategy and structure (Hatten and Schendel 1977). Firms do not adopt franchising as an organizational form for the same reasons; however, groups of franchise networks share similar characteristics and strategies (Carney and Gedajlovic 1991; Castrogiovanni and Justis 1998). It has been underlined in the literature that the members of a given strategic group ought to exhibit similar performances (Ketchen and Shook 1996; Ketchen et al. 1997).

A brief survey of the literature on strategic groups in franchising shows that analyses differ regarding the issues addressed, the variables used, and the results obtained. Nevertheless, the relevant studies do generally adopt a clustering methodology. Cluster analyses based on a theoretical framework generally adopt the traditional theories of franchising, resource scarcity, or agency (Carney and Gedajlovic 1991; Combs et al. 2004; Ketchen et al. 2006). In other words, in identifying strategic groups, these approaches begin by identifying the firm characteristics that are likely to drive franchisors into distinctive strategic groups, specifically by adopting agency and resource-scarcity explanations for franchising (Combs and Ketchen 2003). However, this doesn't rule out the use of other theoretical frameworks, like Bradach's plural-form perspective, in the interpretation of the strategy implemented by the networks in each cluster.

Two main foci can be distinguished in the literature. The first proposes to build franchise network clusters in order to highlight various possible strategies. The second takes a step further and aims at understanding the differences in performance levels across strategic groups. In the first case, each cluster is characterized by a specific strategy (Hoffman and Preble 1991), or the strategy of a network is explained as the movement from one cluster type to another (Carney and Gedajlovic 1991). In the second case (Combs et al. 2004; Ketchen et al. 2006), a strategic group approach is adopted to examine the differences in performance level across groups as a consequence of the motivations for franchising. Taking this literature into account, we propose to observe the network's movement from one cluster to another via robustness tests and the impact of cluster belonging on network performance.

2.2 Main Results in the Franchise Literature

Different franchise network typologies are identified in the literature via the number of variables used, the nature of the data (questionnaires, interviews, or systematic data), and the theories chosen to build the axes in the factor analysis. Taking into account the resource-based and agency theories of franchising and the seven

strategic dimensions (chain size, age, chain growth rate, cost of adhesion to the franchise chain, contractual preventions, dispersion of units, and vertical integration), Carney and Gedajlovic (1991) identify five strategic groups in a sample of 128 Canadian franchise networks: "rapid growers," "expensive-conservatives," "converters," "mature," and "unsuccessful" networks. Reproducing that approach, Castrogiovanni et al. (1995) introduce similar parameters for a sample of 717 franchisors from 28 sectors in the United States. They validate some of Carney and Gedajlovic's groups (1991): the "rapid growth franchisors," the "reconverted," and the partially "mature franchisors." As an extension of Carney and Gedajlovic's work (1991), López and Ventura (2001) used a factor analysis on a sample of 228 franchisors operating in Spain in 1996 and identified five strategic groups: "emergent," "standardized," "large internationals," "traditional," and "unsatisfactory."

Based on agency theory and resource-scarcity theory and using a sample of 65 restaurant chains, Combs et al. (2004) identify three strategic groups: "agency franchisors," "agency franchise minimizers," and "resource-scarce franchisors." In the first group, characterized by moderate franchising, the franchise is a response to agency problems. In the second, the franchisor has a good brand name reputation and low geographic dispersion. According to Combs et al. (2004), agency theory suggests that company ownership is more attractive, although this view is disputed by Lafontaine (1992). Consistent with this picture, the second group franchises the least. In the third group, the resource-scarce franchisors, the high use of franchising is at least partially driven by resource scarcity. Finally, the authors show empirically that members of these different franchising groups have different levels of performance. However, the focus on only one sector might have distorted the results obtained through this approach (Rondán-Cataluña et al. 2007).

In their analysis of franchise networks in the restaurant sector, Ketchen et al. (2006) take two variables into account: franchisee financial resources (low or high) and franchisee intellectual resources (low or high). Then they identify four groups: "manager-scarce franchisors," "money-scarce franchisors," "franchising minimizers," and "seasoned veterans." According to Ketchen et al. (2006), two groups would have been predicted by resource-scarcity theory (the "manager-scarce franchisors" and "money-scarce franchisors") and one by agency theory (the "franchising minimizers"). The seasoned veterans are driven by neither agency concerns nor resource scarcity. Rondán-Cataluña et al. (2007) propose additional strategic variables, not previously used in the literature: "minimum population required," "total shops in Spain," "minimum size of the place," "sector of the company," and "distribution strategy." Accordingly, they classify 140 franchisors operating in Spain from 19 different sectors. The results reveal the existence of four types of franchisors: "expensive," "matures," "rapid growers," and "reconverted."

Finally, Castrogiovanni and Justis (1998) propose an original approach by adapting Mintzberg's (1979) organizational typology to franchising organizations. On this basis the authors identify three franchising configurations: "entrepreneurial," "confederation," and "carbon-copy form." Having surveyed the extant literature, we focus hereafter on the French case.

3 Data Collection and Study Variables

"Choosing the variables along which to group observations is the most fundamental step in the application of cluster analysis, and thus, perhaps the most important" (Ketchen and Shook 1996, p. 443). The choice of the study variables reflects the researcher's responses to three questions: the method of variable selection (inductive or cognitive), the standardization of variables, and the resolution of problems of multicollinearity among variables (since high correlation among clustering variables could be problematic).

Our data were collected from the yearbooks of the French Federation of Franchising. These are panel data for the years 2010–2013. The sample consists of 92 French franchising networks, observed during this 4-year period. We initially had 127 networks in the dataset but had to delete some information to assure the stability of the panel, since some networks entered and others exited the database during the period. Based on the work of Carney and Gedajlovic (1991) and Combs et al. (2004), we distinguish ten study variables.

Contract Duration (CD) Economic theory suggests a trade-off between long- and short-term franchise contracts. Long-term contracts are favorable to the franchisee, giving them more time to recover their investment. In addition, long-term contracts protect the franchisee from the franchisors' potential opportunism, in other words from the hold-up problem. Hence, contract duration is positively linked to franchisees' investment and the risk of quasi-rent expropriation by the franchisor. On the other side, longer contracts are less flexible and prevent the franchisors adapting to environmental changes. Hence, from a general point of view, long-term contracts are unfavorable to franchisors and favorable to the franchisee (Brickley et al. 2006). As a contractual device, longer contract duration should be associated with a higher risk of franchisee expropriation (i.e., higher investment from the franchisee).

Up-Front Fees (FEES) and Royalty Rate (RR) The up-front fees and the royalty rate can be related to the selection of franchisees. Indeed, following Blair and Kaserman (1982) or Sen (1993), the selection of franchisees should be based on high entrance fees and a low royalty rate. Nevertheless, Lafontaine and Shaw (1999) show that there is no inverse relationship or trade-off between these variables at the firm level. The authors explain this result by the relatively small source of revenue represented by franchise fees for the franchisor. Franchisors do not raise their fees as their reputation becomes stronger because fees are only a marginal source of revenue. As a result, up-front fees cannot be considered as a measure of scarcity as regards the financial variable for the franchisor. In the first place, we associate up-front fees with financial obstacles for the franchisees. The royalty rate can be positively correlated with the brand equity and to the quality of the network (Bhattacharyya and Lafontaine 1995). More fundamentally, it is positively linked to the operational costs of the network.

Total Franchisee Investment (TFI) In the franchise literature, the level of specific investment by the franchisee is generally proxied by the TFI. Indeed, much of the

investment a franchisee makes is in specific assets, associated with no alternative use and with low salvage value. As emphasized by Brickley et al. (2006, p. 177), "much of the typical investment made by a franchisee is relationship specific. Higher total investment is likely to be positively correlated with the level of relationship-specific investment." From a more pragmatic point of view, up-front fees represent only a part of the franchisees' investment. The level of the TFI is indicative of the real level of investment and can be considered as a constraint for the franchisee.

Minimum Surface Area of an Outlet (MS) We use this variable as a proxy for the importance of fixed assets (even if it is only interior design) that must be financed. This variable is linked to the type of activities. For product retail activities, the minimum surface area can be quite high, but is smaller in the case of services.

Outlet Turnover (Estimated Turnover for a Typical Outlet) This estimate is provided by the franchisor to franchisees to help them assess the potential revenue they can earn from their outlet. This variable should be positively correlated with the investment by the franchisee and could also involve a sectorial or business model effect. In sectors where the margin is higher (service activities), a smaller turnover can generate more income than in product retail. In this manner, this variable should be positively associated with the surface area of the outlet.

Franchising Rate Gallini and Lutz (1992) assert that new franchisors offering high-quality franchise opportunities will use company ownership to signal their confidence in the business concept to potential franchisees. More generally this variable gives a measure of the importance of franchising in the strategic development of the network.

Age This variable measures years since the inception of the franchisor and can be considered as a measure of experience (Combs et al. 2004).

Experience Before Franchising This variable represents the number of years between firm inception and the establishment of first franchise. This variable is more than simply a proxy for the experience accumulated by the franchisor before they decide to franchise; rather, it allows us to distinguish between firms that developed first without franchising and used franchising later to complement their market coverage and networks where franchising is an important strategic variable from the start. In that second case, franchising begins after just a few years of experience. The former conforms to agency theory, whereas the latter looks rather to the competitive advantage link to market share or to first-mover advantage.

Size This variable measures the total number of outlets in France. In the franchise literature, this is often used as a control variable or as a variable positively related to agency costs. Some studies (Arruñada et al. 2001; Chaudey and Fadairo 2007) consider that opportunism risks on the franchisee's side are higher when the network size is larger.

Table 1 presents descriptive data for the full sample.

Table 1 Descriptive data (full sample)

	Mean	SD	Min	Max
Contract duration	6.64	1.92	3	12
Up-front fees (K Euros)	24.26	12.07	5.00	80.00
Royalty rate	5.15	3.86	0.75	38
Total franchisee investment (K euros)	196.77	190.48	15	1200
Min surface area per outlet (m^2)	424.27	320.08	11	1640
Outlet turnover (K euros)	489.22	452.69	12.5	2250
Franchising rate	0.72	0.28	0.03	1
Age	23.05	17.11	1.67	122.5
Experience before franchising	6.72	10.56	0	66
Size	123.88	115.50	4	501.5

4   Multidimensional Static Analysis

To distinguish strategic groups in the French franchising system, we choose to perform a hierarchical clustering analysis (HCA). Cluster analysis can be defined as follows: "Cluster analysis takes a sample of elements—e.g., organizations—and groups them such that the statistical variance among elements grouped together, is minimized while between-group variance is maximized" (Ketchen and Shook 1996). The proposed HCA allows us to distinguish five clusters.

As a preliminary statistical analysis, we conduct a principal component analysis (PCA), presented in Appendix 1. This PCA highlights the relevance of three factorial axes. The first is related to the ease of payback and the length of the payback period for the franchisees; the second is related to franchising as a means to overcome resource scarcity; the third is related to the servicing and value-added rate of the activities in the network.

4.1   Hierarchical Clustering Analysis

The goal of a cluster analysis is to partition the observations into groups ("clusters") so that pairwise dissimilarities between those assigned to the same cluster tend to be smaller than those in different clusters (Hastie et al. 2009). In this paper we use HCA to distinguish clusters of franchised networks, and we perform this analysis on the first three PCA factors defined previously. Following Murtagh and Legendre (2014), we apply a dissimilarity measure (Euclidean) and an agglomeration criterion (Ward). The number of clusters applied to our dataset is obtained by testing different numbers of clusters and cross-validating with variables and their relevance. We thus distinguish five clusters corresponding to five different strategies.[3]

---

[3]Three approaches are mobilized to investigate the validity of the cluster numbers. The first is based on external criteria and consists in displaying the results of the cluster analysis in the

The dendrogram in Fig. 1 presents the results of our hierarchical clustering, provided in a graphical format, being a highly interpretable and complete description of the clustering process. In addition, Table 2 presents descriptive statistics for the five clusters.

Based on these statistics, the following comments can be made. First, no cluster contains only networks of a unique industry, so there is no perfect cluster/industry matching. Networks in *cluster 1* are the oldest franchisors (51 years old), and on average they had a great deal of experience (more than 20 years) before starting franchising. They are quite big (an average of 177 units) and show the second-lowest franchising rate. They have a low royalty rate (average of 3.99% of turnover) and low franchise fees. The franchise contract is fairly short compared to other clusters. This cluster contains old and big networks, which franchise late and not very much, and does not seek extensive revenues from franchisees (royalty and fees). They do not offer favorable conditions to franchisees (contract duration). This cluster includes networks without resource-scarcity problems, which use franchising to complete market coverage while minimizing agency costs. This picture is close to that of the "Agency costs minimizers" described by Combs et al. (2004) or Ketchen et al. (2006).

Cluster 2 is characterized by its larger size (216 units in the network in average). The networks in the cluster had a significant experience (around 10 years) before deciding to franchise and are relatively old. Salient features in this group are the high contract duration and royalty rate (almost 11% of turnover), combined with high fees (more than 30,000 euros). Their high size, age, and experience nevertheless rule out any resource-scarcity explanation for these high levels of fees and royalties. Furthermore, these networks do not franchise very much (54% franchising rate). Rather, the high royalty rate may reflect a high level of operational costs. High fees and long contract duration are linked with the selection of franchisees, who will accept a long payback period. In summary, these networks look like the "Agency costs minimizers" of group 1, but the franchisees have to support higher costs from the franchisor, higher fees, and slightly higher initial investment. These costs for franchisee are balanced by a longer contract. These networks could be labeled "Agency costs minimizers with high operating costs."

Cluster 3 is the bigger cluster. It contains younger networks with smallest amount of experience before franchising. These networks are highly inclined toward franchising, containing 121 units on average with an average franchising rate of over 80%. This high level of franchising is supported by low investment for the franchisee and a low up-front fee. The contract duration is short, showing a potentially rapid payback period, consistent with a very low turnover and outlet surface area, in accordance with the observation that cluster 3's networks operate in

---

factorial plan resulting from the PCA analysis. The second approach is based on internal criteria, using the information obtained from the clustering process. In this second case, we can evaluate how the results of the cluster analysis fit the data. The third approach of clustering validity is based on validity indexes. This method evaluates a clustering structure by comparing it with other clustering schemes, obtained with the same algorithm but producing a different number of clusters.

JULES
ACADOMIA
ENGEL & VOLKERS
QUICK
B&B HOTELS
SPEEDY
BRIOCHE DORÉE
GRANDOPTICAL
DOMINO'S PIZZA
LA CROISSANTERIE
MIDAS
MYRIAD/MYRIAD PRESTIGE
MICHEL SIMOND
LA COMPAGNIE DES PETIT

BRUJARDIN
BASEC
LA VIE CLAIRE
MONCEAU CAFFET
MONCEAU FLEURS
FEU VERT
COFFEA
VELA AUTO
MÉRIELAND
CATENA
YVES ROCHER
FOUCIA
RAM
COMTESSE DU BARRY
MAISONS PHENIX

LABILA PIZZA
EL RANCHO
HIPPOPOTAMUS
NATILIA
DANIEL MOQUET SIGNE VO
PROXI CONF
LA TAVERNE DE MAÎTRE K
BRASSERIES FLO
DEL ARTE
ALL INCH
COURTEPAILLE
BUFFALO GRILL
AU BUREAU
LA PATA LERIE
PLANET SUSHI
LA BOUCHERIE

GUY DEGRENNE
BESSANGE
GUY HOQUET L'IMMOBILIE
LOLLIPOPS
CARIGO
JONGLERIE
AGE D'OR SERVICES
CENTURY
ERA IMMOBILIER
DE NEUILLE
AUTOSMART
AD HAP SERVICES
YOJO
ADA
GÉNÉRALE D'OPTIQUE
O'TANNELE
SHELL SERVICES
CHAT SAWIK
LE TANNEUR
BEAUTY SUCCESS
ROUGE GORGE LINGERIE
APEF
NORBERT DENTRESSANG
VIENS JOUER À LA MAISON
WSI
CREDIPRO
NADIA
ALICO SERVICES
ALLCO TRAVAUX
CARTRIDGE WORLD
STUDIO SANTE
DOMISPART S ASSISTANC
PLAISIR D'AIDER
AVIS IMMOBILIER
GUY DROUET S
GUY HOQUET ENTREPRISI
SAINT PREUX
ROYAL
GÉNÉRALE DES SERVICES
REPAR STORES
COMPAGNIE DES GLACES
LA MAISON DES TRAVAUX

POINT CHAUD
CRISTHABITAT
DISTRICLUB MÉDICAL
CUISINE PLUS
KINA
ATMOSPHÈRES
MIKIT
CHOCOLATS ROLAND RÉA
RAJA
BRETZEL BURGARD
HISTOIRE DE PAINS
CLAIR DE BAIE
SOLEIL DE TÊTE
MOULIN DE PAVOU
LA PAPETHÈQUE
SPEED RABBIT PIZZA
LE JARDIN DES FLEURS
RAPID FLORE
INFORMATIQUE MINUTE
MAISONS MIKIT
ONGLIN
ONKIN
PIZZA HUT
CÂ MIE CALINE
SIGNARAMA
CLASS CROUTE

cluster
a 1
a 2
a 3
a 4
a 5

Fig. 1 Dendrogram

Table 2 Summary statistics for the five clusters

	Cluster number (and size)	Mean	Min	Max
Contract duration	Cluster 1 (16)	5.91	5	9
	Cluster 2 (14)	8.57	5	12
	Cluster 3 (47)	5.5	3	7
	Cluster 4 (19)	8.58	5	12
	Cluster 5 (28)	6.67	5	10
Up-front fees	Cluster 1	15.65	5.25	29.5
	Cluster 2	30.23	12.00	80.00
	Cluster 3	18.72	5.00	40.00
	Cluster 4	40.36	24.58	50.00
	Cluster 5	24.43	13.5	40.00
Royalty rate	Cluster 1	3.99	0.75	6.5
	Cluster 2	10.84	4	38
	Cluster 3	4.51	1	10
	Cluster 4	4.39	3	6
	Cluster 5	4.54	1.6	7
Total franchisee investment	Cluster 1	171.23	47.75	445
	Cluster 2	183.46	43	500
	Cluster 3	98.74	15	294.01
	Cluster 4	516.05	115	1200
	Cluster 5	165.94	50	282.5
Min surface area per outlet (m^2)	Cluster 1	487.62	155	1000
	Cluster 2	306.67	80	496.62
	Cluster 3	203.97	11	645.99
	Cluster 4	916.9	623.75	1225
	Cluster 5	482.36	80	1640
Outlet turnover	Cluster 1	469.14	70	1650
	Cluster 2	684.92	183.33	2000
	Cluster 3	240	12.5	750
	Cluster 4	803.68	58.5	1516.67
	Cluster 5	607.79	20	2250
Franchising rate	Cluster 1	0.55	0.03	1
	Cluster 2	0.54	0.06	1
	Cluster 3	0.82	0.11	1
	Cluster 4	0.66	0.23	1
	Cluster 5	0.77	0.21	1
Age	Cluster 1	51.15	22	122.25
	Cluster 2	27.86	19	35.25
	Cluster 3	14.82	1.67	35
	Cluster 4	24.81	2.5	50.25
	Cluster 5	17.23	3.5	30.25

(continued)

Table 2 (continued)

	Cluster number (and size)	Mean	Min	Max
Experience before franchising	Cluster 1	20.88	0	66
	Cluster 2	10.18	0	22
	Cluster 3	2.21	0	14
	Cluster 4	7.73	0	27.75
	Cluster 5	3.79	0	19
Size	Cluster 1	176.85	4	472.25
	Cluster 2	215.99	5	482
	Cluster 3	121.55	6	501.5
	Cluster 4	91.13	15.25	312.67
	Cluster 5	73.71	6.33	196.75

services rather than in retail. Features of this group indicate they probably face human capital or management scarcity constraints (younger networks with the smallest amount of experience before franchising). They use franchising to overcome this constraint and possibly to access first-mover or market share advantages. They could be labeled "Resource-constrained franchisors."

Cluster 4 shares some features with cluster 3 regarding its strategy. Networks in cluster 4 are slightly older than in cluster 3 and were a little more experienced when they started franchising. They rely on franchising for growth and exhibit an average franchising rate of 66%, which is quite high but lower than in cluster 3. Finally, networks in cluster 4 are smaller, with an average number of 91 (big) outlets per network. Cluster 4 differs from cluster 3 on dimensions relating to franchisee selection and sector or business features. Networks in cluster 4 need outlets with a higher surface area and with higher predicted turnover. They also exhibit higher entrance fees, contract durations, and franchisee investment. These networks consist of big outlets and prospective franchisees face higher constraints in entering the networks. Cluster 4 seems to operate a strict selection on franchisee: with high up-front fees and low royalty rate, these networks need to signal their quality in order to select the best franchisees (Blair and Kaserman 1982; Sen 1993). Franchisors in this cluster might have more difficulty finding prospective franchisees than in cluster 3. The dendrogram shows closer proximity between cluster 4 and clusters 1 and 2 than with cluster 3. Hence, cluster 4 networks rely on franchising to grow, but seemingly not simply to attain rapid first-mover or market coverage advantages. Franchising is central to their strategy, but it imposes certain constraints due to the franchisors' quality and their desire to select only the best franchisees. Such networks could be labeled "High selecting and positioning networks."

Finally, *cluster 5* is positioned between clusters 3 and 4 as regards many of the variables, although it is closer to cluster 3 on the dendrogram. Networks in this cluster are close to those of network 4, but their outlets are smaller, and the investment needed to join the network is lower. They are less selective from the franchisee point of view (lower up-front fees and investment), although they may also want to acquire the advantages attached to highly selective networks and not only to minimize agency costs or achieve rapid growth or greater market coverage.

Overall, these networks are relatively young with low experience. It is more difficult to label these networks, since they display a tension between plural-form advantages and rapid growth advantages. "Young and un-stabilized" seems best to match these networks.

Complementary tests show that these clusters display clear and significant differences. Levene's test shows that only one variable (up-front fee) respects the homoscedasticity condition. For this reason, we cannot conduct an ANOVA analysis.[4] Welch tests demonstrate that the variables show significant differences between clusters, except for the royalty rate.

4.2   Robustness Checks and Stability of the Clusters

To test the robustness and the stability of network behaviors in each cluster, we develop a predictive model. The aim is to create a classification model which is able to predict whether each network should be classified in one of the five managerial strategies previously highlighted. To construct the model, we use the same aggregated data as in the PCA. However, we introduce our categorical target variable "cluster franchise," with five modalities (clusters 1–5). Then we evaluate the predictive model using a subsample. A detailed presentation of this process is presented in Appendix 2. Taking this model into account, we introduce a cross-tabulation (confusion matrix) of the test sample. Predicted values show that our classification model has good predictive power.

Table 3 presents, for each network in the test set, the number of cases where the predicted cluster is equal to the actual cluster in the diagonal. The classification errors are around the diagonal. The error rate is low: 7 errors for 29 observations, i.e., 24%.

The model is used for each of the 4 years in our dataset, i.e., we predict the cluster classification of each network for each year. Then we look at the stability of the predicted cluster between 2 consecutive years for each network (see Table 4). On the high end of Table 4, we see great stability of clusters between 2010 and 2011. All the networks classified in cluster 1 in 2010 are classified in the same cluster the year after. Overall, the results show a high level of stability of the clusters regarding strategies 1 and 2. Clusters 3 and 4 are also quite stable and show only few switches with cluster 5. Finally, cluster 5 is the least stable and exhibits some switches with clusters 1, 3, and 4. Networks of cluster 5 are more transitory, perhaps due to their youth and their un-stabilized strategy.

The results confirm the overall stability of the network behaviors and show that for 75% of the cases, the prediction is good. The results also support our initial interpretations for the five identified clusters. Consistent with prior studies showing that contract provisions are stable over the time (Lafontaine and Shaw 1999), most

---

[4]We conducted these tests since they are very common in this type of study. Significantly, they allow us to reject the hypothesis of the equality of all the variables (even the royalty rate) between the clusters.

Table 3 Confusion matrix of the test sample

| | Prediction | | | | |
Reference	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1	2	1	0	1	0
Cluster 2	0	2	0	0	0
Cluster 3	2	0	11	0	3
Cluster 4	0	0	0	3	0
Cluster 5	0	0	0	0	4

Note: The test sample includes only one third of the networks, i.e., 29 observations

Table 4 Stability of the predicted cluster over time

	Prediction	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
		Predicted cluster 2011				
Predicted cluster 2010	Cluster 1	10				
	Cluster 2		5			1
	Cluster 3			26		1
	Cluster 4				10	2
	Cluster 5	1	1	1		12
		Predicted cluster 2012				
Predicted cluster 2011	Cluster 1	8		1		
	Cluster 2	1	5			
	Cluster 3	1		23		4
	Cluster 4				9	
	Cluster 5	1			4	9
		Predicted cluster 2013				
Predicted cluster 2012	Cluster 1	10	1			
	Cluster 2		4			
	Cluster 3			23		1
	Cluster 4				8	3
	Cluster 5			1		11

of the clusters form cohesive and stable groups: established networks using franchising as an efficient, but only supplementary, development tool (*Agency costs minimizers*, clusters 1 and 2); networks using franchising as a primary lever to grow which also show great stability (*Resource-constrained franchisors*, cluster 3); and networks relying on franchising for their development but which seem to be searching for more than growth or agency costs benefits alone (*High selecting and positioning networks*, cluster 4). Only cluster 5, initially labeled *Young and un-stabilized*, is unstable. Belonging to this group does not offer a secure position for the relevant networks. This result is not surprising, as it was difficult to identify clear features for franchising networks in this group. It is worth noting that switches from this group are most frequent within cluster 4. We can interpret this as a sign that strategies based on plural-form advantages (cluster 4) are more difficult to reach. Switches from group 5 to other groups are more random.

The results show the stability of the network behaviors within each cluster and thus the quality of our clustering. Some networks have either a strategy that is fixed for a long time (clusters 1 and 2) or a simple and clear strategy (cluster 3) and thus have no incentive to change. A network changes its behavior only if it tries to adapt the strategy recognized as the best (cluster 4) or because it has not identified it yet (cluster 5).

5 Strategic Groups and Performance Outcomes

In the literature on franchise clusters, a number of authors show interest in cluster characterizations based on network performance.[5] Indeed, as remarked by Dant and Gundlach (1999), "external validation requires that the groups differ along variables other than those used in the clustering algorithm." In addition, Combs et al. (2004) underline that "examination of performance differences across groups provides a test of external validity." In line with this previous research, we make our strategic classification of the French franchising networks more precise by introducing various franchisor performance indicators.

Taking into account the availability of accounting data to estimate performance, the sample is reduced from 92 to 79 networks. As the number of observations in each cluster is low and as there may be some outliers, we observe the medians by cluster rather than the means. For the same reason, we choose to perform nonparametric (rank) tests. We introduce three measures of performance at the franchisor's level, two being operational measures (turnover growth and gross operating margin) and one being more financial (return on assets, ROA). Turnover growth is an average yearly variable. Operating margin (earning before interests and taxes/turnover) and ROA (earning before interests and taxes/stockholder's equity plus financial debt) are annual ratios. Consistent with our study period (2010–2013), we average these three yearly variables in the period 2010–2013.

The results in Table 5 highlight some differences among clusters, especially regarding the turnover growth and the gross operating margin. The HCA previously introduced reveals that clusters 1 and 2 are quite similar, even if franchisors in cluster 2 exhibit higher growth compared to cluster 1. Franchisors in cluster 2 also exhibit higher gross operating margin than in cluster 1, consistent with potentially higher operating costs borne by the franchisors in cluster 2. The difference between these franchisors is less clear regarding the ROA. Franchisors in cluster 4 differ from the others with higher turnover growth and gross operating margin. However, these performances do not result in a superior ROA. Finally, we observe that the franchisors' turnover growth in cluster 3 is limited, even if networks in this cluster have a growth strategy in terms of number of franchised units. This observation

---

[5]Dant and Gundlach (1999), Combs et al. (2004), and Gonzalez-Diaz and Solis-Rodriguez (2015)

Table 5 Cluster-based descriptive statistics for the franchisor performances

	Turnover growth (%)		Gross operating margin (%)		Return on assets (ROA) (%)	
Clusters	Median	Mean (N)	Median	Mean (N)	Median	Mean (N)
1	0.84	2.26 (10)	2.55	−2.35 (10)	8.83	10.37 (10)
2	5.43	3.42 (6)	6.23	29.99 (7)	12.8	42.76 (7)
3	2.27	2.06 (25)	2.68	5.37 (25)	6.57	2 .55 (25)
4	29.09	185.57 (12)	14.12	12.29 (14)	7.5	17.43 (14)
5	2.38	9.80 (13)	1.82	−0.53 (13)	9.11	−88.80 (13)

Table 6 Tests of differences in performance among the five clusters

	Turnover growth (%)	Gross operating margin (%)	ROA (%)
Kruskal-Wallis eq. of populations rank test prob (Chi2)	0.018** (11.90)	0.064* (8.90)	0.513 (3.27)
	Kruskal-Wallis: prob (Chi2)	Kruskal-Wallis: prob (Chi2)	Kruskal-Wallis: prob (Chi2)
Cluster 1 vs. cluster 2	0.704 (0.14)	0.157 (2.00)	0.354 (0.86)
Cluster 1 vs. cluster 3	0.827 (0.05)	0.688 (0.16)	0.635 (0.23)
Cluster 1 vs. cluster 4	0.0122** (6.28)	0.012** (6.34)	0.482 (0.49)
Cluster 1 vs. cluster 5	0.264 (1.25)	0.852 (0.035)	0.852 (0.04)
Cluster 2 vs. cluster 3	0.484 (0.49)	0.227 (1.46)	0.194 (1.69)
Cluster 2 vs. cluster 4	0.075* (3.17)	0.412 (0.67)	0.88 (0.02)
Cluster 2 vs. cluster 5	0.66 (0.19)	0.322 (0.98)	0.663 (0.19)
Cluster 3 vs. cluster 4	0.0021*** (9.50)	0.015** (5.91)	0.101 (2.69)
Cluster 3 vs. cluster 5	0.171 (1.875)	0.963 (0.002)	0.656 (0.20)
Cluster 4 vs. cluster 5	0.034** (4.27)	0.052* (3.77)	0.382 (0.76)

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

reveals that a growth strategy at the network level does not systematically involve a growth in franchisors' revenue.

Some differences can be observed regarding the franchisors' performances among clusters. Table 6 shows that these differences are not always significant. The first line of this table provides the results of the Kruskal-Wallis tests for the differences among all the clusters. These results reveal that the differences are significant at the 5% level only regarding the turnover growth. The test also shows differences that are almost significant as regards the gross operating margin.

However, the results regarding the ROA are not significant. To explain these differences, we conduct pairwise Kruskal-Wallis tests, comparing clusters by pairs. Only cluster 4 stands out according to these tests. In this cluster, franchisors have significantly higher turnover growth than franchisors in clusters 1, 2, 3, and 5. The franchisors in cluster 4 also have a higher gross operating margin compared to clusters 1 and 3. The difference is close to significance with cluster 5.

Overall, our results suggest that the strategy followed by franchisors influences operational performances but does not significantly influence financial performances. In particular, in cluster 4 the strategy induces a higher performance for the franchisors, and franchising seems to be a key variable for network growth. These networks are selective in their choice of franchisees and are simultaneously closer to agency-minimizer networks according to the HCA results. This strategy of agency costs minimizing has been highlighted by Lafontaine (1992) as the main explanation for franchising. Indeed, comparing several theoretical frameworks, this author provides empirical evidence that the agency view—and more precisely the two-sided moral hazard model—is the most appropriate one to explain franchising. Hence, their strategy is quite complex compared to other networks which favor either growth (cluster 3) or the minimizing of agency costs (clusters 1 and 2). Networks in cluster 4 combine these two strategic approaches. Consistent with a high selecting and positioning strategy, these networks may have high intangible and human assets that could explain their strategy and performance (Perdreau et al. 2015).

Networks promoting a pure growth strategy (cluster 3) do not display higher performance. This is also the case for networks choosing a pure agency-costs-minimizing strategy (clusters 1 and 2). Our results differ from the two propositions put forward by Combs et al. (2004), who consider first that "strategic groups whose member firms use franchising in the face of resource scarcities will outperform strategic groups that do not" and second that "strategic groups whose member firms align their use of franchising with agency costs will outperform strategic groups that do not" (op. cit. p. 883). Our results demonstrate that the strategic groups which outperform others combine these advantages, and even go beyond them.

6 Conclusion and Directions for Further Research

This empirical paper provides a characterization of network strategies in the French case and offers some directions for future research. First, three dimensions (or axes) are highlighted in the mapping of the network similarities. Based on these three dimensions, hierarchical clustering analysis allows us to distinguish five clusters. The first two use franchising in a moderate way and quite late on in their network development. Franchising hence appears as an (agency-related) efficient tool that completes the network strategy. In the third cluster, franchising is at the heart of enterprise strategy from the beginning. These networks exhibit significant growth and use franchising early in their development, probably to overcome (managerial

and potentially financial) resource scarcity. The fourth cluster also makes an important use of franchising, but not as early as cluster 3 in network development. Furthermore, networks in this cluster impose higher constraints on their franchisee selection and show proximity with the first two clusters. It seems that this more complex use of franchising refers to plural-form network strategies, where advantages from franchising go beyond efficient network development or rapid growth. Finally, the last cluster is more difficult to characterize because it seems to lie between the plural-form networks of cluster 4 and the (initially) resources-scarce networks of cluster 3. These results are in line with previous ones regarding the interpretation of strategic clusters and complement them for the case of France.

Further, we develop a predictive model that offers a useful and efficient way to automatically classify franchised networks into the five managerial strategies detected. The construction of a predictive model enables us to test the quality of the preceding clustering and the stability of network behaviors in each cluster. However, when we look at the stability of this classification year to year, we nevertheless observe that networks from cluster 5 can more frequently change cluster. As such, this cluster can appear as partially transitory.

Last, we can conclude that the franchisor strategy in an identified cluster impacts its performance, in particular operational performance. Better-performing networks present more complex strategies, combining minimizing agency costs and resource-scarcity motivations, suggesting that these two theoretical approaches are more complementary than competitive explanations for franchisor's behaviors, strategies, and performances. This is as suggested by Combs et al. (2004), "[our] finding that agency conditions and resource scarcities point in the same direction among resource scarce franchisors suggests that these theories may furnish complementary rather than competitive explanations in some situations."

This characterization of the French system based on the clustering methodology offers interesting directions for further research. First, while here we have worked on a 4-year panel dataset, it would be interesting to test the stability of our statistical model on a longer period. With a sample available in two distant periods, it might be possible to identify potential strategic paths between clusters and to study the impacts of these paths in terms of network performances. In addition, complementary performance indicators could be taken into account for further analysis and robustness tests.

Appendix 1: Principal Component Analysis

Table 7 presents the explained variance of the resulting factor analysis. Usually, the number of factors is given by the number of eigenvalues higher than 1. Although the number of eigenvalues that are higher than 1 is 4, we make the choice to keep only three of them, considering the gap between the third and the fourth eigenvalue. In other words, since the amount of variation explained drops after the third

Table 7 Explained variance of resulting factor analysis

Component	Eigenvalues	% of total variance	Cumulative proportion (%)
C1	2.191	22	22
C2	1.704	17	39
C3	1.342	13	52
C4	1.107	11	63
C5	0.877	9	72
C6	0.691	7	79
C7	0.681	7	86
C8	0.557	6	92
C9	0.444	4	96
C10	0.401	4	100

Table 8 Correlation between the principal components and the variables

	Component			
	F1	F2	F3	F4
Contract duration	−0.608	−0.144	−0.299	0.109
Up-front fees	−0.496	−0.480	−0.440	0.148
Royalty rate	−0.043	0.0430	−0.544	0.628
Min surface area	−0.582	−0.277	0.4380	−0.16
Outlet turnover	−0.439	−0.078	0.6057	0.334
Total franchisee investment	−0.684	−0.386	−0.008	−0.15
Franchising rate	0.455	−0.434	−0.089	−0.09
Age	−0.419	0.7031	−0.064	−0.15
Experience before franchising	−0.411	0.5540	−0.342	−0.39
Size	−0.133	0.4779	0.2735	0.564

principal component, we keep the three first components which explain more than 52% of the total variance.

To detect clusters, we use three factors in the PCA analysis, we overcome the potential correlation between variables using these factors, and the resulting PCA factors are uncorrelated. The analysis of factor correlations presented in Table 8 highlights three main factorial axes. The first is related to the financial obstacles for the franchisees. It associates higher financial barriers for the franchisees (higher entrance fees and initial investment, high surface area and estimated turnover) with a lower franchise rate (and vice versa). Higher financial barriers to franchising for franchisees are associated with a longer contract term. Hence, this factor also relates to the length of the payback period for the franchisee. This axis can be labeled "(financial) easiness and quickness of payback period for the franchisee."

The second factor associates high age, high experience before franchising, large size, and low entrance fees and financial investment for franchisees with a low rate of franchising. Hence, this axis opposes two types of networks. The first group consists of networks that are well endowed with human and managerial capital

(high age, experience, and size) and also with financial capital (large size and low investment and entrance fees from the franchisees). These networks do not make much use of franchising. On the other end, this axis presents networks with a low endowment of human and managerial capital (low age, experience, and size) and requiring substantial financial resources from their franchisees (high initial investment and entrance fees). These networks have a high franchising rate. Thus, this axis can be labeled "franchising as a means to overcome resources scarcity."

The third relevant factorial axis is more about the value-added rate of the activity and may encompass the sectorial affiliation of the network. On one extremity are highlighted networks with large outlets and a high predicted turnover, in addition to a low royalty rate, entrance fees, and experience before franchising the first unit. This picture is consistent with low value-added activities. On the other extremity are networks with higher royalty rates, entrance fees, and experience before franchising. The typical outlet as described by the franchisor is smaller. This picture is consistent with networks having higher value-added activities. This factorial axis is related to the value added and the complexity of network activities. Thus, it is relevant to assume that this axis integrates sectorial effects (e.g., services vs. retail) as it refers to the size (turnover and surface area) of the outlets. We label this factorial axis "value-added rate."

Appendix 2: Predictive Modeling

First, we split the data into training (2/3), to evaluate the model, and test set (1/3). The test set, i.e., the part of data never used in the training process, will be only used to validate the model.

We apply random sampling using stratified random methods (Kruskal and Mosteller 2004) and obtain a balanced training set and test set taking into account the cluster distributions in the original sample (Table 9). Then we normalize the variables since they have heterogeneous measures.

We use ten repeats of tenfold cross-validation (Picard and Cook 1984). This method aims at providing a nonbiased estimation of model errors. The results from the folds are averaged to produce a single estimation of accuracy. Accuracy is calculated for each model and represents the proportion of the total number of correct predictions. The confusion matrix shows (Table 10) the number of correct

Table 9 % of stratified random sample

	Data (%)	Train (%)	Test (%)
Cluster 1	12.9	12.6	13.8
Cluster 2	11.3	11.6	10.3
Cluster 3	37.9	37.9	37.9
Cluster 4	15.3	15.8	13.8
Cluster 5	22.6	22.1	24.1

Table 10 Theoretical confusion matrix and accuracy formula

Cluster	Model prediction				
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1	**a**	b	c	d	e
Cluster 2	f	**g**	h	i	j
Cluster 3	k	l	**m**	n	o
Cluster 4	p	q	r	**s**	t
Cluster 5	u	v	w	x	**y**

Accuracy $= (a + g + m + s + y)/(a + b + c + d + e + f + g + h + i + j + k + l + m + n + o + p + q + r + s + u + v + w + x + y)$

Table 11 Model evaluation

Accuracy	Min.	1st qu.	Median	Mean	3rd qu.	Max.
Support vector machines	0.700	0.875	0.905	0.915	1.000	1.000
Random forest	0.400	0.721	0.800	0.815	0.892	1.000
Logistic regression	0.625	0.800	0.889	0.871	0.902	1.000
Conditional inference tree	0.200	0.500	0.600	0.611	0.707	0.909

and incorrect predictions made by the classification model, compared to the actual outcomes in the data. In our case the matrix is 5×5, where 5 is the number of target values (clusters). The following table displays a 5×5 confusion matrix for five clusters. So we estimate the rate error using ten repeats of tenfold cross-validation.

Table 11 compares the results of four classification models (support vector machines, random forest, logistic regression, and conditional inference tree). The best model is support vector machine, with more than 90% of correct predictions.

References

Arruñada B, Garicano L, Vazquez L (2001) Contractual allocation of decision rights and incentives: the case of automobile distribution. J Law Econ Org 7:257–286

Barthélemy J (2008) Opportunism, knowledge, and the performance of franchise chains. Strateg Manag J 29:1451–1463

Barthélemy J (2011) Agency and institutional influences on franchising decisions. J Bus Ventur 26:93–103

Bhattacharyya S, Lafontaine F (1995) Double-sidded moral hazard and the nature of share contracts. RAND J Econ 26:761–781

Blair RD, Kaserman DL (1982) Optimal franchising. South Econ J 49:494–504

Bradach JL (1998) Franchise organizations. Harvard Business School Press, Boston, MA

Brickley J, Dark F (1987) The choice of organizational form: the case of franchising. J Financ Econ 18:401–420

Brickley J, Dark F, Weisbach M (1991) The economic effect of franchise termination laws. J Law Econ 34:101–132

Brickley J, Misra S, Van Horn L (2006) Contract duration: evidence from franchising. J Law Econ 49:173–196

Carney ME, Gedajlovic E (1991) Vertical integration in franchise systems: agency theory and resource explanations. Strateg Manag J 12:607–629

Castrogiovanni GJ, Justis RT (1998) Franchising configurations and transitions. J Consum Mark 15:170–190

Castrogiovanni GJ, Bennett N, Combs JG (1995) Franchisor types: reexamination and clarification. J Small Bus Manag 33:45–55

Castrogiovanni GJ, Combs JG, Justis RT (2006) Shifting imperatives: an integrative resource scarcity and agency reasons for franchising. Entrep Theory Pract 30:23–40

Caves R, Murphy W (1976) Franchising: firms, markets and intangible assets. South Econ J 42:572–586

Caves RE, Porter ME (1977) From entry barriers to mobility barriers: conjectural decisions and contrived deterrence to new competition. Q J Econ 91:241–262

Chaudey M, Fadairo M (2007) Restrictions verticales et réputation des réseaux de franchise. Un travail empirique sur données françaises. Rev Econ 58:891–914

Cliquet G (2008) New challenges for store location in plural form networks: an exploratory study. In: Henrikse G, Cliquet G, Tuunanen M, Windsperger J (eds) Strategy and governance of networks. Physica-Verlag, Springer, Heidelberg

Cliquet G, Pénard T (2012) Plural form franchise network: a test of Bradach's model. J Retail Consum Serv 19:159–167

Combs JG, Ketchen DJ (1999) Can capital scarcity help agency theory explain franchising? Revisiting the capital scarcity hypothesis. Acad Manag J 42:196–207

Combs JG, Ketchen DJ (2003) Why do firms use franchising as an entrepreneurial strategy? A meta-analysis. J Manag 29:443–465

Combs JG, Ketchen DJ, Hoover V (2004) A strategic groups approach to the franchising-performance relationship. J Bus Ventur 19:877–897

Combs JG, Ketchen DJ, Shook CL, Short JC (2011) Antecedents and consequences of franchising: past accomplishments and future challenges. J Manag 37:99–126

Cool K, Schendel D (1987) Strategic group formation and performance: the case of the US pharmaceutical industry, 1963–1982. Manag Sci 33:1102–1124

Dant RP, Gundlach GT (1999) The challenge of autonomy and dependence in franchised channels of distribution. J Bus Ventur 14:35–67

Dant RP, Kaufmann PJ (2003) Structural and strategic dynamics in franchising. J Retail 79:63–75

Dant RP, Perrigot R, Cliquet G (2008) A cross-cultural comparison of the plural forms in franchise networks: USA, France, and Brazil. J Small Bus Manag 46:286–311

Galbraith C, Schendel D (1983) An empirical analysis of strategy types. Strateg Manag J 4:153–173

Gallini NT, Lutz NA (1992) Dual distribution and royalty fees in franchising. J Law Econ Org 8:471–501

Gonzalez-Diaz M, Solis-Rodriguez V (2015) Differences in contract design between successful and less successful franchises. Eur J Law Econ 43:1–20

Hastie T, Tibshirani R, Friedman J (2009) The elements of statistical learning: data mining, inference, and prediction, Springer series in statistics, 2nd edn. Springer, New York, NY

Hatten KJ, Schendel DE (1977) Heterogeneity within an industry: firm conduct in the U.S. brewing industry, 1952–71. J Ind Econ 26:97–113

Hoffman RC, Preble JF (1991) Franchising: selecting a strategy for rapid growth. Long Range Plan 24:74–85

Jell-Ojobor M, Windsperger J (2014) The choice of governance modes of international franchise firms; development of an integrative model. J Int Manag 20:153–187

Ketchen DJ, Shook CL (1996) The application of cluster analysis in strategic management research: an analysis and critique. Strateg Manag J 17:441–458

Ketchen DJ, Combs JG, Russell CJ, Shook C, Dean MA, Runge J, Lohrke FT, Naumann SE, Haptonstahl DE, Baker R, Beckstein BA, Handler C, Honing H, Lamoureaux S (1997) Organizational configurations and performance: a meta-analysis. Acad Manag J 40:223–240

Ketchen DJ, Combs JG, Upson JW (2006) When does franchising help restaurant chain performance? Cornell Hotel Restaur Admin Q 47:14–26

Kruskal WH, Mosteller F (2004) Representative sampling. Wiley, New York

Lafontaine F (1992) Agency theory and franchising: some empirical results. RAND J Econ 23:263–283

Lafontaine F, Kaufmann P (1994) The evolution of ownership patterns in franchise systems. J Retail 70:97–113

Lafontaine F, Shaw KL (1999) The dynamics of franchise contracting: evidence from panel data. J Polit Econ 107:1041–1080

López B, Ventura J (2001) Grupos estratégicos en las franquicias españolas. Econ Ind 340:163–176

McIntyre FS, Huszagh SM (1995) Internationalization of franchise systems. J Int Mark 3:39–56

Meyer AD, Tsui AS, Hinings CR (1993) Configurational approaches to organizational analysis. Acad Manag J 36:1175–1195

Miles RE, Snow C (1978) Organizational strategy, structure, and process. McGraw-Hill, New York

Miller D, Mintzberg H (1983) The case for configuration. In: Morgan G (ed) Beyond method. Sage, Beverly Hills, CA, pp 57–73

Minkler A (1990) An empirical analysis of a firm's decision to franchise. Econ Lett 34:77–82

Mintzberg H (1979) The structuring of organizations. Prentice-Hall, Englewood Cliffs, NJ

Mitsuhashi H, Shane S, Sine WD (2008) Organization governance form in franchising: efficient contracting or organizational momentum? Strateg Manag J 29:1127–1136

Murtagh F, Legendre P (2014) Ward's hierarchical agglomerative clustering method: which algorithms implement Ward's criterion? J Classif 31:274–295

Norton S (1988) An empirical look at franchising as an organizational form. J Bus 61:197–217

Oxenfeldt AR, Kelly AO (1969) Will successful franchise systems ultimately become wholly-owned chains? J Retail 34:69–83

Perdreau F, Le Nadant AL, Cliquet G (2015) Human capital intangibles and performance of franchise networks: a complementary view between agency and critical resource perspectives. Manag Decis Econ 36:121–138

Picard R, Cook R (1984) Cross-validation of regression models. J Am Stat Assoc 79:575–583

Picot-Coupey K, Burt SL, Cliquet G (2014) Retailers' expansion mode choice in foreign markets: antecedents for expansion mode choice in the light of internationalization theories. J Retail Consum Serv 21:976–991

Porter ME (1980) Competitive strategy. Free Press, New York

Rondán-Cataluña FJ, Navarro-García A, Díez de Castro EC (2007) Proposing new variables for the identification of strategic groups in franchising. Int Entrep Manag J 3:355–377

Sen KC (1993) The use of initial fees and royalties in business-format franchising. Manag Decis Econ 14:175–190

Control and Performance in Franchising Networks

Ilir Hajdini, Helge Klapper, Paulus Rommer, and Josef Windsperger

Abstract The aim of the study is to examine the determinants of franchisor performance by focusing on the moderating role of control as transaction cost savings and value-creating mechanism. In line with resource-based view, we argue that intangible resources of the franchisor (brand name) and the intangible resources of the franchisees (local market knowledge, human resource management, quality control, and administrative capabilities) will positively impact franchisor performance. Based on the transaction cost view, we show that environmental uncertainty is negatively related to franchisor performance. Although the resource-based view and transaction cost economics have been extensively used in previous literature, no study examined the moderating role of control on the impact of resource-based and transaction cost variables on franchisor performance. We use cross-sectional data from the franchise sector in Germany to empirically test the hypotheses.

1 Introduction

A large number of studies in the management, marketing, and organization theory examine the role of control in intra- and interorganizational relationships (e.g., Brown et al. 2003; Chalos and O'Connor 2004; Choi and Beamish 2004; Dant and Nasr 1998; Das and Teng 1998; Dekker 2004; Doherty and Alexander 2006; Gatignon and Anderson 1988; Geringer and Hebert 1989; Grewal et al. 2013; Jaussaud and Schaaper 2006; Mjoen and Tallmann 1997). However, this literature uses very heterogeneous concepts of control and does not provide a general theoretical foundation of control as a major pillar of the governance structure of the firm (Liu et al. 2013). This study applies the concept of control developed in the property rights theory (e.g., Baker et al. 2008; Grossman and Hart 1986; Hansman 1996). It refers to the allocation of decision and ownership

I. Hajdini (✉) • H. Klapper • P. Rommer • J. Windsperger
Department of Business Administration, University of Vienna, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria
e-mail: ilir.hajdini@univie.ac.at; helge.klapper@univie.ac.at; paulus.rommer@meduniwien.ac.at; josef.windsperger@univie.ac.at

rights in intra- and interorganizational relationships. If assumed that outlet ownership (i.e., the proportion of company-owned outlets) is given in franchising networks, control refers to *authoritative control* (Weitz and Jap 1995; Mohr et al. 1996) as allocation of decision authority between the franchisor and franchisees over the different value chain activities at the local outlets, such as pricing, advertising, product and service, human resource management, procurement, and supplier selection. High control means that the franchisor has a high proportion of residual decision rights over the value chain activities at the local outlets.

Although many studies investigate different aspects of control in franchising (e.g., Azevedo 2009; Brookes and Roper 2011; Dant and Nasr 1998; Dant and Gundlach 1999; Doherty and Alexander 2006; Fladmoe-Lindquist and Jacque 1995; Mellewigt et al. 2011; Mumdziev and Windsperger 2013; Pizanti and Lerner 2003; Quinn 1999; Quinn and Doherty 2000), no previous study examines the impact of control on franchisor performance. Starting from this deficit, the aim of the study is to examine the determinants of franchisor performance by focusing on the moderating role of control as transaction cost savings (Williamson 1975, 1985) and value creation mechanism (Barney 1991; Madhok 1996). Consistent with the resource-based theory (RBT) and transaction cost theory (TCT), the study argues that franchisor control increases network performance by facilitating knowledge transfer and mitigating appropriation and coordination cost concerns (Gulati and Singh 1998; Dekker 2004; Gulati et al. 2012). Specifically, it shows that the franchisor will set up a control level which considers the trade-off between the performance-enhancing effect of control under highly intangible brand name assets and high environmental uncertainty and the performance-decreasing effect of control under highly intangible local market assets of the franchisees.

Overall this study contributes to the franchise literature by combining RBT and TCT reasoning to explain performance in franchising networks. Specifically, the impact of RBT and TCT variables (such as franchisor's brand name assets, franchisees' local market assets, and environmental uncertainty) on franchisor performance is contingent on the level of control. In addition, the study contributes to the application of the RBT in marketing channel literature (Kozlenkova et al. 2014) by focusing on the impact of market-based resources (such as brand name and local market assets) on channel performance (Morgan et al. 2009; Richey et al. 2010; Srivastava et al. 2001).

The paper is organized as follows: Section 2 explores the resource-based and transaction cost determinants of franchisor performance. Section 3 investigates the moderating role of control in the relationship between the resource-based as well as transaction cost variables and franchisor performance. Section 4 presents the empirical analysis. Finally, we discuss the results and draw conclusions for theory and practice.

2 Franchisor Performance, Intangible Resources, and Environmental Uncertainty

According to RBT, franchising is an interorganizational network that increases relational rents by combining complementary intangible resources of the franchisor and the franchisees, while based on TCT, franchising is a governance form that minimizes transaction costs due to uncertainty and transaction-specific investments (Mayer and Salamon 2006). Hence, RBT focuses on the value creation function and TCT on the transaction cost savings function of a governance mechanism. In the following, the study uses both theories to explain the determinants of franchisor performance.

2.1 Resource-Based Perspective

The main focus of the resource-based framework is to explain sustainable performance differences among firms (Barney 1991; Kozlenkova et al. 2014; Peteraf 1993). According to the RBT (e.g., Rumelt 1991), performance variation among firms is due to their idiosyncratic and unique resources as homogeneously distributed resources cannot generate competitive advantage and high returns. On the contrary, resource attributes of prosperous firms should be sticky, non-imitable, and hence difficult to transfer (Madhok 2002). Therefore, the most important resources to create and maintain competitive advantage are intangible resources (Barney 1991; Galbreath and Galvin 2008).

Intangible Resources of the Franchisor and Performance The success of the franchise network relates to the ability to effectively manage the value of intangible resources (Watson et al. 2005). The franchisor's intangible resources refer primarily to the system-specific know-how and brand name (Hall 1993) that are characterized by a high-tacitness component. According to Fladmoe-Lindquist and Jacque (1995), the brand name is the most important intangible resource. To build brands, the franchisor invests in marketing and promotion that reduce information asymmetry between the firm and the customers (Norton 1988). Similarly, Amit and Schoemaker (1993) highlight that brand name assets are less vulnerable to competition as they cannot be easily imitated by potential competitors. Accordingly, the study proposes that intangible resources in general and a strong brand name in particular lead to competitive advantage and higher performance (Blomstermo et al. 2006; Sharma and Erramilli 2004; Watson et al. 2005). It is hypothesized that:

H1 *Intangible brand name assets of the franchisor will positively impact franchisor performance.*

Intangible Resources of the Franchisee and Performance Intangible resources of the franchisee include local market know-how, human resources, quality control,

and administrative capabilities. The franchisee will continuously seek to exploit his/her capabilities to increase the relationship-specific rents. More specifically, franchisees have higher incentives to pursue more explorative learning as opposed to the managers of company-owned outlets (Sorenson and Sørensen 2001). Accordingly, managers are concerned with incremental improvements as they are more intensively monitored by franchisor's internal hierarchy that aims to minimize possible shirking risks. Based on the RBT, value chain activities will be delegated to the local partners when franchisees possess superior local market knowledge (Kogut and Zander 1992). In line with this reasoning, franchisees provide easier access for the franchisor to gain competitive advantage in heterogeneous and changing local environments where local market knowledge, such as consumer preferences, cultural values, and location-specific marketing methods, are very important for value creation. Consequently, we expect that franchisees' intangible resources will increase the performance of the network and more particularly that of the franchisor. Hence, the following hypothesis is formulated:

H2 *Intangible local market assets of the franchisees will positively impact franchisor performance.*

2.2 *Transaction Cost Economic Perspective*

According to the TCT, environmental uncertainty influences the choice of intra- and interorganizational governance structure (Gulati et al. 2005; Rindfleisch and Heide 1997; Williamson 1991). Environmental uncertainty refers to the unpredictability of business environment, demand volumes, technologies, etc. In such circumstances, the context of economic exchange becomes difficult to predict and cannot be easily specified in contracts (Geyskens et al. 2006; Hendrikse and Windsperger 2011). In an uncertain local environment, contractual renegotiations and adjustments are costly. In addition, environmental uncertainty may also increase franchisees' propensity for opportunistic behavior resulting in high monitoring costs. Consequently, high environmental uncertainty may negatively impact the performance of the franchisor. Hence, the next hypothesis is:

H3 *Environmental uncertainty will negatively affect franchisor performance.*

3 The Moderating Role of Control

3.1 *Interaction Between Control and Intangible Resources*

In areas of the value chain activities where network partners have more intangible resources, they should exercise more control (Brown et al. 2003; Choi and Beamish

2004; Windsperger 2004; Gurcaylilar-Yenidogan and Windsperger 2015). First, the franchisor has to consider the nature of his/her knowledge assets (such as brand name), which interact with the extent of control exercised in the franchise networks. As argued by Demsetz (1988), if the knowledge of one of the partners is more tacit and less codified in contracts, more residual control rights should be transferred to that partner. Therefore, if the franchisor possesses knowledge assets with highly idiosyncratic and tacit characteristics, he/she should have more control (Contractor and Ra 2002) to strengthen the positive performance effect of his/her intangible assets. Hence, it is predicted that:

H1a *In presence of franchisor's highly intangible brand name assets, more control will strengthen the positive performance effect of highly intangible franchisor's assets.*

Second, franchisees are expected to have more specific know-how of the local market. Yin and Zajac (2004) finds that franchised stores permit more flexibility to respond to the local market environment compared to company-owned stores. As a result, it is presumed that they have higher exploration capabilities and generate more innovations for the system (Bradach 1997). Under such circumstances more franchisee autonomy and less franchisor control can strengthen the positive impact of franchisees' intangible local market assets on network performance.

However, franchisees may also behave opportunistically by lowering quality or underinvesting in local advertising in order to increase their residual income stream (Gassenheimer et al. 1996). A higher level of control enables the franchisor to minimize horizontal externality problems by protecting the brand name value against degradation (Combs et al. 2004). In this case, more control is also supported by field audits, mystery costumers, and management information systems (Barthélemy 2008). Consequently, under highly intangible local market assets, the value-enhancing effect of a lower (higher) level of control (franchisee autonomy) might be weakened by the costs of free-riding. Stated formally:

H2a *In presence of franchisees' high intangible local market assets, more control will weaken the positive performance effect of highly intangible local market assets.*

3.2 Interaction Between Control and Environmental Uncertainty

Two different theoretical views explain the impact of environmental uncertainty on the choice of governance form. First, the control view of governance highlights that firms could respond more effectively to environmental uncertainty by increasing their level of control with more hierarchical integration (Williamson 1975). This view has been supported by several authors (e.g., Geyskens et al. 2006; John and Weitz 1988; Noordewier et al. 1990; Stinchcombe 1990). They have shown that firms increase their tendency to vertically integrate under increasing environmental

uncertainty. Applied to franchising networks, TCT reasoning would predict higher control by the franchisor in uncertain business environments. A qualitative study regarding six UK-based fashion retailers and their international franchise operations (Doherty and Alexander 2006) shows that franchisee managers asked for more franchisor control as this helps them to keep pace with uncertain business developments. Faced with unpredictability, franchisors use more vertically integrated governance structures that enable faster reaction and adoption. Therefore, more control decreases the negative performance effect of environmental uncertainty. Hence, it is anticipated that:

H3a *In presence of high environmental uncertainty, more control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty.*

Second, according to the adaptation view of governance (e.g., Gulati et al. 2005; Simon 1947; Williamson 1991), high environmental uncertainty requires more local responsiveness that is achieved by delegating more coordination tasks to the franchisees. Accordingly, lower levels of control and hence more franchisee autonomy are required if the local market environment is very uncertain. This would allow for more flexibility in order to react to environmental changes (Erramilli and Rao 1993; Klein et al. 1990). Consistent with this reasoning, lower levels of control are expected to decrease the negative performance effect of environmental uncertainty while allowing more space for local adaptation of the franchisees. Hence, the following hypothesis is formulated:

H3b *In presence of high environmental uncertainty, more control exercised by the franchisor will strengthen the negative performance effect of environmental uncertainty.*

In conclusion, our research model is based on the view that control is an important moderator variable in the relationship between RBT and TCT variables and franchisor performance (Fig. 1). The need for an appropriate level of control is more sever under highly intangible brand name and local market assets as well as
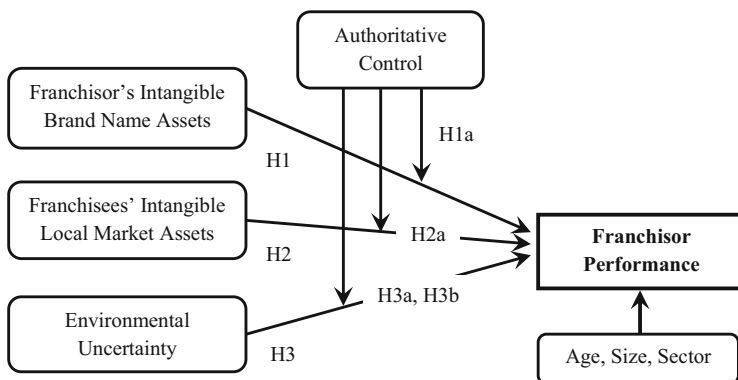

Fig. 1 Performance model

high environmental uncertainty. On the other hand, if the use of brand name and local market assets can be easily specified in contract and the environmental uncertainty at the local outlets is low, control will be exercised mainly by specifying detailed contract provisions in the franchise agreement (Demsetz 1998; Hendrikse and Windsperger 2011) and less by assigning residual decision rights to the franchisor.

Overall, the impact of control as moderator on franchisor performance can be summarized by the following proposition: the higher the value of the franchisor's brand name as well as the level of environmental uncertainty and the lower the extent of franchisees' intangible local market assets, the stronger is the value creation and transaction cost savings effect of higher control and the stronger is its performance-enhancing effect. This can be illustrated by comparing the following cases of control in franchising networks (Table 1):

1. High control: If the extent of intangible brand name assets and environmental uncertainty is high and the extent of franchisees' intangible local market assets is low, the franchisor will exercise a high level of control to facilitate knowledge transfer from the headquarters to the network partners ("top-down" knowledge transfer) and to mitigate appropriation and coordination cost concerns.
2. Medium control: If the extent of intangible brand name assets and intangible local market assets as well as the level of environmental uncertainty is high, the franchisor will exercise a medium level of control to facilitate both knowledge transfer from the headquarters to the network partners and the network partners to the headquarters ("top-down and bottom-up" knowledge transfer) as well as to mitigate appropriation and coordination cost concerns. In this case, the franchisor will increase franchisee autonomy to efficiently exploit the franchisees' intangible local market know-how.
3. Low control: If the extent of intangible brand name assets and environmental uncertainty is low and the extent of franchisees' intangible local market assets is

Table 1 Moderating role of control

Environmental uncertainty and intangible brand name assets	Intangible local market assets	
	High	Low
High	Medium control ("bottom-up" and "top-down" knowledge transfer and high transaction cost savings)	High control ("top-down" knowledge transfer and high transaction cost savings)
Low	Low control ("bottom-up" knowledge transfer and low transaction cost savings)	n/a[a]

[a]This case refers to market control and is not applicable to authoritative control (Ouchi 1979; Weitz and Jap 1995) which we examine in franchising networks. Under low asset intangibility and low environmental uncertainty, control can be exercised by specifying detailed contract provisions regarding the use of assets under different environmental situations

high, the franchisor will exercise a lower level of control to increase network partners' incentives for knowledge transfer from the local outlets to the headquarters. In addition, the transaction cost savings function of control is less important for franchisor performance under low environmental uncertainty.

4 Empirical Analysis

4.1 Data Collection

To empirically test the hypotheses, we collected data from the franchising sector in Germany. In-depth interviews with franchise professionals from the Austrian and German franchise associations guided to several preliminary steps in questionnaire development and refinement. Moreover, a pretest with 20 franchisors in Austria was part of the final modification process. According to the key informant approach for data collection (McKendall and Wagner III 1997), interviews were conducted with senior managers that were considered responsible for franchise expansion. The revised questionnaire, which incorporated the alterations suggested by the pretest, was mailed to 491 relevant franchise systems in Germany. We derived the data from the directory of the German Franchise Federation (DFV) and "Franchise Wirtschaft" (2009/10) which lists all franchise systems operating in the country. Although, these directories list 837 franchise systems operating in Germany, we employed a reduced judgmental sampling on the basis of two-point criteria. The system should have started franchising at least 2 years previous to our selection, and it should have at least five operating outlets to be considered as a valuable observation. As a result, we were left with 491 relevant franchise systems to mail the questionnaires. We received back 137 filled questionnaires with a response rate of 28%. However, due to missing value, only 110 responses could be used for the regression analysis.

To trace nonresponse bias, we examined whether the results obtained from analysis are driven by early versus late respondents (Armstrong and Overton 1977). The late respondents serve as proxies for the group of nonrespondents, which includes the firms that completed the questionnaire 4 weeks after the first group of respondents. Second, we compared the respondents with nonrespondents in terms of age, size, advertising fee, and royalties to determine whether nonresponse was a serious problem for the data. These variables are available in the "Franchise Wirtschaft" for the entire listed systems. No significant differences emerged between the two respondent groups (see Table 2). In addition, Harman's single-factor test has been used to examine whether a significant amount of common method variance exists in the data (Podsakoff et al. 2003). Factor analysis conducted on all items as well as extracting more than one factor with eigenvalues greater than 1 revealed that common method variance is not a problem in our study.

Table 2 Nonresponse bias

	Means, (SD), and counts[a]			
	Population	Respondents	t-value	p-value
Age of franchise system (years)	10.1 (8.1) N = 449	11.2 (8.39) N = 121	−1.29	0.19
System size (total outlets)	112.7 (431.4) N = 337	155.9 (328.37) N = 118	0.99	0.32
Advertising fee (% of sales)	1.0 (1.4) N = 326	0.9 (1.34) N = 127	−0.47	0.63
Royalties (% of sales)	4.4 (6.2) N = 446	5.4 (7.45) N = 117	1.40	0.16

The measures of advertising fee and royalties were first tested by a MANOVA to ensure independence of these variables

[a]Counts differ across different measures because of missing values

4.2 Measures

Performance of the Franchisor Derived from Sorenson and Sørensen (2001) and Ghemawat and Ricart Costa (1993), performance is measured with four items by asking the franchisor to rate the franchise performance on a seven-point Likert scale: reduction in costs, increase in revenues, increase in innovations, as well as increase in savings in coordination and control costs. There are several reasons to use subjective measures aiming to capture the multifaceted nature of the performance construct. The singularity nature of the objective indicators and the lack of financial data disclosure in franchise networks have encouraged authors to more often use subjective measures. Similarly, researchers find high correlation between subjective and objective measures (Geringer and Hebert 1991; Glaister and Buckley 1998; Wall et al. 2004). Although the average variance extracted (AVE) is just slightly below the required level (0.48), composite reliability (CR) and internal consistency (Cronbach's alpha [CA]) of measurements are according to the required threshold levels (CA, 0.77, and CR, 0.79; see Appendix).

Franchisors' Intangible Brand Name Assets The construct adopted from Barthélemy (2008) asked franchisors to rate on a seven-point Likert scale the franchise networks' brand name advantage compared to their competitors. Brand strength, brand recognition, and reputation for quality all compared to the competitors as well as the importance of brand name to achieving competitive advantage were rated (CA, 0.75; AVE, 0.47; and CR, 0.79).

Franchisees' Intangible Local Market Assets Four items are derived from Mumdžiev and Windsperger (2011). They reveal franchisor's opinion about the

advantage of franchised outlets compared to company-owned outlets. Franchisors were asked to rate on a seven-point Likert scale whether franchised outlets have more advantages on quality control, administrative skills, human resources, and local market know-how (CA, 0.84; AVE, 0.61; and CR, 0.80).

Environmental Uncertainty Adopted from Celly and Frazier (1996) and John and Weitz (1988), the construct is measured on a seven-point Likert scale. Franchisors were asked to assess three items regarding their possibility to forecast development and fluctuations of outlet sales, unpredictability of the local market, and volatility of the local economic situation (CA, 0.74; AVE, 0.54; CR, 0.74).

Control Adopted from Windsperger (2004), control represents the allocation of decision-making authority between franchisor and franchisees. The variable assessed on a seven-point scale (1, very low influence; 7, very high influence) captures the extent of franchisor's influence on operational decisions regarding the selection of suppliers, product/service offering, equipment and procurement decisions, new product decisions, and application of accounting and controlling systems. By averaging the scale values, we constructed a control index varying between 1 and 7. The higher the franchisor's influence on residual decision-making in the network, the higher is the control index (CA, 0.84; AVE, 0.50; CR, 0.85).

Size is measured by the log of the number of employees in the headquarters. From the transaction cost theoretical perspective, larger firms should have a higher control capacity (Erramilli and Rao 1993). Therefore, we expect that the larger the number of employees in franchisors' headquarters, the more savings in coordination and monitoring can be achieved.

Age of the franchising system is measured by the log of the number of years since the opening of the first franchised outlets. Age may be a proxy for interorganizational learning. As time passes, experience with established practices and routines increases, raising efficiency and the level of performance (Sorenson and Sørensen 2001).

Sector affects the efficiency of the franchising system in different ways. Intangible assets (e.g., local market know-how, knowledge transfer, monitoring capabilities) vary between different sectors. Service franchising firms need more intangible assets compared to the product franchising firms (Zeithamel et al. 1985). We include a dummy variable to control for sectoral effects (0 for service firms, 1 for product franchising firms).

All items across the scales were subject to principal component factor analysis with varimax rotation and to confirmatory factor analysis, which confirmed a five-factor solution for the items presented in the study (Anderson and Gerbing 1988) explaining 63.77% of the variance. In addition, a discriminant validity test was conducted (Fornell and Larcker 1981) (see Table 3).

Table 3 Discriminant validity

		1	2	3	4	5
1	Franchisor performance	0.48				
2	Intangible brand name assets	0.13	0.47			
3	Intangible local market assets	0.00	0.00	0.61		
4	Environmental uncertainty	0.06	0.01	0.01	0.54	
5	Control	0.14	0.00	0.00	0.00	0.50

The average variance extracted values are presented on the diagonal, while the numbers below represent squared correlations

5 Regression Analysis

We use the OLS regression method to test the research model (Fig. 1). Descriptive statistics and Pearson correlation coefficients are reported in Table 4. Additional to correlations, low inflation factors (VIF ranges from 1.06 to 1.48) indicate that multicollinearity does not affect the results of our analysis. Next, Breusch-Pagan and Ramsey tests showed no signs of heteroscedasticity or omitted variable bias. Further, to test whether there is an endogeneity between the extent of control and franchisor performance, an instrumental variable derived from franchisors formal visits to the franchisees was used. Several authors show how franchisors exercised control on their franchisees via formal visits (Quinn 1999; Quinn and Doherty 2000; Dekker 2004; Doherty and Alexander 2006; Mellewigt et al. 2011). The Durbin-Wu-Hausman test comparing instrumental variable estimates to OLS estimates indicates that endogeneity is not the issue in this matter (ch2 (10) = 0.20).

According to the resource-based view, we hypothesize positive effects of intangible brand name assets and the franchisees' local market assets on franchisor performance. Further, under the realm of TCT, environmental uncertainty is hypothesized to negatively impact franchisor performance. The results of OLS regression analysis are presented in Table 5. First, we conduct regression analysis only with control variables, with age being the only significant variable (model 1). In model 2, we add the RBT and TCT variables. The regression results in model 2 show support for the hypotheses 1 and 3 that intangible brand name assets of the franchisor positively and environmental uncertainty negatively impact franchisor performance (ß = 0.251, p = 0.006; ß = −0.284, p = 0.002, respectively). However, the results do not support the positive impact of franchisees' intangible local market assets on franchisor performance (hypothesis 2). In models 3 and 4, we add the interaction effects between control and TCT and RBT variables.

In line with H1a, the regression results reveal that control strengthens the positive performance effect of highly intangible brand name assets (ß = 0.158, p = 0.03). Hypothesis (H2a), that in presence of franchisees' high intangible local market assets, more control will weaken the positive performance effect of highly intangible franchisees' assets, is also supported (ß = −0.194, p-value = 0.01). This means that more franchisee autonomy will improve franchisor performance by supporting the use of local market knowledge. Finally, consistent with H3a more

Table 4 Correlations

	Variables	Mean	SD	1	2	3	4	5	6	7
1.	Franchisor performance	4.51	0.98							
2.	Intangible brand name assets	5.61	1.13	0.36[b]						
3.	Intangible local market assets	3.68	1.30	−0.06	−0.07					
4.	Environmental uncertainty	3.72	1.37	0.25[a]	−0.11	0.13				
5.	Control	4.67	1.47	0.38[b]	0.09	−0.09	0.01			
6.	Size	2.35	1.30	0.16	0.20[a]	−0.04	−0.01	0.19[a]		
7.	Sector	0.65	0.48	−0.15	−0.12	0.22[a]	−0.02	−0.05	−0.11	
8.	Age	2.03	0.96	0.21[a]	0.14	−0.01	0.03	0.06	0.53[b]	−0.05

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

Table 5 Results of OLS regression analyses of franchisor performance

Variables	Franchisor performance			
	Model 1	Model 2	Model 3	Model 4
Constant	4.115*** (0.276)	3.755*** (0.614)	2.629*** (0.599)	2.645*** (0.567)
Size	0.034 (0.084)	−0.007 (0.078)	−0.083 (0.071)	−0.051 (0.067)
Age	0.218* (0.115)	0.210** (0.106)	0.216** (0.096)	0.211** (0.090)
Sector	−0.102 (0.195)	−0.090 (0.186)	−0.069 (0.168)	−0.126 (0.160)
Intangible brand name assets		0.251*** (0.019)	0.228*** (0.018)	0.223*** (0.016)
Intangible local market assets		−0.011 (0.017)	0.020 (0.015)	−0.006 (0.014)
Environmental uncertainty		−0.284*** (0.064)	−0.278*** (0.058)	−0.230*** (0.055)
Control			0.395*** (0.009)	0.388*** (0.008)
Control × intangible brand name assets				0.158** (0.002)
Control × intangible local market assets				−0.194** (0.002)
Control × environmental uncertainty				0.219*** (0.006)
N	110	110	110	110
F	2.723**	5.318***	9.08***	9.13***
R^2	0.072	0.235	0.382	0.477
Adjusted R^2	0.045	0.191	0.340	0.425

Values in parentheses represent standard errors. ***$p < 0.01$. **$p < 0.05$. *$p < 0.1$

control weakens the negative performance effect of environmental uncertainty (ß = 0.219, p = 0.006). These results support the control view of governance (e.g., Williamson 1975; Stinchcombe 1990) that franchise firms could respond more effectively to environmental uncertainty by centralization of decision-making. The results of the hypotheses test are summarized in Table 5. Overall, we can conclude that adding control strongly increases the explanatory power of the research model (R2 increased from 0.235 to 0.477). This result highlights that the impact of the RBT and TCT variables on franchisor performance is contingent on the level of control (Table 6).

Table 6 Summary of the hypotheses test

H1	Intangible resources of the franchisor will positively impact franchisor performance	Supported
H2	Intangible resources of the franchisee will positively impact franchisor performance	Not supported
H3	Environmental uncertainty negatively affects franchisor performance	Supported
H1a	In presence of franchisor's highly intangible brand name assets, more control will strengthen the positive performance effect of highly intangible franchisor's assets	Supported
H2a	In presence of franchisees' high intangible local market assets, more control will weaken the positive performance effect of highly intangible local market assets	Supported
H3a	In presence of high environmental uncertainty, more control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty	Supported
H3b	In presence of high environmental uncertainty, more control exercised by the franchisor will strengthen the negative performance effect of environmental uncertainty	Not supported

6 Discussion and Implications

6.1 Discussion

This paper presents a combined resource-based and transaction cost explanation of franchisor performance by focusing on the moderating role of control as transaction cost savings and value creation mechanism. The empirical results from the German franchise sector provide overall support for the hypotheses. First, consistent with the RBT logic, the relation between franchisor's intangible brand name assets and franchisor performance is positive. In addition, the results show that control strengthens the positive performance effect of franchisor's intangible brand name. Second, the results indicate that the impact of franchisees' intangible local market assets on performance is contingent on the level of control. If the franchisor evaluates franchisees' intangible local market assets of high value, more control will weaken the positive performance effect of highly intangible local market assets. Hence, the results suggest that under such circumstances more franchisee autonomy increases system performance. This is due to the fact that franchisees will be more motivated to use their local market know-how to increase the residual surplus if they have a higher level of autonomy over the operational decisions at the local markets.

Third, consistent with TCT prediction, environmental uncertainty negatively influences franchisor performance. Specifically, when franchisors perceive higher market and demand uncertainty, they are confronted with the dilemma regarding the appropriate level of control that should be imposed over the operational activities at the local markets. According to our results, in presence of high environmental uncertainty, more control exercised by the franchisor will weaken

the negative performance effect of environmental uncertainty. This supports the control view of governance and is consistent with the result of Doherty and Alexander (2006). They show that franchisees ask for more franchisor control under uncertain business developments. In addition, under high environmental uncertainty, the negative performance effect of higher opportunism risk may be mitigated by a higher level of control. Overall, the inclusion of control as a moderator variable strongly increases the explanatory power of the performance model.

The present empirical results do not support the hypothesis regarding the direct impact of intangible local market knowledge on franchisor performance. This may be due to availability biases (Tversky and Kahneman 1974) or the leadership style of the franchisors (Anderson and Brown 2010), who may consider local market knowledge as less important performance driver in the franchise system. Finally, the control variable size and sector do not significantly influence franchisor performance. On the other hand, age supports the view that experience may lead to interorganizational learning and hence to higher franchisor performance.

6.2   Implications

What are the theoretical and practical implications of this study? First, to the best of our knowledge, it is the first study that examines the moderating role of control on the impact of the resource-based and transaction cost variables on franchisor performance. We argue that a high level of franchisor performance requires a fit between control, RBT, and TCT variables. The findings show that a higher level of control strengthens the positive performance effect of franchisor's intangible brand name assets and weakens the negative performance effect of environmental uncertainty. On the other hand, a higher level of control weakens the performance effect of franchisees' intangible local market assets. Therefore, highly intangible local market assets require more autonomy for franchisees to trigger a positive performance effect. Second, this study contributes to the application of RBT in the marketing channel literature (Kozlenkova et al. 2014) by focusing on the impact of market-based resources (such as brand and local market know-how) on firm performance (Morgan et al. 2009; Orr et al. 2011; Richey et al. 2010).

In addition, the results of the study have important implications for the management of franchising networks. They show that control is an important governance mechanism to improve franchisor performance. A higher level of control increases franchisor performance, if the franchisor's resources are highly intangible and the business environment at the local markets is very uncertain. On the other hand, a higher level of control may prevent the franchisor from getting access to highly intangible local market resources resulting in a negative performance effect. Consequently, the franchisor can only set up an efficient level of control if he/she considers the trade-off between the performance-enhancing effect of higher control under a strong brand name and high environmental uncertainty and the

performance-weakening effect of higher control under highly intangible local market assets.

6.3 Limitations and Future Research Directions

Some limitations of the study have to be acknowledged. First, the main limitation results from the fact that performance measurement is based on subjective indicators. While objective measures have greater validity, most of the franchise systems in this survey do not disclose financial data. Although the literature has demonstrated that there is a strong positive correlation between objective and subjective performance indicators, future studies should test the research model by using both subjective and objective performance indicators that are closely related to the theoretical framework (Crook et al. 2008). Second, our empirical analysis uses data based on the franchisor's evaluation of franchisees' intangible local market assets. Future research should also collect data from the franchisees to increase the validity of the results. Third, although our research model explains more than 47% of the variance in our performance measure, other variables, not included in this study, may impact franchisor performance. In addition to the resource-based and transaction cost variables, trust as relational variable and bargaining power of the partners may influence franchisor performance. According to the relational view of governance (e.g., Dyer and Singh 1998), trust influences cooperation and coordination in interorganizational relationships (Das and Teng 2001; Gulati et al. 2012; Gurcaylilar-Yenidogan and Windsperger 2013; Weitz and Jap 1995). Hence, trust may improve franchisor performance by reducing relational risk and increasing communication and knowledge sharing between the partners (Gorovaia and Windsperger 2011). Bargaining power theory (e.g., Gaski 1984; Gaski and Nevin 1985; Heide and John 1992; Porter 1976; Shervani et al. 2007) may focus on the impact of bargaining power on performance in franchising networks. We expect that franchisors with high bargaining power may influence the behavior of the franchise partners and hence network performance. High bargaining power may have a positive or negative impact on performance, which depends on the network partners' relative dependence (Gilliland et al. 2010; Kumar et al. 1995; Palmatier et al. 2007). Consequently, future research has to examine the impact of relational governance and bargaining power variables on franchise performance.

7 Conclusions

The study examines the determinants of franchisor performance by focusing on the moderating role of control as transaction cost savings and value-creating mechanism. Our results suggest that the impact of franchisor's brand name assets and franchisees' local market assets as well as environmental uncertainty on franchisor performance is strongly contingent on the level of control. Overall, we can conclude

that the franchisor has to set up a level of control in the franchising network that considers the trade-off between the performance-enhancing effect of higher control under a strong brand name and high environmental uncertainty and the performance-decreasing effect of higher control under highly intangible local market know-how of the franchisees.

Appendix: Measures of the Variables

Constructs	Items	Description of measures
Franchisor performance CA = 0.77 CR = 0.79 AVE = 0.48	Four seven-point items, anchored by "much worse than planned" [1] and "much better than planned" [7], adopted from Sorenson and Sørensen (2001)	The extent the franchisor achieved the following goals last year 1. Reduction of costs 2. Increase of revenues 3. More innovation 4. Savings on coordination and control costs
Franchisor intangible brand name assets CA = 0.75 CR = 0.79 AVE = 0.47	Four seven-point items, anchored by "strongly disagree" [1] and "strongly agree" [7], adapted from Barthélemy (2008)	How franchisors evaluated their brands 1. Our brand name is very strong compared with that of our competitors 2. The quality of our franchise system has a very good reputation 3. Our franchise system is well recognized compared with that of our competitors 4. Our brand name is very important to achieve a competitive advantage
Franchisees intangible local market assets CA = 0.84 CR = 0.80 AVE = 0.61	Five seven-point items, anchored by "strongly disagree" [1] and "strongly agree" [7], adapted from Mumdžiev and Windsperger (2011)	Franchisee's know-how advantage compared to the manager of a company-owned outlet evaluated by the franchisor with regard to 1. Local market knowledge 2. Quality control 3. Administrative skills 4. Human resource capabilities
Environmental uncertainty CA = 0.74 CR = 0.74 AVE = 0.54	Three seven-point items, anchored by "strongly disagree" [1] and "strongly agreed" [7], adapted from John and Weitz (1988); Celly and Frazier (1996)	Franchisor's opinion on 1. Sales at the local markets are very unpredictable 2. It is very difficult to forecast the market development in the local markets 3. Economic environment is changing quickly in the local markets

(continued)

Constructs	Items	Description of measures
Control CA = 0.84 CR = 0.85 AVE = 0.50	Six seven-point items, anchored by "very large extent" [1] and "not at all" [7], based on Windsperger (2004)	Franchisor's opinions on the extent they influence franchisees on the following decisions 1. Supplier decision 2. Product/service decision 3. Equipment decision 4. Procurement decision 5. New product decision 6. Accounting and controlling system decision

Sector: dummy variable, 0 = service franchising and 1 = product franchising

Age: log of the number of year since opening the first franchise outlet

Size: log of the number of employees in the franchisor's headquarters

CA Cronbach's alpha, *CR* composite reliability, *AVE* average variance extracted

References

Amit R, Schoemaker PJ (1993) Strategic assets and organizational rent. Strateg Manag J 14:33–46

Anderson C, Brown D (2010) The functions and dysfunctions of hierarchy. Res Organ Behav 30:55–89

Anderson J, Gerbing D (1988) Structural equation modeling in practice: a review and recommended two-step approach. Psychol Bull 103(3):411–423

Armstrong JS, Overton TS (1977) Estimating non-response bias in mail surveys. J Mark Res 14:396–402

Azevedo PF (2009) Allocation of authority in franchise chains. Int Stud Manag Organ 39(4):31–42

Baker GP, Gibbons R, Murphy KJ (2008) Strategic alliances: bridges between "islands of conscious power". J Jpn Int Econ 22:146–163

Barney J (1991) Firm resources and sustained competitive advantage. J Manag 17:99–120

Blomstermo A, Sharma D, Sallis J (2006) Choice of foreign market entry mode in service firms. Int Mark Rev 23:211–229

Bradach JL (1997) Using the plural form in the management of restaurant chains. Adm Sci Q 42:276–303

Barthélemy J (2008) Opportunism, knowledge, and the performance of franchise chains. Strateg Manag J 29:1451–1463

Brookes M, Roper A (2011) International master franchise agreements: an investigation of control from operational, relational and evolutionary perspective. Eur J Mark 45(7/8):1252–1276

Brown JR, Dev CS, Zhou Z (2003) Broadening the foreign market entry decision: separating ownership and control. J Int Bus Stud 34:473–488

Celly KS, Frazier GL (1996) Outcome-based and behavior based coordination efforts in channel relationship. J Mark Res 332:200–210

Chalos P, O'Connor NG (2004) Determinants of the use of various control mechanisms in US–Chinese joint ventures. Acc Organ Soc 29(7):591–608

Choi CB, Beamish PW (2004) Split management control and international joint venture performance. J Int Bus Stud 35(3):201–215

Combs JG, Michael SC, Castrogiovanni GJ (2004) Franchising: a review and avenues to greater theoretical diversity. J Manag 30:907–931

Contractor FJ, Ra W (2002) How knowledge attributes influence alliance governance choices: a theory development note. J Int Manag 8:11–27

Crook R, Ketchen D, Combs J, Todd S (2008) Strategic resources and performance. A meta-analysis. Strateg Manag J 29(3):1141–1154

Dant R, Nasr NI (1998) Control techniques and upward flow of information in franchising in distant markets: conceptualization and preliminary evidence. J Bus Ventur 13:3–28

Dant RP, Gundlach GT (1999) The challenge of autonomy and dependence in franchised channels of distribution. J Bus Ventur 14(1):35–67

Das TK, Teng B (2001) Trust, control and risk in strategic alliances. Organ Stud 22(2):251–283

Das TK, Teng B (1998) Between trust and control: developing confidence in partner cooperation in alliances. Acad Manag Rev 23(3):491–512

Dekker HC (2004) Control of inter-organizational relationships: evidence on appropriation concerns and coordination requirements. Acc Organ Soc 29:27–49

Demsetz H (1998) Book review: firms, contracts and financial structure (by O. Hart). J Polit Econ 106:446–452

Demsetz H (1988) Theory of the firm revisited. J Law Econ Org 4:141–161

Doherty AM, Alexander N (2006) Power and control in international retail franchising. Asia Pac J Mark Logist 40:292–316

Dyer JH, Singh H (1998) The relational view: cooperative strategy and sources of interorganizational competitive advantage. Acad Manag Rev 23:660–679

Erramilli MK, Rao CP (1993) Service firms' international entry-mode choice: a modified transaction-cost analysis approach. J Mark 57(3):19–38

Fladmoe-Lindquist K, Jacque LL (1995) Control modes in international service operations: the propensity to franchise. Manag Sci 41(7):1238–1249

Fornell C, Larcker D (1981) Evaluating structural equation models with unobservable variables and measurement error. J Mark Res 18(1):39–50

Galbreath J, Galvin P (2008) Firm factors, industry structure and performance variation: new empirical evidence to a classic debate. J Bus Res 61:109–117

Gassenheimer BJ, Baucus BD, Baucus SM (1996) Cooperative arrangements among entrepreneurs: an analysis of opportunism and communication in franchise structures. J Bus Res 36:67–79

Gaski JF (1984) The theory of power and conflicts in channels of distribution. J Mark 48:9–29

Gaski JF, Nevin J (1985) The differential effects of exercised and unexercised power sources in a marketing channel. J Mark Res 22:130–142

Gatignon H, Anderson E (1988) The multinational corporation's degree of control over foreign subsidiaries: an empirical test of a transaction cost explanation. J Law Econ Org 4:305–336

Geringer JM, Hebert L (1989) Control and performance of international joint ventures. J Int Bus Stud 19(2):235–254

Geringer JM, Hebert L (1991) Measuring performance of international joint ventures. J Int Bus Stud 22:249–263

Geyskens I, Steenkamp JEM, Kumar N (2006) Make, buy, or ally: a transaction cost theory meta-analysis. Acad Manag J 49:519–543

Ghemawat P, Ricart Costa JEI (1993) The organizational tension between static and dynamic efficiency. Strateg Manag J 14(2):59–73

Gilliland DI, Bello DC, Gundlach GT (2010) Control-based channel governance and relative dependence. J Acad Mark Sci 38:441–455

Glaister K, Buckley P (1998) Measures of performance of UK international alliances. Organ Stud 19:89–118

Gorovaia N, Windsperger J (2011) Determinants of the knowledge transfer strategy in franchising: integrating knowledge-based and relational governance perspectives. Serv Ind J 11:1–18

Grewal R, Kumar A, Mallapragada G, Saini A (2013) Marketing channels in foreign markets: control mechanisms and the moderating role of multinational corporation headquarters – subsidiary relationship. J Mark 50(3):378–398

Grossman SJ, Hart OD (1986) The costs and benefits of ownership: a theory of vertical and lateral integration. J Polit Econ 94:691–719

Gulati R, Lawrence P, Puranam P (2005) Adaptation in vertical relationships: beyond incentive conflict. Strateg Manag J 26:415–440

Gulati R, Singh H (1998) The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. Adm Sci Q 43(4):781–814

Gulati R, Wohlgezogen F, Zhelayzkov P (2012) The two facets of collaboration: cooperation and coordination in strategic alliances. Acad Manag Ann 6:531–583

Gurcaylilar-Yenidogan T, Windsperger J (2013) Centralization of decision making authority in inter-organizational networks: evidence from the Austrian automotive industry. J Glob Strat Manag 7(13):184–194

Gurcaylilar-Yenidogan T, Windsperger J (2015) Complementarity between formal and relational governance mechanisms in inter-organizational networks: combining resource-based and relational governance perspectives. In: Windsperger J, Cliquet G, Ehrmann T, Hendrikse G (eds) Interfirm networks: cooperatives, franchising, and strategic alliances. Springer, New York, pp 229–248. doi:10.1007/978-3-319-10184-2_12

Hall R (1993) A framework linking intangible resources and capabilities to sustainable competitive advantage. Strateg Manag J 14:607–618

Hansman H (1996) The ownership of enterprise. The Belknap Press, Cambridge, MA

Heide JB, John G (1992) Do norms matter in marketing relationships? J Mark 56:32–44

Hendrikse G, Windsperger J (2011) Determinants of contractual completeness in franchising. In: Tuunanen M, Windsperger J, Cliquet G, Hendrikse G (eds) New developments in the theory of networks. Springer, New York, pp 13–30. doi:10.1007/978-3-7908-2615-9

Jaussaud J, Schaaper J (2006) Control mechanisms of their subsidiaries by multinational firms: a multidimensional perspective. J Int Manag 12:23–45

John G, Weitz BA (1988) Forward integration into distribution: an empirical test of transaction cost analysis. J Law Econ Org 42:337–355

Klein S, Frazier GL, Roth VJ (1990) A transaction cost analysis model of channel integration in international markets. J Mark Res 27(2):196–208

Kogut B, Zander U (1992) Knowledge of the firm, combinative capabilities and the replication of technology. Organ Sci 3:383–397

Kozlenkova IV, Samaha SA, Palmatier RW (2014) Resource-based theory in marketing. J Acad Mark Sci 42:1–21

Kumar N, Scheer LK, Steenkamp J-BEM (1995) The effects of perceived interdependence on dealer attitudes. J Mark Res 32:348–356

Liu X, Vredenburg H, Steel P (2013) A meta-analysis of factors leading to management control in international joint ventures. J Int Manag 20(2):219–236. http://dx.doi.org/10.1016/j.intman.2013.07.001

Madhok A (1996) The organization of economic activity: transaction costs, firm capabilities, and the nature of governance. Organ Sci 7:577–590

Madhok A (2002) Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource-based theories of the firm and the institutional structure of production. Strateg Manag J 23:535–550

Mayer K, Salamon R (2006) Capabilities, contractual hazards, and governance: integrating resource-based and transaction cost perspectives. Acad Manag J 49:942–959

McKendall MA, Wagner J III (1997) Motive, opportunity, choice, and corporate illegality. Organ Sci 8(6):624–647

Mellewigt T, Ehrmann T, Decker C (2011) How does the franchisor's choice of different control mechanisms affect franchisees' and employee-managers' satisfaction? J Retail 87:320–331

Mjoen H, Tallmann S (1997) Control and performance in international joint ventures. Organ Sci 8:257–274

Mohr JJ, Fisher RJ, Nevin JR (1996) Collaborative communication in interfirm relationships: moderating effects of integration and control. J Mark 60:103–115

Morgan N, Slotegraaf R, Vorhies D (2009) Linking marketing capabilities with profit growth. Int J Res Mark 26(4):284–293

Mumdžiev N, Windsperger J (2011) The structure of decision rights in franchise networks: a property rights perspective. Entrep Theory Pract 35(3):449–465

Mumdziev N, Windsperger J (2013) An extended transaction cost model of decision rights allocation in franchising: the moderating role of trust. Manag Decis Econ 34:170–182

Noordewier TG, John G, Nevin JR (1990) Performance outcomes of purchasing arrangements in industrial buyer vendor relationships. J Mark 54:80–93

Norton SW (1988) Franchising, brand name capital, and the entrepreneurial capacity problem. Strateg Manag J 9:105–114

Orr L, Bush V, Vorhies D (2011) Leveraging firm-level marketing capabilities with marketing employee development. J Bus Res 64(10):1074–1081

Ouchi WG (1979) A conceptual framework for the design of organizational control mechanisms. Manag Sci 25:833–848

Palmatier R, Dant R, Grewal D (2007) A comparative longitudinal analysis of theoretical perspectives of interorganizational relationship performance. J Mark 71(4):172–194

Peteraf M (1993) The cornerstones of competitive advantage: a resource-based view. Strateg Manag J 14:179–191

Pizanti I, Lerner M (2003) Examining control and autonomy in the franchisor-franchisee relationship. Int Small Bus J 21(2):131–159

Podsakoff PM, MacKenzie SB, Podsakoff NP, Lee J-Y (2003) Common method biases in behavioral research: a critical review of the literature and recommended remedies. J Appl Psychol 88:879–903

Porter M (1976) Interbrand choice, strategy, and bilateral market power. (No. 146). Harvard University Press, Cambridge, MA

Quinn B (1999) Control and support in an international franchise network. Int Mark Rev 16:345–362

Quinn B, Doherty A (2000) Power and control in international retail franchising: evidence from theory and practice. Int Mark Rev 17:354–372

Richey G, Tokman M, Dalela V (2010) Examining collaborative supply chain service technologies: a study of intensity, relationships, and resources. J Acad Mark Sci 38(1):71–89

Rindfleisch A, Heide JB (1997) Transaction cost analysis: past, present, and future applications. J Mark 61:30–54

Rumelt RP (1991) How much does industry matter? Strateg Manag J 12:167–1985

Sharma VM, Erramilli MK (2004) Resource-based explanation of entry mode choice. J Mark Theory Pract 12:1–18

Shervani TA, Frazier G, Challagalla G (2007) The moderating influence of firm market power on the transaction cost economies model: an empirical test in a forward channel integration. Strateg Manag J 28:635–652

Simon H (1947) Administrative behavior: a study of decision-making processes in administrative organizations. The Free Press, New York

Sorenson O, Sørensen J (2001) Finding the right mix, franchising, organizational learning, and chain performance. Strateg Manag J 22:713–724

Srivastava R, Fahey L, Christensen H (2001) The resource-based view and marketing: the role of market-based assets in gaining competitive advantage. J Manag 27(6):777–802

Stinchcombe AL (1990) Organizations and information. University of California Press, Berkeley, CA

Tversky A, Kahneman D (1974) Judgment under uncertainty: heuristics and biases. Science 185:1124–1131

Verzeichnis der Franchise Wirtschaft (2009/2010) 5. Jahrgang

Wall T, Michie J, Patterson M, Wood S, Sheehan M, Clegg C, West M (2004) On the validity of subjective measures of company performance. Pers Psychol 57:95–118

Watson A, Stanworth J, Healeas S, Purdyb D, Stanworth C (2005) Retail franchising: an intellectual capital perspective. J Retail Consum Serv 12:25–34

Weitz BA, Jap SD (1995) Relationship marketing and distribution channels. J Acad Mark Sci 23
(4):305–320

Williamson OE (1975) Markets and hierarchies: analysis and antitrust implications. Free Press,
New York

Williamson OE (1985) The economic institutions of capitalism: firms, markets, relational
contracting. Free Press, New York

Williamson OE (1991) Strategizing, economizing, and economic organization. Strateg Manag J
12:76–94

Windsperger J (2004) Centralization of franchising networks: evidence from the Austrian fran-
chise sector. J Bus Res 57:1361–1369

Yin X, Zajac E (2004) The strategy/governance structure fit relationship: theory and evidence in
franchising arrangement. Strateg Manag J 25(4):365–383

Zeithaml VA, Parasuraman A, Berry LL (1985) Problems and strategies in services marketing. J
Mark 49:33–46

Beyond Main Street: Franchising Strategies for Indigenous Entrepreneurship in Australia

Cary Di Lernia and Andrew Terry

Abstract Australia's Indigenous population faces disparities which tarnish Australia's image as "the lucky country": a life expectancy markedly less than non-Indigenous Australians, lower education standards, poorer health, greater unemployment, and the list goes on. Having developed a culture which enabled first Australians to survive, and indeed thrive, for over 60,000 years in all areas of Australia's massive landmass and challenging climate and conditions, Australia's original inhabitants have faced their greatest challenge in the form of European invasion and settlement just over 200 years ago. Successive Australian governments have made regrettably little progress in dealing effectively with the challenges faced by Indigenous Australians living within, and alongside, modern Europeanized and increasing Asianized Australia. A massive welfare budget has not resulted in sustained positive outcomes, and there is increasing recognition from Indigenous leadership that there is a need to find a way out of welfare dependency and that economic empowerment is likely to be a more effective strategy. This paper considers the potential role of franchising—albeit not as practiced in Main Street Australia—in supporting Indigenous entrepreneurship.

1 Introduction

Australia is by any measure a lucky country. It has bountiful natural resources, a high standard of living, and legal, economic, and commercial systems which enable the realistic aspirations of the vast majority of its 24 million population to be realized. However, Australia's Indigenous population—the world's oldest surviving culture which predates European settlement in 1788 by about 60,000 years—is largely disenfranchised. On any measure, very significant disparities exist between Indigenous[1] and non-Indigenous Australia. This sad reality continues despite

---

[1]This paper uses the terms Indigenous Australians and first Australians to describe Aboriginal and Torres Strait Islander people in Australia.

C. Di Lernia (✉) • A. Terry (✉)
The University of Sydney Business School, The University of Sydney, Sydney, NSW 2006, Australia
e-mail: cary.dilernia@sydney.edu.au; andrew.terry@sydney.edu.au

significant mining royalties and income flowing to remote communities by virtue of Native Title legislation granting land rights to Indigenous communities[2] and a massive welfare budget (Steering Committee for the Review of Government Service Provision 2014).

There can be little argument with the proposition that "economic disadvantage leads to social dysfunction and has a dramatic negative impact on education, health and general well being" (Gunya Australia 2007, p. 3). The plight of many Indigenous Australians might be cited as stark and compelling proof of this proposition. A massive welfare budget is recognition of the extent of Indigenous disadvantage, but even the most parochial think tank would question its effectiveness. In this context the words of Kirk Magleby (2013) resonate: "The development community should wean itself away from aid models in favour of genuine enterprise sustainability through pervasive local ownership." The proposition that "increasing Indigenous participation in enterprise development activity would provide widespread economic and social benefits for Indigenous communities" has wide support (Gunya Australia 2007, p. 3). To this end, there is an extensive range of government, industry, and community organizations offering specific enterprise support programs and services to Indigenous people—so much so that the government itself has recognized that "the sheer number and complexity of programs and services [is] often confusing and daunting to emerging Indigenous entrepreneurs" (Department of Employment and Workplace Relations 2006, p. 3).

Despite the "smorgasbord" (Department of Employment and Workplace Relations 2006) of support programs and services to encourage Indigenous business participation, successive governments, both state and federal, have "failed to engage Indigenous Australians in sustainable economic development" (Gunya Australia 2007, p. 3). There is a need to consider new models. It is against this complex milieu that franchising—albeit not in its familiar downtown Main Street guise—is proposed as an Indigenous enterprise development strategy worthy of serious consideration. While governments in developing countries encourage franchising as a vehicle for stimulating economic growth, there has been much less attention paid to franchising by governments in developed countries as a strategy which can be applied to foster entrepreneurship in Indigenous communities (Binh and Terry 2011).

This paper considers the role of franchising in Indigenous entrepreneurship—defined as "the creation, management and development of new ventures by Indigenous people for the benefit of Indigenous people" (Hindle and Landsdowne cited in Tapsell and Woods 2010). It begins with a brief analysis of the causes of Indigenous disadvantage and how they affect entrepreneurial activity before explaining the role business format franchising may play in ameliorating these

---

[2]Indigenous land rights were not acknowledged until 1993 in the *Native Title Act 1993* (Cth) following the High Court's decision in *Mabo and Others v Queensland (No. 2)* (1992) 175 CLR 1 which rejected the fiction that inhabited land could be terra nullius. See Brennan (2003) and Tehan (2003).

conditions. It then considers various iterations on the traditional business format franchising formula and illustrates their use through a small case study and suggests that while franchising in any current or future iteration cannot alone solve the problem of Indigenous business disenfranchisement, it would be remarkable if it was not part of a solution.

2 The Indigenous Business Challenge

> For too long Australia has held back remote Indigenous people on the fringes of the economy, trapping them in a hopeless circle of poverty, with governments adopting a socialistic and "noble savage" approach. We must have the courage to treat remote Indigenous populations like other human beings who can—indeed must—play a role in Australia's economic future. (Mundine 2012)

2.1 Indigenous Australia

Australia's Indigenous inhabitants—acknowledged as having developed the world's oldest surviving culture (Behrendt 2012)—have lived across the full breadth of Australia's massive interior and along endless stretches of its vast coastline, forging successful modes of existence which saw their culture survive and thrive over a period of 60,000 years. However, since European settlement in 1788, Indigenous Australians have faced overwhelming difficulties which have impacted on their ability to flourish on land which has long played a definitive role in their existence. Successive Australian governments from both sides of the political spectrum can claim precious little success in effectively dealing with the challenges faced by Indigenous Australians living within, and alongside, modern Australia which is primarily westernized but increasingly "Asianized."

Indigenous Australia is characterized by massive diversity, with hundreds of languages and Indigenous nations. The variegated richness of Indigenous Australian cultures did not however make much of an impression on early English colonizers, and Australia was regarded at law as terra nullius—an unsettled land belonging to no one. This perspective, dictated by western conceptions of property and cultural practices, ignored Indigenous interaction with country (Behrendt 2012). Given the depth of Indigenous connections to traditional lands, colonization marked the first step in the debasement of Indigenous culture. The ability to practice ceremonies, manage their land, and feed and shelter their families was almost instantly taken from Indigenous peoples and social structures were "severely disrupted" (Behrendt 2012). The devastating impact of white settlement perhaps reached its nadir with the taking and forced assimilation of Indigenous children—the Stolen Generation—so they might grow up as "white" Australians (Haebich and Kinnane 2013).

2.2 Indigenous Disadvantage

The Indigenous population of Australia at the time of invasion and settlement in 1788 has been estimated to have been approximately one million (Evans 2007). At the date of the 2011 census, it was estimated that the resident Indigenous population was 669,900 or 3% of the Australian population (ABS 2011). Today, 32% of Australia's Indigenous population live in cities, while 43% and 25%, respectively, live in regional communities and remote areas (ABS 2011). Despite the fact that the majority of Indigenous people live within, or in close proximity to, modern westernized Australia, living standards of Indigenous Australians fall well below those of other Australians. Indigenous Australians exhibit the poorest levels of health of all Australians, with life expectancy rates between Indigenous and non-Indigenous males and females differing by as much as 11 years on average (Australian Institute of Health and Welfare 2011). Despite strong recent improvements, Indigenous education is also in what might only be described as a woeful state, with completion rates for schooling nearly half that of non-Indigenous students (Australian Institute of Health and Welfare 2011). Unemployment rates are higher among Indigenous than non-Indigenous Australians. They are much more likely to be employed in low-skilled occupations such as laboring and trades (78% versus 60%) and twice as likely to work part time (75% versus 39%) than non-Indigenous Australians (Behrendt 2012). This is also reflected in self-employment rates with only 6% of Indigenous Australians (versus 17% of non-Indigenous Australians) being self-employed in their own businesses (Behrendt 2012). The apparent lack of grassroots training through which to familiarize a cultural group largely unfamiliar with western business modes or adequately support those who are keen to become entrepreneurs in the formative stages of business generation with preparatory training (Henley 2007) can perpetuate an all too vicious cycle:

> All the socioeconomic factors that affect the lives of so many Indigenous people—poor health, literacy and numeracy, housing, education and income—create a cycle of poverty poor health, which can be exacerbated by poor-quality housing and overcrowding, affects the ability to engage in education and employment. (Behrendt 2012, p. 357)

It has been argued that "economic welfare programmes have created havoc in Indigenous societies" (Furneaux 2007, p. 134). As a result, an approach to the problem which is increasingly supported is the idea that many issues faced by Indigenous Australians could be and should be dealt with through their economic status—that rather than being placed on the drip feed of welfare, they should be assisted to start their own businesses. While expenditure on health and education programs is essential, Indigenous leaders have argued that "the vast majority [of funding] should be going into lifting our economic status, getting us into enterprise development, getting us skin in the gam" (Robinson 2012, quoting Warren Mundine). A former head of a government Indigenous agency eloquently explained over two decades ago why economic empowerment is necessary:

[W]e need to find a way out of welfare dependency. We need to find replacements for the traditional economic activities of the past ... our young people are growing in number and they will need something productive and meaningful ... we need to be participants, rather than bystanders ... we need to develop Indigenous businesses and entrepreneurs. (Furneaux and Brown (2008) citing Mr Gatjil Djerrkura)

Given the failure of government policy to gain real traction in the quest for equality of opportunity for non-Indigenous Australians, it is important to understand whether the rhetoric of economic empowerment is realistic and, if so, how such a strategy might work.

2.3 Indigenous Business

Given that the traditional Indigenous conception of business activity was, and still largely is, completely different to that underpinning westernized modes—with the collectivist, cooperative nature of the former folding in the face of the predominantly individualized latter—it is no real surprise that it has taken time for first Australians to respond to the change in circumstances confronting them and the cultural values they have held sacred for 60,000 years (Taylor and Wilson 2012; Tiessen 1997). Given the absence of many of the prerequisites required for successful participation in the modern Australian economy (including education and health), Indigenous business (with the exception of Indigenous-led mining services companies in western Australia) has not been able to systematically break through social disadvantage as it may have been able to in Indigenous cultures in other countries which have a similar basis to Westernized modes. Hunter (2014) nevertheless provides encouraging recent evidence that the number of Indigenous self-employed—the largest component of Indigenous entrepreneurship—has almost tripled from 4600 to 12,500 based on the last ABS data.

When compared with non-Indigenous entrepreneurs and business people, Indigenous business aspirants face significant hurdles in any attempt to participate in the economy as anything other than a paid worker (which itself can be a struggle for reasons of entrenched disadvantage). An Indigenous entrepreneur faces challenges over and above those faced by non-Indigenous entrepreneurs. Factors critical to success in starting a business include education, financial literacy, and access to finance. Given the history and treatment of Indigenous peoples in this country, these factors are in short supply (Foley 2010; Furneaux and Brown 2008). Relatively limited exposure to western markets and business owners makes it difficult for many Indigenous people to begin to understand how such businesses work. The fact that very few Indigenous Australians have family members who have started their own businesses and therefore lack close networks of business role models (Schaper 1999; Fuller et al. 2002) prevents familiarity with, and no doubt interest in, starting one's own business (Fairchild 2010). With the education levels of those surrounding budding entrepreneurs playing a role in an entrepreneur's success (Millan et al. 2014), poor education standards constitute a double blow (Toft-Kehler et al. 2014).

Indeed traditional cultural practices around household capital management and obligatory sharing mean that what many might consider basic financial management skills is not so much nonexistent but rather not applicable in many Indigenous communities. None of this bodes well for access to financial capital in modern markets, with low intergenerational transmission of wealth due to Native Title laws and cultural practices around them (Furneaux 2007; Schaper 1999) and potential prejudice, or at the very least the perception of a lack of cultural sensitivity, from financial institutions working against the ready availability of capital necessary to begin and continue operating a small business (Schaper 1999).

A report by the Australian Taxation Office (ATO 2009) on Indigenous business owners in Australia recognizes that "unique" challenges face traditional Australians considering opening a business including business relationship constraints and a lack of business networks and cultural considerations:

> Indigenous business people walk into a world of prejudice and stereotypes which is so out of whack with the notion of Aboriginal people being successful entrepreneurs... They had to walk into a world which is replete with stereotypes that created all sorts of problems for the business itself: in terms of its relationship with suppliers ... credibility within marketing and gaining a profile within their industry sector, it's very difficult. (ATO 2009)

This makes it harder to develop strong business networks which might provide basic financial, informational, and advisory support to the business. While migrant communities are apparently able to provide such support to each other, first Australians with the education, skill sets, and capital to assist others in their communities in a way useful for participating in a modern economy are in short supply. There are also a limited number of qualified Indigenous accountants, lawyers, and other professional business advisers that managers rely on for "culturally sensitive advice" (Schaper 1999).

Instead, the networks that are available are premised on different cultural values—including obligatory sharing and gift giving. What would have been a rational economic practice for thousands of years might actually work against Indigenous entrepreneurs trying to make it in a westernized system operating on a different set of assumptions. This has come to be referred to by Indigenous communities as "humbugging" whereby those first Australians who have attempted to engage with western economic systems are continually harassed by members of the family and extended family for what they have made. This has given rise to the practice of Indigenous people opening multiple bank accounts, one with the majority of their earnings and another with a portion of it which they can direct humbuggers to. This potential lack of reciprocal support from the immediate local community can affect the establishment and successful continued operation of small regional or rural Indigenous enterprises (Millan et al. 2014).

Given the effect that social networks can have on the success of a small business, the impact of features of Indigenous culture noted above on the social capital of Indigenous business aspirants cannot be underestimated (Foley 2010). Indeed, elements of Indigenous culture that might be of assistance to the Indigenous entrepreneur are fading under the dominating influence of western business models.

While myriad programs exist for Indigenous peoples, many of which are designed to facilitate business and entrepreneurial ventures, the level of Indigenous participation in the economy at this level raises serious questions as to their efficacy. Relatively little research has been conducted that addresses questions such as the appropriate scale and types of businesses most likely to have some chance of commercial success within Indigenous communities in Australia (Fuller et al. 2002, p. 2), and there appears no real evidence that any change has occurred which might draw more first Australians into the economy on acceptable terms.

3 A Franchising Strategy for Indigenous Entrepreneurship

Franchising is an "increasingly popular form of economic organisation providing an alternative means of expanding an existing business or an alternative means of entering an industry" (House of Representatives Standing Committee on Industry, Science and Technology 1997, pp. 3.4–5). It is a method of business operation which has revolutionized the distribution of goods and services in virtually all industry sectors and has transformed the business landscape of most countries. Because a franchisor provides a franchisee with not only a proven business concept and system but also with training and ongoing support in relation to all operational and managerial aspects of the business, it is a particularly effective strategy in encouraging micro, small, and medium enterprise (MSME) development in developing countries. The franchisee gains from access to established business systems, networks, developed products or services, economies of scale, training, operational and management advice, group advertising, and, as a result, lower risk. The appeal of franchising for a franchisee lies, in the words of Australia's *Opportunity not Opportunism* report, in "the potential benefits of being able to conduct the business under an established brand name using tested operational systems" (Parliamentary Joint Committee on Corporations and Financial Services 2008), and it is this characteristic which makes franchising an effective strategy for MSME development. The advantages may be significant for Indigenous business start-ups in which role models and networking are particularly lacking. Foley (2005, p. 230) argues that

> Networking is an almost essential attribute. It enables the participants to develop and make use of relationships and in so doing provide increased opportunities to build credibility, a positive image and customer access. Networking provides role models, industry advice, the sharing of experiences and access to suppliers and customers. Networking enhances the Indigenous entrepreneurs' ability to succeed and survive.

Franchising of course enshrines networking as a basic ingredient.

Despite the proven credentials of franchising as a business development strategy, it would be naïve to suggest that its success in empowering minority groups and disadvantaged sectors of developed countries, as well as in promoting MSME development in developing countries, transfers seamlessly to Australia's Indigenous peoples. The entrenched disadvantage of Indigenous communities including

their extreme remoteness and massive cultural diversity requires solutions more creative than Main Street concepts. Franchising is, however, a very adaptive business strategy. Its capacity for reinventing itself is a matter of record (Terry and Di Lernia 2013). Indeed its continual adaptation to accommodate changing circumstances and market conditions is a major factor in its increasing influence throughout the world.

The original model has been through many iterations. The franchising relationship is based on a prescribed business model developed by the franchisor and carried out under the franchisor's guidance and oversight by franchisees who are granted the right to trade under the franchisor's brand and using its system. But the manner in which the franchise model is implemented is nevertheless capable of infinite variation. Franchising is not a business in itself but is a method of doing business—an innovative and dynamic method of distributing goods and services. It encompasses a wide variety of different practices that are used in different ways and, with varying degrees of sophistication, in virtually all industry sectors. It is an essentially practical strategy, which, in the words of Martin Mendelsohn, "did not derive from one moment of inventiveness by an imaginative individual [but from] the solutions developed by businesses in response to the problems with which they were confronted in their business operations" (Mendelsohn 2004, p. 7). It is franchising's capacity for adaptation and innovation which drives its relentless development, and it is this quality which offers the opportunities for its role in contributing to Indigenous business development.

Franchising's success as a business strategy is a result of the manner in which it harnesses the key business drivers—systems, management, technology, marketing, networks, and brands—in combination with the franchisee's proprietorship and the franchisor's training and ongoing support. But, despite its impressive credentials, franchising is not a universal or inevitable solution to the challenge of small business empowerment. While franchising relationships can be built at different levels of sophistication to accommodate practical commercial and cultural realities, the challenges of Indigenous entrepreneurship and business development, particularly in remote communities, may require solutions that are far removed from a traditional franchise model. While franchising—and its iterations including social franchising, microfranchising, tandem franchising, community franchising, quasi-franchising, and freedom franchising models—may be applied in the Indigenous space, the solutions are likely to be variegated and owe more to practical demands than theoretical constraints.

One important theme underlying several of these permutations of the franchise formula is the potential for collective activity and the involvement of communities in the financing, establishment, and continued operation of any particular business. Given the potential reticence to immediately switch to individualized forms of social and economic metabolism, the potential for any such social tweak to the franchising equation (to potentially control for the excesses observed in everyday capitalist franchising) may assist in the "imagining and enacting [of] alternative futures for economic life beyond [current modes]" (Williams and Nadin 2013, p. 565); it might be franchising principles rather than franchising itself that will

provide the most effective solutions at least in the short to medium term in this space. What is surprising is that franchising and franchising principles have received so little attention in government policy surrounding the economic development of Indigenous Australia.

4 Facilitating Indigenous Entrepreneurship Through Conventional and Nonconventional Franchising

While conventional franchising may be a bridge too far for Indigenous business development in a remote community, in an urban environment, conventional franchising techniques may be more effectively employed (Lofstrom et al. 2014). Public and private sector strategies to encourage Indigenous business participation through franchising can undoubtedly be better employed.

At the private sector level, a range of admirable and worthwhile initiatives are developing among socially aware franchisors. As social responsibility becomes more prominent, franchise systems—in common with the wider business community—are developing strategies to give back to the local community. Many franchise systems donate leftover product to the disadvantaged, including the Indigenous disadvantaged in local communities, and the provision of services on a pro bono basis is not uncommon. However, there are lesser known initiatives relating to the development of franchising programs specifically targeted at minorities. While individual systems may provide financial assistance to assist minorities to acquire franchises, institute diversity awareness, and training programs and have a minority employee recruitment policy, the developments are ad hoc.

At the public level, a "smorgasbord" of support programs and services to encourage business participation exists. It is nevertheless the unfortunate reality that the efforts of successive governments both state and federal have "failed to engage Indigenous Australians in sustainable business development" (Gunya Australia 2007). Franchising is not a particular focus of such programs, but it is among the mix. The Victorian Aboriginal Economic Development Group (2010, p. 38) appears forward-looking in its approach, stating that:

> ... there are also business models that offer a more supportive and accessible way to business ownership such as franchises and joint ventures. Employees working in a franchise have the opportunity to lease and/or purchase a business. Ongoing support is then provided to ensure long-term business success. Targeted promotion and support by Government and franchisors should be provided to enable more Aboriginal people to operate a franchised business ... [and that] tailored support is needed to give more Aboriginal people access to commercial finance and business services, and to encourage more franchises and joint ventures involving Aboriginal Victorians.

The report noted types of support of particular benefit to Indigenous groups: a finance broker to determine appropriate finance (including microfinance); business planning, accredited business training, and mentoring; a loan underwritten by the government in conjunction with accredited business training if required; entry into

a business incubator; social investment funds for community enterprises; accredited business training and planning; and ongoing business mentoring and post-establishment support. The report recommended that the government provide "targeted support to assist Aboriginal employees to lease and/or buy franchises including awareness raising, business preparation, an underwritten loan, accredited business training, and ongoing mentoring" (Victorian Government 2014).

The most comprehensive example of a government using franchising as a deliberate policy for the economic employment of a disadvantaged sector is that of Malaysia where franchising is a key government economic strategy to increase indigenous bumiputra participation in business otherwise foreclosed by a combination of cultural and commercial factors. Opening the Franchise International Malaysia conference in August 2000, the Deputy Prime Minister commented that:

> Franchising is one mode of entrepreneurship that can help us achieve higher standards not only in the goods and services offered, but also in upgrading effective management systems and skills. This will enable organisations to respond to competitive pressures accordingly. The level of bumiputra participation in the retail sector is still on the low side. The government intends to increase bumiputra participation in the retail sector through franchising. Franchising ensures immediate entry, the learning period is shortened and the rate of success is enhanced. Franchising can also be used as an instrument to enable the transfer of technology from systems developed elsewhere. We will be able to benefit from such transfer. (Badawi 2000)

The lead agency in the franchise sector in Malaysia is Perbadanan Nasional Berhad (PNS), an agency of the Ministry of Domestic Trade, Cooperatives and Consumerism which has the mandate to lead the development of Malaysia's franchise industry. It provides financial support to the franchising sector through loans and investments in addition to providing a range of educational, consulting, and entrepreneurial services. PNS is an active participant in the developing Malaysian franchising sector and offers lessons for government and other countries seeking to encourage the economic empowerment of disadvantaged communities (Harif et al. 2011).

Despite these initiatives in relation to conventional franchising, it is suggested that several innovative and relatively new nonconventional franchising models may be more appropriate to the Indigenous Australian context. It has been uncontroversially suggested that

> the concept and theory of entrepreneurship through the development of micro and small enterprises is likely to be particularly relevant to the achievement of economic development of Indigenous communities. (Fuller et al. 2002)

Novel and innovative applications of the traditional franchise concept offer real opportunities for Indigenous business development.

Tandem franchising is a strategy to facilitate franchised business operations by franchisees from disadvantaged backgrounds through funding and mentoring programs (du Toit 2007). It is a form of "cooperative entrepreneurship" (Hoy and Shane 1996) designed to empower individuals to acquire a minority stake in the business, which increases over time while he or she works alongside, and is mentored by, an experienced operator. It is a strategy that has been used as part

of the South African government's *Black Economic Empowerment Policy* and may offer an opportunity for Australia's Indigenous population.

Microfranchising—franchising on a small scale—is another important strategy in this context. As with conventional franchising, microfranchising is built on replicable business systems, but with scaled down business concepts and low entry costs. Microfranchising is frequently associated with microfinancing which has a proven track record in empowerment for those geographically or socially excluded from mainstream economic activity.[3] Microfranchising constitutes an important tool for small business in the developing world and is potentially a very effective strategy for Indigenous business development and entrepreneurship through its focus on fostering economic self-reliance.

Social franchising, usually associated with microfranchising, involves the application of franchise technologies to achieve social rather than strict commercial goals. A form of social franchising may even be implemented simply as "a distribution model for social services or products and services that pursue social goals" (du Toit 2004) within a particular regional community. Interest in social franchising is gaining momentum around the world as nongovernmental organizations, mostly operating as not-for-profit organizations and social aid programs, consider franchising as a mechanism to deliver services and products with social goals particularly in relation to health services and may also provide options for the encouragement of Indigenous economic empowerment.

Community franchising—a form of franchising based on the Bendigo Community Bank model where the community rather than an individual is the franchisee—may also be particularly effective in the context of Indigenous communities: "sharing resources within Indigenous communities is more than an economic investment—it is also a social investment [which] acts as a form of socialism through the redistribution of wealth throughout the community" (Furneaux 2007, p. 134).

Freedom, or *flexible*, *franchising* is an emerging form of franchising under which a franchisor grants a greater level of autonomy to its franchisees. There is increasing recognition that even in traditional business format franchising, while the core brand components such as brand name, logo, and essential product features should be as consistent as possible across the network, peripheral attributes can be modified (Terry and Di Lernia 2013). At a conservative level, freedom franchising allows for service personalization providing "an effective opportunity for chains to adapt to local customer needs without jeopardizing brand integrity" (Streed and Cliquet 2008). A more radical freedom franchising model grants greater autonomy to franchisees and allows them to harness their entrepreneurial initiative to develop new customization options. While brand and system integrity is critical in business format franchising, the extent to which franchisors can tolerate departure from

---

[3]Opportunity International Australia, for example, provided two million families, primarily farmers of small-scale crops or livestock in India, Indonesia, the Philippines, China, and Ghana, with loans averaging A$150 in 2012. The vast majority (97%) of the loans were repaid on time.

prescribed standards without concept infringement is a developing issue driven by practical commercial considerations. While there is undoubted potential for freedom franchising in the Main Street context, it would not be surprising if it was most fruitfully deployed in the Indigenous business context and, in particular, in regional and remote communities.

Quasi-franchising is a more extreme iteration where back-of-house functions in the form of tried, tested, and proven systems and procedures not directly visible to the consumer are replicated without front-of-house features represented by the brand and visible manifestations of brand architecture (Terry and Di Lernia 2013). Particularly in regional and remote communities, brand and brand architecture in the form of look and feel are unrealistic and unnecessary expectations. The provision of comprehensive back-of-house systems is nevertheless an inevitable and essential prerequisite for business operation, and a form of quasi-franchising which accommodates such practical realities is a commercial strategy with real potential, not only in the franchising of essential services in Indigenous communities but also in the franchising of Indigenous businesses in areas such as ecotourism, bush tucker restaurants, and bush holiday resorts to other Indigenous communities.

5   A Variegated Cooperative Model

Given the complex cultural constellations which surround Indigenous peoples' thinking about starting a business, any business model or business support plan must take local conditions and cultural practices into account. Practical imperatives must trump distribution theory. While sophisticated business format franchising may prove too rigid to be viable at this point in time, especially in remote communities, there are interesting and important initiatives through which services are provided in remote communities, not through franchising as such but through a mixed model adaptation of the traditional model.

Indigenous people assert that "they themselves should be given the key role in finding solutions to the problems that affect their communities" (Behrendt 2012, p. 356). One unique example of Indigenous peoples doing so successfully, and in the absence of direct government support, is the Arnhem Land Progress Aboriginal Corporation (ALPA). Established in 1972 and headquartered in Darwin, ALPA is an Indigenous-owned organization turning over approximately $75 million per year through its branded company-owned and managed unbranded community retail stores. Its mission is to strive to enhance the social and economic development of its members, giving primacy to their cultural heritage, dignity, and desire for equality with their fellow Australians (ALPA 2014).

Originally established with help from the Methodist Overseas Mission as a cooperative of community stores in seven remote Arnhem Land communities of the Yolŋu people, ALPA currently exists as a corporation with its own board of directors. While the board is constituted by Indigenous peoples, senior management charged with responsibility for day-to-day management of the organization is

predominantly constituted by Balanda, the Yolŋu word for non-Yolŋu people. Communication between Balanda and Yolŋu is facilitated by an independent interpreter who provides explanations of issues of import facing the organization using relevant language and concepts from traditional Aboriginal economic and legal parallels (ALPA 2014). Senior management is predominantly Balanda because they can provide the necessary skills and experience: "They work for us. They answer to us. They share our commitment and our vision for a successful Yolŋu enterprise" (ALPA 2014). Store managers in remote areas themselves are also Balanda. While this makes sense given the sheer numbers of Balanda who have the necessary supermarket management experience compared with Yolŋu peoples, it might be asked why Yolŋu do not yet fulfill this role. Demonstrating its attunement to local needs (given its board of directors is representative of member communities, this is not a surprise), ALPA has stated that although it is able to impart necessary skills through its training arm, it is unable to provide the necessary cultural authority in situations where "and family obligations create enormous pressure for our Indigenous managers" (ALPA 2014).

Of particular interest in the consideration of appropriate business models for Indigenous communities, especially in remote settings, is ALPA's "consultancy" stores, which are operated on a management contract model. ALPA was originally constituted by seven member communities, with two stores opting to leave the group in the 1980s. These stores promptly returned as ALPA managed stores when they were unable to operate successfully and financial viability became a concern. These and several other community stores—ALPA now runs 12 stores in addition to its 5 ALPA-owned and branded stores—invite comparisons to the back-of-house and management contract options discussed above. Importantly, ALPA does not seek to become involved with any community unless that community wishes ALPA to do so, and even then ALPA, having acknowledged the need for local participation in the store, states "it is a prerequisite of ALPA managing a store that the community wants to have active participation in the operation of their store at all levels" (ALPA 2014, *Indigenous Employment*). This includes training services, provided by a business incorporated in 2011 Australian Retail Training which offers training services and expertise to stores outside the group.

ALPA has also established Australian Retail Consultants (ARC) which provides "cost effective access to more than four decades of stable and continuous remote retail expertise [and] offers a flexible service model with experienced professional personnel in retail, finance, governance support and consulting services" (Australian Retail 2014). Recognizing a need in the late 1990s for expertise in the management of community-owned stores across remote Indigenous communities, ARC was established to offer tailored business support.

In providing such services, ALPA does not seek to lock communities in for any specified period and only works in communities it is invited to. Culturally and community-sensitive, the retail consultancy business given birth by ALPA's success in running its own stores provides "relief management, on-the-job training and a health and nutrition focus for community stores. When ARC assists a store, it liaises with the client representatives to ensure their input is valued, and that their

requirements and expectations are met" (Australian Retail 2014). In addition to retail services, ARC also provides purely back office services necessary for the operation of community stores, including bookkeeping, payroll, stocktake, performance reviews, budgeting, accounting, and finance service provisions tailored to the literacy and numeracy competencies of its clientele. ARC can offer support behind the scenes in a way other providers either would or could not, because margins might be too slight for the investment involved or because of a lack of local knowledge. Local knowledge and its own networks through the operations of ALPA also assist ARC to provide support around product range decisions, including nutritionally balanced product ranges, and deal with logistical realities of remote areas. There is very little left for the community organization to do other than provide a store and local community members interested in becoming employees.

The arrangement is a practical and innovative form of unbranded quasi-franchising drawing on both back-of-house franchising and management contracts. It differs from the former in that the back-of-house services provided by the ARC are implemented by ARC's in-house team. It differs from the latter in that the ARC team operates on a management consultancy basis rather from assuming complete operational proprietorship. A move away from management contract type arrangements to back-of-house franchising arrangements with the local community managing the store itself with back-of-house systems and consulting services provided by ARC is not inconceivable.

As ALPA's success demonstrates, the particular model which is chosen requires tight tailoring to local exigencies if it is to work. ALPA appears to have borrowed elements from several of the options discussed earlier in this paper and stitched them into a coherent yet variegated model which is best suited to the circumstances it faces. Adaptation to local conditions is the key. Given its self-sufficiency as compared with other businesses (Outback Stores 2014), ALPA's preference for real world as opposed to strictly textbook-based solutions is both admirable and, in view of their performance, effective.

6 Conclusion

It may be thought ironic that, in the words of Kirk Magleby, "fast food restaurant chains, icons of profligate western consumer culture, epitomize a business model that may be a key solution to the daunting challenge of global poverty" (Magleby 2005, p. 2). It is nevertheless not surprising that franchise models have a significant role to play in reducing global poverty through empowering minority business. While franchising developed to assist enterprises achieves economies of scale through countering management and commercial and financial limitations, there is nothing inherent in the model which prevents its application to different settings and to the achievement of different goals. In the real world, as Henriques and Herr (2007, p. 52) observe, "each franchise system like every business enterprise is a

unique response to the particular entrepreneurial opportunity it seeks to fill and to the particular environment in which it operates." What is important is that the precise goals of the use of any such variation are clearly set to enable a more realistic assessment of the efficacy of any such program overall and of course that these goals are appropriately contextualized, for as cautioned by Blackburn and Ram (2006, p. 83), "business ownership should not be regarded as a simple and convenient vehicle for the social inclusion of ethnic minorities." Franchising provides a supportive environment and an effective platform for social and economic development. It would be surprising if franchising—albeit in a different guise to that practiced in Main Street—is not a significant force in the development of viable strategies for the economic empowerment of first Australians.

References

Australian Bureau of Statistics (2011) Estimates of Aboriginal and Torres Strait Islander Australians. http://www.abs.gov.au/ausstats/abs@.nsf/mf/3238.0.55.001

Australian Institute of Health and Welfare, Australian Government (2011) The health and welfare of Australia's Aboriginal and Torres Strait Islander people – an overview. http://www.abs.gov.au/AUSSTATS/abs@.nsf/lookup/4704.0Chapter350Oct+2010

Australian Retail (2014) Australian retail consultants. http://www.australianretail.net.au/pages/Australian-Retail-Consultants.html. Accessed 15 Sept

Australian Taxation Office, Commonwealth of Australia (2009) Indigenous small business owners in Australia. http://www.ato.gov.au/Business/Starting-and-running-your-small-business/In-detail/Industry-specific/Indigenous-small-business-owners-in-Australia/

Badawi D (2000) The official opening of the franchise international conference. http://www.pmo.gov.my/ucapan/?m=p&p=paklahtpm&id=3435

Behrendt L (2012) Indigenous Australia for dummies. Wiley Publishing, Milton, QLD

Binh NB, Terry A (2011) Good morning Vietnam! Opportunities and challenges in a developing franchise sector. J Mark Channels 18:147–163

Blackburn R, Ram M (2006) Fix or fixation? The contributions and limitations of entrepreneurship and small firms to combating social exclusion. Entrep Reg Dev 18(1):73–89. at 83

Brennan S (2003) Native title in the High Court of Australia a decade after Mabo. Public Law Rev 14:209

Department of Employment and Workplace Relations, Australian Government (2006) The resources guide: a guide to available resources and services to assist Indigenous Enterprise development

du Toit A (2004) Social franchising as organisational format – an overview. Proceedings of the 18th international society of franchising conference, Las Vegas

du Toit A (2007) The financing and mentoring of emerging franchisees through tandem franchising. In: 3rd international conference on economics and management of networks, Rotterdam School of Management, Rotterdam

Evans R (2007) A history of Queensland. Cambridge University Press, Cambridge

Fairchild GB (2010) Intergenerational ethnic enclave influences on the likelihood of being self-employed. J Bus Ventur 25:290–304

Foley D (2005) Understanding indigenous entrepreneurship: a case study analysis. PhD Thesis, University of Queensland. http://espace.uq.edu.au/eserv/UQ:179923/Foley_V_24_PhD_Thesis_6_April_2005.pdf

Foley D (2010) The function of social (and human) capital as antecedents on Indigenous entrepreneurs networking. N Z J Employ Relat 35(1):65–87

Fuller D, Howard M, Cummings E (2002) Indigenous micro-enterprise development in northern Australia – implications for economic and social policy. J Econ Soc Policy 7(2):1–21

Furneaux C (2007) Indigenous entrepreneurship: an analysis of capital constraints. http://eprints.qut.edu.au/12947/1/Furneaux_and_Brown.pdf

Furneaux C, Brown K (2008) Australian Indigenous entrepreneurships: a capital-based view. Int J Entrep Innov 9(2):133–144

Gunya Australia (2007) Indigenous economic development scheme: a solution to create employment opportunities within Indigenous communities. Discussion Paper

Haebich A, Kinnane S (2013) Indigenous Australia. In: Bashford A, Macintyre S (eds) The Cambridge history of Australia, vol 2. Cambridge University Press, Melbourne

Harif M, Othman SN, Filzah MI, Din MS, Chee HH, Zolkafli H (2011) The determinant factors of successful franchise business in Malaysia. Int Rev Bus Res Pap 7(1):1–15

Henley A (2007) Entrepreneurial aspiration and transition into self-employment: evidence from British longitudinal data. Entrepreneurship Reg Dev 19(3):253–280

Henriques M, Herr M (2007) The informal economy and microfranchising. In: Fairbourne J, Gibson SW, Dyer WG (eds) Microfranchising: creating wealth at the bottom of the pyramid. Edward Elgar, Cheltenham

House of Representatives Standing Committee on Industry, Science and Technology, Commonwealth of Australia (1997) Finding a balance: towards fair trading in Australia

Hoy F, Shane SA (1996) Franchising as an entrepreneurial venture form. J Bus Ventur 13:91–94

Hunter B (2014) Indigenous employment and businesses: whose business is it to employ Indigenous workers? CAEPR Working Paper No. 95/2014, Centre for Aboriginal Economic Policy Research, the Australian National University, Canberra

Lofstrom M, Bates T, Parker SC (2014) Why are some people more likely to become small-businesses owners than others: entrepreneurship entry and industry-specific barriers. J Bus Ventur 29:232–251

Magleby K (2005) Microfranchises as a solution to world poverty. http://www.cybermissions.org/icafe/theory/Microfranchising%20by%20Magleby,%20Nov.%2005.pdf

Magleby K (2013) Microfranchises as a solution to world poverty, 17. Brigham Young University, Ballard Centre for Economic Self-Reliance. http://marriottschool.byu.edu/selfreliance/wiki/UserFiles/Kirk_Magleby.pdf

Mendelsohn M (2004) The guide to franchising, 7th edn. Thomson Learning, Independence, KY

Millán JM, Congregado E, Concepción R, van Praag M, van Stel A (2014) The value of an educated population for an individual's entrepreneurship success. J Bus Ventur 29:612–632

Mundine W (2012) Indigenous commerce must come next. Australian Financial Review.

Outback Stores (2014) Website. http://outbackstores.com.au. Accessed 15 Sept

Parliamentary Joint Committee on Corporations and Financial Services, Australian Government (2008) Opportunity not opportunism: improving conduct in Australian franchising

Robinson N (2012) Money that fails to serve change. The Australian. http://www.theaustralian.com.au/national-affairs/Indigenous/money-that-fails-to-serve-change/story-fn9hm1pm-1226367361643

Schaper M (1999) Australia's Aboriginal small business owners: challenges for the future. J Small Bus Manag 37(3):88

Steering Committee for the Review of Government Service Provision (2014) Report on government services—Indigenous compendium. http://www.pc.gov.au/__data/assets/pdf_file/0008/135746/indigenous-compendium-2014.pdf. Accessed 15 Sept

Streed O, Cliquet G (2008) Concept uniformity: control versus freedom in business format franchising. In: Hendrikse G, Tuunanen M, Windsperger J, Cliquet G (eds) Strategy and governance of networks: cooperatives, franchising and strategic alliances. Springer, Berlin, pp 205–220

Tapsell P, Woods C (2010) Social entrepreneurship and innovation: self-organization in an Indigenous context. Entrepreneurship Reg Dev 22(6):535–556

Taylor MZ, Wilson S (2012) Does culture still matter? The effects of individualism on national innovation rates. J Bus Ventur 27:234–247

Tehan M (2003) A hope disillusioned, an opportunity lost? Reflections on common law native title and ten years of the native title act. Melb Univ Law Rev 27(2):523

Terry A, Di Lernia C (2013) Quasi-franchising: a new model for strategic business cooperation. In: Windsperger J, Ehrmann T, Cliquet G, Hendrikse G (eds) Network governance: alliances, cooperatives and franchise chains. Physica-Verlag, Heidelberg, pp 269–286

The Arnhem Land Progress Aboriginal Corporation (2014) Website. http://www.alpa.asn.au/. Accessed 15 Sept

Tiessen JH (1997) Individualism, collectivism, and entrepreneurship: a framework for international comparative research. J Bus Ventur 12:367–384

Toft-Kehler R, Wennberg K, Kim PH (2014) Practice makes perfect: entrepreneurial-experience curves and venture performance. J Bus Ventur 29:453–470

Victorian Aboriginal Economic Development Group (2010) Moonda Wurrin Gree – pathways to a better economic future

Victorian Government (2014) The bridge to work. http://www.dpc.vic.gov.au/images/documents/Aboriginal_Affairs/Moonda-Wurrin-Gree-Pathways-to-a-Better-Economic-Future-Part-2.pdf. Accessed 15 Sept

Williams CC, Nadin SJ (2013) Beyond the entrepreneur as a heroic figurehead of capitalism: re-representing the lived practices of entrepreneurs. Entrepreneurship Reg Dev 25 (7–8):552–568

Social Entrepreneurship and Franchising: A Panacea for Emerging Countries? The Case of Algeria

Hachemi Aliouche and Dominique Bonet Fernandez

Abstract   One of the most intractable social and economic challenges in emerging countries, namely, high unemployment, may be tackled by social entrepreneurship and franchising. In this ongoing research, we focus on Algeria as the case study to demonstrate the practical application of social entrepreneurship and franchising in an emerging country. Though Algeria has invested heavily in large-scale government-sponsored employment programs, unemployment, especially among the youth, remains stubbornly high, leading to a number of serious social and security problems (criminality, drug usage, suicides, illegal emigration, terrorism, etc.). We argue that social entrepreneurship combined with franchising has the potential to foster quickly a large number of social entrepreneurs, leading to the creation of a large number of sustainable jobs, especially among the educated youth in Algeria and, by extension, in many emerging countries.

1   Introduction

Emerging countries face a number of tough social and economic challenges, including lack of access to education, poverty, and high unemployment. These challenges in turn often lead to severe and dramatic crises. Terrorism and armed conflicts are rampant in many regions of the world. Mass migrations from many African, Middle Eastern, and Asian countries have recently plunged Europe into an unprecedented crisis. Though not always the case, often the main actors of these tragedies are young unemployed people who have lost all hope of a decent life in their birth countries. It is revealing that one of the greatest social and political events in recent memory in the Middle East—the *Arab Spring*—can be traced back

H. Aliouche (✉)
Rosenberg International Franchise Center, Peter T. Paul College of Business and Economics, University of New Hampshire, 10 Garrison Avenue, Durham, NH 03824, USA
e-mail: hachemi.aliouche@unh.edu

D. Bonet Fernandez (✉)
IPAG Business School, CRET-LOG, Aix-Marseille Université, 184, Boulevard Saint-Germain, 75006 Paris, France
e-mail: d.bonet@ipag.fr

to a young Tunisian, Mohamed Bouazizi, who could only support himself and his family by selling fruits in the street. After having his produce confiscated by the police in December 2010, he set himself on fire, causing his death and unleashing massive youth riots that quickly spread to the rest of Tunisia and then to many countries in North Africa and the Middle East, ultimately leading to the demise of many long-lasting regimes in the region (Tunisia, Libya, Egypt, Yemen, etc.).

Youth unemployment has been a serious social, economic, and political problem in many countries for decades. It is now increasingly recognized that neither the private sector alone nor government programs alone have been particularly effective at alleviating this and other social challenges (Schwab Foundation for Social Entrepreneurship 2013). *Social entrepreneurship*, a new approach combining social mission (such as fighting poverty) with market-based solutions, has been gaining popularity as a method of tackling stubborn social and economic challenges in both emerging and more economically developed countries. However, because of the massive magnitude of the challenges in many countries, scale is a key factor for a meaningful and lasting impact of social enterprises. *Franchising* the best social initiatives would create and grow small and medium businesses and generate employment and wealth on a large scale. In that sense, *social franchising*—the application of franchising to social entrepreneurship—may be a potent model to multiply the impact of social enterprises to match the magnitude of these challenges in emerging countries.

In the first stage of an ongoing research on emerging countries and solutions to social issues, we focus on Algeria, an emerging country that, though rich in natural resources, has been faced with stubbornly high youth unemployment and other related social challenges. The World Bank classifies Algeria as an "upper middle-income" country with a gross national income (GNI) per capita in 2014 of $5480 (World Bank 2015b). Algeria is an oil- and gas-rich country with foreign reserves estimated at $200 billion in 2014. Algerians, however, often speak of Algeria as "a rich country with a poor population." Unemployment, particularly among young people, is still very high, keeping large segments of society in poverty and fueling resentment and frustration among the youth. Well before the *Arab Spring* that started in 2011, Algerian youth took to the streets in violent riots in October 1988, resulting in hundreds of deaths and eventually leading to the dismantlement of the one-party political system in place since independence in 1962; the instauration of a multiparty system; democratic reforms, including organization of the first relatively free political elections in North Africa and the Middle East, and freedom of the press; and the liberalization of the economy. However, continuing high unemployment and lack of opportunity among the young, as well as other social and political problems, led to a vicious civil war that lasted almost a decade—the *Black Decade* of the 1990s—and claimed the lives of almost 200,000 people. Youth unemployment and lack of opportunity for the youth are very serious social, economic, and political problems that can have very destabilizing effects on a country and whole regions, as the Algerian experience and the *Arab Spring* and its aftermath have shown.

In this article, we argue that *social entrepreneurship* and *social franchising*, the combination of franchising and social entrepreneurship, can be effective and potent ways to mitigate the destabilizing problem of youth unemployment, particularly in emerging countries such as Algeria. By extension, our ongoing research agenda will focus on various social issues, such as access to education, medical care, water, etc., in different emerging countries. First, we present social entrepreneurship, franchising, and social franchising and their potential for job creation and poverty reduction. Then we discuss Algeria's youth unemployment challenge and the programs developed by government agencies to tackle it. We then argue that social entrepreneurship and franchising may be unique ways to complement current efforts to make a lasting impact on youth unemployment and other social problems by creating large-scale sustainable employment and fostering entrepreneurial talent.

2 Social Entrepreneurship: Solving Social Issues with Market-Based Solutions

Emerging countries face a number of tough social and economic challenges, including poverty and high unemployment, often resulting in widespread misery and tragic crises as recent events in the Middle East and Africa have shown. Governments, nongovernmental organizations (NGOs), charitable institutions, international agencies such as FAO[1] and UNICEF,[2] and private businesses have been engaged in fighting economic and social challenges all over the world for decades. Much progress has been made in reducing extreme poverty and improving, to some extent, many people's lives in various parts of the world. According to the United Nations, 700 million people moved out of extreme poverty over the 1990–2010 time period, halving the global poverty rate. However, there still remain 1.2 billion people living in extreme poverty worldwide (United Nations 2015).

Though government, nongovernment, international, and private programs have had some successes, they may have contributed to the indefinite dependency of the aid recipients. Furthermore, the long-term sustainability of these programs is questionable. It is now increasingly recognized that new ways of tackling the persisting massive social challenges such as poverty and unemployment in a sustainable way are needed (Schwab Foundation for Social Entrepreneurship 2013).

Social entrepreneurship, a new entrepreneurial approach combining social mission (such as fighting poverty) with market-based solutions, has been gaining popularity as a method of fighting stubborn social and economic challenges. In essence, this new approach applies market-based principles to solving social problems (Aliouche and Schlentrich 2015).

---

[1]Food and Agriculture Organization of the United Nations http://www.fao.org/home/en/

[2]United Nations International Children's Emergency Fund https://www.unicef.org/

Social entrepreneurship is a relatively new field of academic research. Only 152 journal articles on social entrepreneurship have been published since 1991 (Short et al. 2009). A decade ago the concept was rarely discussed even though the practice of delivering social values to the population has been around for years (Abdul Kadir and Sarif 2016). Efforts that combined the concept of entrepreneurship and social development were established years before the emergence of the term. Only in recent years, the concept of social entrepreneurship is making a significant breakthrough. A variety of definitions of social entrepreneurship have been proposed. For example, Dacin et al. (2010) discuss 37 definitions. Nevertheless, two features are present in most definitions: the use of market-based principles and the pursuit of a social mission. A simple definition that encapsulates the essence of social entrepreneurship can be that it is *the application of market-based principles to solving social and environmental problems* (Aliouche and Schlentrich 2015).

A number of social enterprises have been started in recent years. Though they may be called different names—including "market-based solutions to poverty, inclusive businesses, impact enterprises, social enterprises, or enterprises serving the Bottom of the Pyramid (BoP)" (Prahalad (2006))—they all use market-based principles to address the basic needs of the poor and the underprivileged: providing employment and decent incomes, affordable access to goods and services, low-cost healthcare, etc. Examples include Naya Jeevan (Pakistan), Aravind (India), and Projeto Cies (Brazil) in the healthcare field; PlanetRead (India) and Lumni (Peru) in the education field; Friends International (Cambodia), Education for Employment (Middle East), and Hapinoy (Philippines) in the employment field; Cinepop/ Hormiga (Mexico) and Waste Concern (Bangladesh) in the urban development field; and SELCO (India), Proximity Designs (Myanmar), and HSSi (Philippines) in the rural development field (Schwab Foundation for Social Entrepreneurship 2013).

Though social entrepreneurship has had some undeniable successes, the social needs and challenges around the world are of such magnitude that scaling and sustaining this approach have become key requirements. *Franchising*—a business model that can sustainably scale up business operations—may be an effective way to grow and multiply social enterprises.

3   Franchising: A Choice Method of Scaling the Impacts of Social Entrepreneurship

Franchising is a powerful business model that creates and grows small and medium businesses and generates employment and wealth on a large scale. In the United States—the country where modern franchising is most developed—franchising was responsible, directly or indirectly, for 17.4 million private nonfarm jobs (11.8% of all such jobs), generating $708 billion (9.7% of all payroll in this sector) and

contributing $1.2 trillion to private nonfarm gross domestic product (9.7% of the total in this sector) in 2007. In that year, franchise establishments totalled more than 828,000 (IFA 2011). The franchise model is an economic growth engine. According to International Franchise Association president and CEO Steve Caldeira, franchised small businesses grow at a faster rate, create more jobs, and produce higher sales growth than other businesses (IFA 2015).

Though the basic concept of franchising can be traced all the way back to the Middle Ages in Europe, modern-day franchising developed in the United States with the launch of now well-known franchise companies such as McDonald's, KFC, International House of Pancakes, etc. (Aliouche and Schlentrich 2015). Today, there are two major categories of franchising: product distribution franchising and business format franchising. Product distribution franchising is characterized as a supplier-dealer relationship whereby the owner of a branded product or service (*the franchisor*) licenses its trademark and logo to independent businesses (*the franchisees*) who then can sell its products and services. This category of franchising dominates in soft drinks (Coca-Cola), automobiles (General Motors), and gasoline distribution (Shell). The other category of franchising, business format franchising, is characterized by a more involved relationship between the owner of a brand (the franchisor) and the franchisees. Not only does the franchisor license its brand and logo to the franchisees and allow them to sell its products and services, it also provides them with all the information and tools necessary to operate the business. This includes an operation manual, a marketing plan, training, and ongoing technical and managerial support. Franchisees pay the franchisor a franchise fee to join the franchise network and ongoing royalty fees (generally a percentage of sales revenues). Recently, in the United States, business format franchising has been more dominant, with almost 20 times as many establishments and more than 5 times as many jobs as product distribution franchising (IFA 2011).

An entrepreneurial business can expand by building and operating its own establishments or by franchising. Resource scarcity theory and agency theory are the two theoretical frameworks generally used by franchise scholars to explain the motivation of business firms to franchise. Resource scarcity theory sees franchising as a solution to the capital, managerial, and informational challenges faced by expanding business firms (Oxenfeldt and Kelly 1968; Caves and Murphy 1976; Norton 1988; Carney and Gedajlovic 1991; Shane 1996).

Through franchising, a growing firm gains access to scarce capital (the franchisee's capital) in a cost-effective way. The franchising firm also gains management talent (in the form of franchisees) dedicated to growing the business and valuable local market knowledge provided by the franchisees (Minkler 1990). For the proponents of agency theory, franchising helps mitigate the agency problems that exist whenever the owner of a business (the principal) delegates management responsibilities to an individual or an organization (the agent) (Jensen and Meckling 1976; Eisenhardt 1989). As both franchisor (principal) and franchisee (agent) benefit from a successful franchise system, their interests are generally aligned.

Entrepreneurs who want to start their own business venture may start an independent business or join an established franchise system as a franchisee. In exchange for the franchise fees and royalty payments to the franchise owner (the franchisor), the benefits to the franchisee are many: possibility to use an established brand; joining a proven business concept; franchisor-provided technical and managerial support and assistance in critical areas such as site selection, facility design and layout, inventory purchasing and control, equipment purchasing, or leasing; training; quality control standards; marketing support; etc. As a franchisee, the budding entrepreneur can "go into business for yourself, but not by yourself" (Besthel 2001).

Because of its inherent characteristics of sustainably multiplying business operations, franchising is increasingly seen as a choice method of scaling the impacts of social entrepreneurship. *Franchising* the best social initiatives would create and grow small and medium businesses and generate employment and wealth on a large scale. The application of the franchise model to social entrepreneurship has resulted in the emerging field of *social franchising*.

4 Social Franchising: Driving Social Initiatives to Large-Scale Development

As an emerging field, social franchising's theoretical foundations have yet to be developed. Extant franchise theories, including the dominant ones (agency theory and resource scarcity theory) and alternative ones (institutional theory, social capital theory, etc.), do not adequately explain this new approach (Spencer 2013; Litalien 2013; Volery and Hackl 2010; Tracey and Jarvis 2007). Though a number of definitions have been proposed, there is no one agreed-upon definition. A survey of these proposed definitions identifies three features as being key in social franchising: elements of commercial franchising, social purpose, and scale (Aliouche and Schlentrich 2015). Simply put, social franchising is *franchising with a social purpose* (Spencer 2013).

Elements of (commercial) franchising that are also in social franchising include a proven, scalable business model with defined systems and processes documented in an operating manual that covers the essential administrative, legal, and functional aspects of the franchise system; a trademark, owned by the franchisor and licensed to the franchisees for the term of the franchise relationship; the delivery of a standardized product and/or service; a set of support services provided by the franchisor to the franchisees that may include training, quality control, advertising, and marketing; and payment of fees by the franchisees to the franchisor, including one-time franchise fees, ongoing royalty fees, and advertising fees (Temple 2011).

A key aspect that differentiates social franchising from (commercial) franchising is its social mission. A (commercial) franchise business' primary objective is to maximize the financial returns of its owners—it has only one bottom line: profits.

However, social franchises have a "double bottom line"—social benefits for its beneficiaries (social bottom line, generally the primary objective)—and a financial bottom line (profits) for long-term sustainability. This key difference between social and commercial franchising has at least three important practical implications (Aliouche and Schlentrich 2015). First, the enforcement of quality standards and recruitment of franchisees and employees are more flexible in a social franchise as social impact is more important than brand promotion and repeat sales. Second, social franchisees generally do not contribute much capital to start their franchise business, apparently negating the agency problem-mitigating feature of the franchise model. However, in most cases, this potential problem is alleviated by the social franchisee's motivation to provide social impact. Third, payments of fees and royalties by the social franchisee can be expected to be much lower than those of a commercial franchisee as the financial motive is not of primary importance in a social franchise.

Social franchises have been started in both emerging countries and in more economically developed countries. In Europe and North America, the major motivation for social franchising is the scaling of social enterprises and the creation of employment for disadvantaged people (European Social Franchising Network 2015). In Europe, there were 56 social franchises and aspiring social franchises across 12 countries in 2011, with 30 in the United Kingdom and 6 in Germany. Some of the European social franchise systems have attained a significant size. The recycling and refurbishing shops and businesses of Belgian social franchisor Komosie's De Kringwinkel employed 3861 people, while German supermarket social franchisor CAP-Markt had 1200 employees by 2011. Most European social franchise systems are recent and growing, with 80% of them being less than 10 years old.

In emerging countries, social franchises provide basic services to the poor as well as employment. A successful example is the Hapinoy network in the Philippines. Hapinoy's mission is "sustainably uplifting the lives of those at the base of the pyramid by empowering Nanays [Filipino mothers] to become more effective micro-entrepreneurs with the goal of eventually harnessing the store network to provide communities access to high impact products" (Hapinoy 2015). Hapinoy's network of small neighborhood convenience stores (called sari-sari stores) provide sustainable incomes for Filipino mothers and families and supply socially needed products and services to poor communities. Their Hapinoy Sari-Sari Store Program supports the nanays with extensive business training, access to capital through microfinancing, and assistance with new business development. By 2015, the Hapinoy franchise system had trained more than 3000 nanays to own and operate their sari-sari stores.

As the above examples illustrate, social franchising has the potential to help alleviate tough social problems such as poverty and unemployment in emerging countries. A very serious problem in many emerging countries, especially those in North Africa and the Middle East, is youth unemployment which is endemic in these regions (World Bank 2007). In recent years, many countries in North Africa and the Middle East (Libya, Egypt, Syria, Yemen, etc.) have been plunged into

chaos and vicious civil wars, and in most cases, a key factor has been youth unemployment with its corollaries of poverty, hopelessness, and violence. Social franchising can be a powerful model to help mitigate the tough problem of youth unemployment. In this study, we focus on Algeria as a case study for the development of social entrepreneurship and social franchising to address the tough social problem of youth unemployment in emerging countries.

5   An Emblematic Case Study, Algeria: A Rich Country with a Poor Population

Though a number of studies have analyzed the whole region of North Africa and the Middle East or particular countries of the region, very little has been written about the North African country of Algeria, especially in the franchising literature.

Algeria is interesting in many respects. It is the largest (by geographic size) country in Africa and the tenth in the world; it occupies a strategic geographical location as it is at the crossroads of Africa, the Middle East, and Europe; it is a sizable potential market for many franchisors, with a population of almost 40 million people. With a gross national income (GNI) per capita of $5480 in 2014, it is classified by the World Bank as an "upper middle-income country." Since independence in 1962, Algeria has made some significant progresses. GNI per capita more than doubled, the poverty rate has been reduced significantly, and access to education and to healthcare has become universally available (Nabni 2012). By 1996, enrollment at primary schools was 97% for boys and 91% for girls (State University.com 2015). Women play an important role in society, accounting for 70% of Algeria's lawyers and 60% of its university students (World Population Review 2015). By 2014, the average life expectancy in Algeria had reached 76.4 years, while the urbanization rate had climbed to 76.4% (CIA World Factbook 2015). By the early 2010s, Algeria was in a very comfortable financial situation with no external debt to speak of and about $200 billion of foreign exchange reserves.

However, along with these positive results are some significant shortcomings. Given its many resources, Algeria could have done better or at least as well as other emerging countries that were at about the same level of economic development in the 1960s, such as South Korea, Malaysia, and Turkey. Algeria remains deeply dependent on oil and gas revenues, which still represent two-thirds of the state budget and 98% of total exports; the private sector of the economy is still embryonic and not able to create many jobs; informal markets and informal employment are widespread; the investment climate is very uncertain; and unemployment, especially among the young, remains high (Bonet-Fernandez and Teulon 2014; Nabni 2012).

Though women have made significant strides in certain fields (education, law, medicine, etc.), they still represented only 19% of the total workforce in 2013.

Algeria is a very young country (out of a population of 38.4 million in 2014, 45.8% were under the age of 24 years), and it is struggling to provide adequate jobs to its youth. In 2014, its youth unemployment rate was stubbornly high at 28.4% (CIA World Factbook 2015).

This lack of opportunity for young Algerians pushes many of them to leave the country in search of more promising horizons. While in the past, it was mostly unskilled laborers who migrated, in more recent times, many highly skilled Algerians—including experienced managers, doctors, and researchers—have resettled in Europe and North America (Kendel 2008). Lack of opportunity for the young also is a factor pushing some of these young men to join extremist groups in Algeria and in other parts in the Middle East. This persistent unemployment problem does not bode well for the future stability of the country—unless it is meaningfully resolved.

As discussed earlier, Algeria had its *Arab Spring* many years before the rest of North Africa and the Middle East. This led to some political and economic reforms in the 1980s. However, continuing high unemployment and lack of opportunity among the young, as well as other social and political problems, culminated in a vicious civil war that lasted almost a decade—the *Black Decade* of the 1990s—and claimed the lives of almost 200,000 people. It is worth noting, though, that Algerian youth remained mostly quiet during the recent *Arab Spring*, while neighbors Tunisia and Libya underwent severe social and political turmoil. In fact, during those turbulent years of the *Arab Spring*, Algeria looked like a model of stability (Bonet Fernandez and Teulon 2014). Having defeated the extremist insurgency of the 1990s, the Algerian government was able to "buy civil peace" by enacting some political reforms and increasing public sector expenditures. The high oil prices over 2010–2014 allowed the government to accumulate vast foreign exchange reserves, which reached over $201 billion by 2013 (World Bank 2015a). The government had the financial wherewithal to launch a string of social programs, including programs that were designed to benefit the youth.

Since the mid-1990s, Algeria launched a number of programs designed to spur job creation. These included ESIL (Emplois Salariés d'Initiative Locale, local initiative for salaried employment), TUP-HIMO (Travaux d'Utilité Publique à Haute Intensité de Main-oeuvre, public works with high labor intensity), DAIP (Dispositifs d'Aide à l'Emploi, aid to employment mechanisms), ANSEJ (Agence Nationale de Soutien à l'Emploi des Jeunes, national agency to support youth employment), etc. (El Watan 2015). As its name indicates, ANSEJ is geared toward youth employment and entrepreneurship, focusing on the young unemployed aged 19–35 years. ANSEJ's main mission is to help unemployed youth start microenterprises, which are in fact social enterprises:

– It provides information, advice, and other technical support to start microenterprises.
– It grants financing to launch microenterprises. ANSEJ proposes two financing formulas: *financement triangulaire* (three-way partnership, prospective entrepreneur/ANSEJ/bank) or *financement mixte* (two-way partnership, prospective

entrepreneur/ANSEJ). In the *financement triangulaire*, the prospective entrepreneur personally contributes 1% of the total cost of the project if it is one million DA (Algerian Dinars) or less (about US$10,000) or 2% of total cost if the project is greater than five million DA (about US$50,000). In the *financement mixte* formula, the prospective entrepreneur contributes 71–72% of the total project cost. In both formulas, ANSEJ finances 28–29% of the total project cost at zero interest.
– It allows a number of fiscal benefits to the microenterprise when it reaches the operational stage, including exoneration from property taxes and income taxes.

ANSEJ's mission is also to promote a culture of entrepreneurship among the Algerian youth, particularly among the 1.3 million students. In partnership with Algerian universities and Grandes Ecoles, it has created *maisons de l'entrepreneuriat* (houses of entrepreneurship) where students are invited to learn about entrepreneurship and encouraged to initiate their own start-up businesses.

According to ANSEJ data, since its inception in 1997, it has financed 292,186 projects and helped create 710,788 jobs (through 2013) (ANSEJ website). The vast majority of the projects (74%) cost between 1 and 5 million DA (approximately between US$10,000 and US$50,000). Twelve percent of the projects cost 1 million DA or less, and 14% cost more than 5 million DA. Almost 62% of the projects were in the services sector (180,751 projects), followed by 12.3% in crafts (35,877), 11.6% in agriculture and fishing (33,787), 7.6% in construction (22,212), and 6.7% in industry and maintenance (19,559). Ten percent of the projects (29,329) were started by women, and 95.3% (278,465) of the projects were financed through the *financement triangulaire* formula, where the entrepreneur contributes only 1–2% of the total project cost (ANSEJ web site). According to the director of ANSEJ, it created a further 40,000 microenterprises in 2014, and 84% of these required 5 million AD (US$50,000) or less to start. Furthermore, ANSEJ now operates 53 *maisons d'entrepreneuriat* across Algerian campuses.

As impressive as these results appear to be, youth unemployment remains a serious problem in Algeria—stubbornly high at 28.4% in 2014. It seems clear that current policies and structures by themselves will not resolve meaningfully this problem. Franchising can be a powerful model to complement the current efforts and help resolve the tenacious problem of youth unemployment in Algeria.

Franchising creates a large number of small and medium businesses, generates large-scale employment, and adds significantly to national output and incomes (IFA 2011). Furthermore, for emerging countries such as Algeria being faced with a serious youth unemployment problem, franchising is a compelling model. By promoting the creation of small enterprises by franchisees, franchising promotes entrepreneurship and creates employment. Because the fledgling franchisee "is in business for him/herself, but not by him/herself," he/she does not need extensive entrepreneurial and managerial skills and experience—which are in short supply in Algeria and most emerging countries. Indeed, a major reason for the attractiveness of joining an established franchise system for a budding entrepreneur is the extensive support to be provided by the franchisor. A sensible policy for Algerian

policy makers and agencies such as ANSEJ is to expand and adapt their current activities and policies to the promotion of franchised businesses in Algeria:

1. Promote the expansion of successful small enterprises into franchising systems by providing them financing and technical support; this would take advantage of the multiplicative effect of the franchise model.
2. Encourage would-be entrepreneurs to become franchisees and thus benefit from the support to be provided by a franchisor.

In an emerging country such as Algeria, for a young would-be entrepreneur, joining a franchise system is much more compelling than starting an independent business:

– The franchisee joins a proven business model with established systems and processes, documented in an operating manual that details the administrative, legal, and functional aspects of the franchise system. Given the lack of business experience of most Algerian youth, this support from the franchisor is vital and vastly improves the chances of success for the young would-be entrepreneur.
– A franchisor generally also provides to the franchisees a set of support services that may include training, quality control, advertising, and marketing. Again, these support services are vital for the young would-be entrepreneur with generally little business experience.
– The franchisor delivers to the franchisees a set of standardized products and/or services to sell to consumers. The franchisee therefore does not need to spend extensive time and other resources conducting R&D, market research, design, manufacturing, etc. to produce a new product or service, all the while earning no income—an unsustainable situation given the lack of venture capital in Algeria as in most emerging countries.
– As part of the franchise relationship, the franchisee is required to make a set of payments to the franchisor. ANSEJ and similar agencies can help create employment through franchising by providing financing assistance to the young would-be franchisees—financing that could be similar to what they provide now. Given that young unemployed people most likely lack personal capital, this financing could be critical for the expansion of franchising in Algeria. This financing could help would-be franchisees pay the initial franchise fees, as well as other business start-up expenses, including working capital.

It goes without saying that the creation of franchisee businesses cannot happen without the existence of franchisors that develop and grow franchise systems. Franchisors could be international franchise companies that expand into Algeria, as have the different brands of hotelier Accor, retailer Carrefour, and others done. However, in the franchising context, locally developed franchise systems may be more suited for the local conditions of emerging countries as they may be better able to provide products, pricing, and cost structures that are better suited to local needs and tastes (Dalberg 2009). A key to harnessing the power of franchising in employment creation and small business formation is to adopt regulations and provide financing support that helps the development and expansion of local franchise systems. Furthermore, the promotion of product distribution franchising

may be a simpler way to quickly expand franchise systems in emerging countries like Algeria (Dalberg 2009). In this type of franchising, the relationship between franchisor and franchisee is much simpler and involves usually just the agreement of the franchisor to allow the franchisee to use its logo and to sell (distribute) its products. Less capital is needed and a favorable legal and regulatory environment is not critical. Brand protection is key because without legal brand protection, the concept can be copied anytime and anywhere. An adequate legal system will aim to reassure prospective franchisors and franchisees, especially foreign investors (Nguyen and Cliquet 2003). Successful emerging market product distribution franchise systems include SPOT Taxi (India), Fan Milk (Ghana), Kegg Farm (India), and Natura (Brazil). In Algeria, Kiki Taxi, a franchise system similar to India's SPOT Taxi, was launched recently in 2015.

Though product distribution franchising may be the quick and simple way to kick-start franchising in Algeria, business format franchising may provide more long-term benefits in the struggle to reduce youth unemployment and create entrepreneurial opportunities for young individuals. In addition to creating jobs, business format franchising also provides training for low-skilled youth; does not require extensive business experience to start a small business; provides extensive and continuous support for the franchisees, helping young entrepreneurs succeed and thus fostering an entrepreneurial culture; provides high-quality standardized products and services; and helps social mobility as employees may have the opportunity to become franchisees.

Algeria has many of the resources and factors necessary for the successful expansion of franchising: a relatively large market of almost 40 million people; substantial disposable income; growing economy; large financial resources; proximity to important markets in Europe, the Middle East, and Africa; largely educated population; high urbanization rate; etc. However, one key ingredient for the successful development of franchising is badly lacking in Algeria: a supportive legal and regulatory environment (Bonet Fernandez and Teulon 2014; Aliouche et al. 2015; Aliouche 2015). According to the *International Franchise Expansion Index*, Algeria was ranked 85 out of 125 countries as an attractive expansion market for US franchise companies in 2011 (Aliouche 2015). This unflattering ranking is due to a large extent to Algeria's dismal performance as a country conducive to starting and operating a business. According to the 2016 World Bank's *Doing Business* survey, Algeria ranked 163 out of the 189 countries included in the report. This survey assessed the ease of doing business in the countries it surveys according to a number of criteria, including starting a business (Algeria ranked 145 out of 189 countries), dealing with construction permits (#122), getting electricity (#130), registering property (#163), getting credit (#174), protecting minority investors (#174), paying taxes (#169), enforcing contracts (#106), trading across borders (#176), and resolving insolvency (#73).

It is clear that many necessary ingredients of economic competitiveness are woefully inadequate and have gotten worse. While Algeria ranked at #148 in the *Doing Business* rankings in 2012, it has now slipped to #163 in 2015, continuously losing market competitiveness, especially relative to its immediate neighbors

Tunisia and Morocco, which were ranked, respectively, #75 and #74 in 2015. It is no surprise that the franchising sector is much more developed in Morocco and Tunisia than in Algeria (Aliouche et al. 2015).

Innovation does not appear to be a significant feature of the Algerian economy, which is still mainly based on the capture of rents from natural resources and not from the creation of new wealth. Entrepreneurs and innovative projects have to overcome major bureaucratic hurdles that result in prohibitive costs of doing business (importation of processed goods, imports of skills and expertise, rigid procurement procedures, etc.) (Bonet Fernandez and Teulon 2014). High costs, long time delays, complicated procedures, and high minimum capital deposits, among other hurdles, put Algeria in a very unfavorable position vis-à-vis its immediate neighbors Morocco and Tunisia and many close-by OECD countries. Despite some efforts to promote entrepreneurship in the country (such as those by ANSEJ discussed earlier), these efforts are hampered by the serious impediments to starting and operating a business in Algeria as captured by the *Doing Business* rankings. It is therefore urgent for the authorities to seriously consider major legal and regulatory reforms that would make the Algerian economy much more competitive. The need for reforms has become even more urgent now as the price of oil has been more than halved recently, significantly reducing Algeria' financial resources. With abundant financial resources derived from oil and gas production and exports, Algerian policy makers did not feel the pressure to make the rest of the economy more competitive. This is no longer the case. It is encouraging that a *Doing Busines*s commission has been set up by the government in 2015 with the mandate to propose reforms to improve the business climate in the country. Such reforms would no doubt help promote the development of a dynamic franchise sector in Algeria.

SME life cycle should ideally be expanded to large-scale networks, provided that the business model is performant and most of all that a favorable business and legal environment exists.

6   Conclusions

Emerging countries are facing many fundamental problems such as access to work, education, healthcare, water, food, and a decent living. In this first part of an ongoing research program, we chose to study the emblematic case of unemployment in Algeria as a relevant case study for our investigations.

Social entrepreneurship helps address serious social problems by using *market-based principles*. We argue that franchising adds scale to the social entrepreneurship model by using its multiplicative properties. As interest for these models grows, more social enterprises and social franchises are being started all over the world and especially in emerging countries. Algeria is an emerging country, combining high potential and necessary political reforms that could greatly benefit from the development of franchising, both commercial and social. The government

has started to mobilize financial resources and should promote social enterprises and franchises to help tackle one of the most destabilizing social challenges facing the country, namely, high and persistent youth unemployment. Franchising's proven ability to create and grow quickly large numbers of small- and medium-sized businesses, generate large-scale employment, and produce new wealth, combined with the government's significant financial resources—which can be used to finance young entrepreneurs to start franchised businesses and successful social enterprises to grow into franchise systems—can be marshaled to help resolve Algeria's youth unemployment challenge, thus diffusing a key source of social and political instability in the country. However, the promise of franchising (social and commercial) cannot be fulfilled in Algeria unless major legal, regulatory, and institutional reforms are enacted to spur innovation and business creation and expansion. It is an encouraging sign that Algerian policy makers have recently set up a *Doing Business* commission that will hopefully lead to reforms that will ultimately boost innovation, entrepreneurship, and franchising in the country.

For future research, our objective is to study and propose solutions to social problems in emerging countries. We promote the thesis according to which social entrepreneurship boosted by franchise principles can bring significant social benefits, through scale and sustainability.

References

Abdul Kadir M, Sarif S (2016) Social entrepreneurship, social entrepreneur and social enterprise: a review of concepts, definitions and development in Malaysia. J Emerg Econ Islam Res 4 (2):1–16. Available from Business Source Complete, Ipswich, MA. Accessed 30 Jan 2017

Aliouche EH (2015) The impact of the global financial crisis on country attractiveness. Thunderbird Int Bus Rev 57(1):63–83

Aliouche EH, Schlentrich U (2015) Social franchising. In: Brookes M, Altinay L (eds) Entrepreneurship in hospitality and tourism: a global perspective. Goodfellow Publishers, Oxford

Aliouche EH, Bonet Fernandez D, Chanut O, Gharbi N (2015) Institutional environments and the internationalization of franchise chains: the contrasting cases of three North African countries. J Appl Bus Res 31(2):417–436

ANSEJ (2015) http://www.ansej.org.dz/

Besthel B (2001) An introduction to franchising. IFA Educational Foundation and the Pepsi Foundation, Washington, DC

Bonet Fernandez D, Teulon F (2014) L'Algérie en Quête d'un Nouvel Avenir, Ipag Economics & Management Letters, No. 4, 5, 6. http://www.ipag.fr/wp-content/upload/2014/03/Letter_2014-04;pdf; http://www.ipag.fr/wp-content/upload/2014/03/Letter_2014-05;pdf; http://www.ipag.fr/wp-content/upload/2014/03/Letter_2014-06;pdf

Carney M, Gedajlovic E (1991) Vertical integration in franchise systems: agency theory and resources explanations. Strateg Manag J 12:607–629

Caves R, Murphy W (1976) Franchising: firms, markets and intangible assets. South Econ J 42:572–586

CIA World Factbook (2015) http://www.theodora.com/wfbcurrent/algeria/algeria_people.html

Dacin MT, Dacin PA, Matear M (2010) Social entrepreneurship: why we Don't need a new theory and how we move forward from here. Acad Manag Perspect 24(3):37–57

Dalberg (2009) Franchising in frontier markets. http://www.templeton.org/newsroom/in_the_news/docs/091215_frontiers_markets_summary.pdf

Education State University (2015) http://education.stateuniversity.com/pages/21/Algeria-EDUCATIONAL-SYSTEM-OVERVIEW.html

Eisenhardt K (1989) Agency theory: an assessment and a review. Acad Manag Rev 14:57–74

El Watan (2015) Les Dispositifs d'Aide à l'Emploi et leurs Limites, 5 June 2015

European Social Franchising Network (2015) Social franchising in Europe 2011. http://www.lemat.it/en/the-brand/le-mat-europe. Accessed 22 Feb 2015

Hapinoy (2015) http://hapinoy.com/about/the-hapinoy-sari-sari-store-program. Accessed 16 Feb 2015

International Franchise Association (2011) Economic impact of franchised businesses, vol 3. http://www.franchise.org/sites/default/files/ek-pdfs/html_page/EconomicImpact11_5.pdf. Accessed 10 Feb 2015

International Franchise Association (2015) Franchise businesses continue to grow faster than rest of US economy, June 2, 2015. http://www.franchise.org/franchise-businesses-continue-to-grow-faster-than-rest-of-us-economy. Retrieved 10 July 2015

Jensen MC, Meckling WH (1976) Theory of the firm, managerial behavior, agency costs, and ownership structure. J Financ Econ 3(4):305–360

Kendel H (2008) Mobilité des Compétences et Gestion des Compétences en Algérie. International Journal of Information Sciences for Decision Making: Information, Savoirs, Decisions et Mediations, ISDM 33, Numero Thematique 'Connaissance, Information & Environment Socio-economique', 3eme trimestre, pp 77–82

Litalien B (2013) Social franchising: a new paradigm for a global challenge. In: Proceedings of the 27th annual international society of franchising conference, Zhuhai, China, 12–16 Mar 2013

Minkler LP (1990) An empirical analysis of a Firm's decision to franchise. Econ Lett 34:77–82

Nabni (2012) Algérie: Bilan et Situation en 2012. http://www.nabni.org/nos-propositions/economie/bilan-et-situation-en-2012/

Nguyen M-N, Cliquet G (2003) La franchise, une méthode d'implantation dans le commerce de détail: le cas du Vietnam. http://www.cidegef.refer.org/hanoi/nguyen.cliquet.doc

Norton S (1988) An empirical look at franchising as an organizational form. J Bus 61:197–218

Oxenfeldt AR, Kelly AO (1968) Will successful systems ultimately become wholly-owned chains? J Retail 44(49):69–83

Prahalad CK (2006) The fortune at the bottom of the pyramid. Wharton School Publishing. Available on https://books.google.fr/books?id=R5ePu1awfloC&pg=PR3&lpg=PR3&dq=HARVEY+Bottom+of+pyramid&source=bl&ots=McUjOL2Gob&sig=_yAJ7FSgevff-Ie7uYD1kQ_px_g&hl=fr&sa=X&ved=0ahUKEwihn572gZXTAhXDhRoKHSrPCrEQ6AEIVTAH#v=onepage&q=HARVEY%20Bottom%20of%20pyramid&f=false

Schwab Foundation for Social Entrepreneurship (2013) Breaking the binary: policy guide to scaling social innovation, April

Shane SA (1996) Hybrid organizational arrangements and their implications for firm growth and survival: a study of new franchisors. Acad Manag J 39:216–234

Short JC, Moss TW, Lumpkin GT (2009) Research in social entrepreneurship: past contributions and future opportunities. Strateg Entrep J 3:161–194

Spencer EC (2013) Deriving meaning for 'social franchising' from commercial franchising and social enterprise. In: Proceedings of the 27th annual international society of franchising conference, Zhuhai, China, 12–16 Mar 2013

Temple N (2011) The social franchising manual, social enterprise coalition. http://www.socialenterprise.org.uk/uploads/files/2011/11/social_franchising_manual.pdf. Accessed 20 Feb 2015

Tracey P, Jarvis O (2007) Toward a theory of social venture franchising. Entrep Theory Pract 31(5):667–685

United Nations (2015) Millennial development goals and beyond 2015. http://www.un.org/millenniumgoals/poverty.shtml. Accessed 10 Feb 2015

Volery T, Hackl V (2010) The promise of social franchising as a model to achieve social goals. In: Fayolle A, Matley H (eds) The handbook of research on social entrepreneurship. Edward Elgar, Cheltenham

World Bank (2007) Youth – an undervalued asset: towards a new agenda in the Middle East and North Africa. World Bank, Washington, DC

World Bank (2015a) http://data.worldbank.org/indicator/FI.RES.TOTL.CD

World Bank (2015b) Doing business 2016. http://www.doingbusiness.org/data/exploreeconomies/algeria/

World Population Review (2015) http://worldpopulationreview.com/countries/algeria-population/

Franchising in the Education Sector: How Do Pakistani Customers Perceive This New Phenomenon?

Muhammad Akib Warraich and Rozenn Perrigot

Abstract The literature on franchising is growing. However, the customer perceptions regarding franchising have rarely been explored, and the few existing studies deal with developed markets, e.g., the UK and the USA. The aim of this research is to assess how customers perceive franchising in the education sector in Pakistan. More specifically, our research questions are the following: (1) According to the customers, what are the differences between franchised schools and public schools? (2) What are the customer perceptions regarding the main characteristics of franchising in the education sector? (3) What are the customer perceptions regarding social achievements of these franchised schools and chains? (4) According to the customers, what are the opportunities and challenges associated with franchising in the education sector? We adopt a qualitative approach with 17 face-to-face interviews conducted with customers of franchised schools in Pakistan, including parents and students.

1 Introduction

Despite the growth of franchising in most countries and most industries, there are only a few studies looking at perceptions regarding franchising. In France, a few authors have explored perceptions regarding specific aspects of franchising. Perrigot and Herrbach (2012) analyzed franchisee perceptions regarding the existence of company-owned units within their chain. Perrigot et al. (2017) studied franchisee perceptions regarding resale pricing practices within their chain. Perrigot et al. (2015) assessed the perceptions of independent small business owners regarding the relationships that franchisees have with their franchisors, their fellow franchisees, their employees, and their customers.

M.A. Warraich (✉) • R. Perrigot
Center of Research in Economics and Management (CREM UMR CNRS 6211), Graduate School of Management (IGR-IAE), University of Rennes 1, 11 rue Jean Macé, CS70803, 35708 Rennes Cedex 7, France

Center in Franchising, Retail & Service Chains, Graduate School of Management (IGR-IAE), University of Rennes 1, 11 rue Jean Macé, CS70803, 35708 Rennes Cedex 7, France
e-mail: muhammad-akib.warraich@etudiant.univ-rennes1.fr

As far as Watson and Kirby (2004) are concerned, they explored public perceptions regarding franchising in the UK. We think it is relevant to focus on customer perceptions regarding franchising because it is thanks to a better understanding of customer perceptions and expectations that franchisors can better adapt their concept and business models and franchisees can better adapt their local offers. As a result, armed with such better knowledge of customer perceptions, these chains will be able to attract more customers on a long-term basis, expand their activities with the opening of new stores, and succeed.

In this paper, we explore this question of customer perceptions regarding franchising in the education sector. The education sector is believed to be part of social welfare for society. In many countries, the government is seen as responsible for providing essentially free education for children and teenagers. Indeed, many constitutions recognize free access to primary and secondary education as a fundamental constitutional and enforceable right of every child (i.e., Brazil,[1] Pakistan,[2] Germany,[3] etc.). However, additionally to this public schooling system, franchising has appeared in many emerging as well as developed markets (i.e., Canada, Malaysia, South Africa, the USA, etc.). Franchising is often limited to after-school learning centers such as tutoring given by instructors at students' houses or in private centers, centers for students with learning difficulties, etc. (i.e., *Kumon*, *Huntington Learning Center*, etc.), but in some countries, such as Pakistan and South Africa, franchising is mainly used for full-time studies from preprimary to higher secondary schools. These franchised chains are often committed to serving as substitutes for public schools.

The aim of this research is to assess how customers perceive franchising in the education sector in Pakistan. More specifically, our research questions are the following: (1) According to the customers, what are the differences between franchised schools and public schools? (2) What are the customer perceptions regarding the main characteristics of franchising in the education sector? (3) What are the customer perceptions regarding social achievements of these franchised schools and chains? (4) According to the customers, what are the opportunities and challenges associated with franchising in the education sector?

The paper is organized as follows. Section 2 briefly reviews the literature on customer perceptions regarding franchising, franchising in emerging markets, and franchising in the education sector. Section 3 presents franchising in the Pakistani market. Section 4 describes the research methodology. Sections 5 and 6 present and discuss the findings, respectively.

---

[1]The constitution of Brazil, Article 206, defines that every child holds a right to access free primary and secondary education in Brazil. http://www.loc.gov/law/help/child-rights/brazil.php

[2]The constitution of Pakistan, Article 25-A, recognizes free education access for every primary and secondary student. http://unesdoc.unesco.org/images/0022/002297/229718E.pdf

[3]The legislative and executive power under article GG, art. 7 allows children to access free primary and secondary education. http://www.loc.gov/law/help/child-rights/germany.php

2 Literature Review

2.1 Customer Perceptions Regarding Franchising

The franchising literature dealing with customer perceptions is very limited despite the fact that it is important for franchisors and franchisees to assess these perceptions to better attract, serve, and gain the loyalty of customers and then expand their activities. First, Watson and Kirby (2004) examined public perception regarding franchising in the UK. They concluded that the franchise sector had potential for development in the country and that chains could expand more by improving public awareness toward franchise opportunities, i.e., self-employment and small business development. Second, through a questionnaire-based survey, Grünhagen et al. (2012) explored Chinese customer perceptions of the US franchise brand McDonald's. They mentioned that Chinese customers now prefer local brands because of the extended variety and uniqueness of their products. Nevertheless, they also perceive that these local brands will not be able to compete with international franchised chains in terms of quality and consistency of the offer in the long run. International franchised chains, and more specifically McDonald's, are then expected to sustain and grow in China. Third, Jeon et al. (2014) examined the influence of credence and experience services on customer perceptions of quality in franchised and non-franchised chains in the US market. They found significant differences in terms of customer perceptions regarding quality among experience and credence-based services. Fourth, Jeon et al. (2015) investigated McDonald's customer perception in China and India. They examined whether the universal culture of McDonald's and the social values of egalitarianism and democratization enshrined in the chain were linked to customers' patronage of McDonald's. They asserted that, for a better customer perception, franchisees in both markets would have to be given enough autonomy from the franchisor to adapt to their local markets. Fifth, Dant and Meiseberg (2015) measured customer perceptions regarding franchising using a cross-national comparison in the BRIC countries and the USA. They concluded that the importance of customer satisfaction decreases if customers have formed a habit of patronizing a particular franchised chain.

2.2 Franchising in Emerging Markets

Emerging markets represent about 80% of the world's total population (Dant and Grünhagen 2014; Preble and Hoffman 2006; Welsh et al. 2006). The population is continuously growing in emerging markets, at a faster pace compared to the case of developed markets. Similarly, consumption in emerging markets is growing and contributes to fueling the success of new businesses. Customer expectations in these emerging markets increase vis-à-vis new products and services. The World

Bank recently anticipated that, over the next 5 years, economic growth in emerging markets will be twice that of developed economies (World Bank 2014).

All these elements offer opportunities for franchisors as recognized in the franchising literature. Emerging markets have been declared the fastest growing markets for international franchising in the academic literature (Alon and Welsh 2002; Welsh et al. 2006). While franchising is becoming popular in emerging markets, franchisors have to face various challenges in these markets, such as unstable political systems, insufficient domestic infrastructures, variations in foreign exchange rates and liquidity risks, etc.

Examples of topics that have been explored in the franchising literature include the development of franchising in China and the associated opportunities, challenges and future development for domestic as well as international franchised chains (Doherty et al. 2014), and the adoption of franchising to modernize the retail sector in Singapore and develop Singaporean franchised chains in foreign markets (Li Choy and Goh 1997).

2.3 Franchising in the Education Sector

Education is believed to be one of the important factors in the development of economies and societies. It creates opportunities for socially and economically deprived segments of society (Brown and Lauder 1996). However, very few authors have explored franchising in the education sector. Among them, Casson (2011) pointed out the impact of franchising on elementary and secondary education in the USA, concluding that franchising improved the quality of education and became a positive competitive force for the public educational system. Davies and Aurini (2006) explored the increasing demand for private tutoring in Canada that is being successfully provided by franchised chains.

After having briefly reviewed the literature on customer perceptions regarding franchising, franchising in emerging markets, and franchising in the education sector, the main research question we investigate in the empirical study is the following: "How do customers (students and parents) perceive franchising in the education sector?" More specifically, (1) according to the customers, what are the differences between franchised schools and public schools? (2) What are the customer perceptions regarding the main characteristics of franchising in the education sector? (3) What are the customer perceptions regarding social achievements of these franchised schools and chains? (4) According to the customers, what are the opportunities and challenges associated with franchising in the education sector?

3 Franchising in Pakistan

3.1 Commercial Franchising in Pakistan

Pakistan has been chosen for this empirical study due to the development of commercial franchising with foreign (mainly the USA) and domestic chains in the country since the 1990s. A US franchised chain, i.e., Pizza Hut, opened the doors for commercial franchising development in Pakistan in 1993 (Augment 2015). Following the success of this chain, many international franchised chains from different sectors entered the Pakistani market. We can mention Avis and Hertz for car rentals; Debenhams, Mango, and Mothercare for clothing; Next, Nine West, Nike, and Adidas for shoes; Best Western, Marriott, Ramada, and Sheraton for hotels; Domino's Pizza, Fatburger, Hardee's, KFC, McDonald's, Pizza Hut, and Subway for restaurants; Butler's, Cinnabon, and Gloria Jean's Coffees for coffee shops; FedEx and TNT for courier/postal services; Carrefour/Hyperstar, Metro, and Macro for hypermarkets; and Telenor, Warid, and Zong for telecommunications. Today, the growth of commercial franchising is not limited to international chains but also involves domestic franchised chains, such as ChenOne, offering a wide range of products such as clothing, furniture and kitchen accessories, etc.; Coco in clothing; and Pakistan Telecommunication Company Limited (PTCL) in telecommunications. As a conclusion, the presence of famous international chains and various domestic ones significantly shows that the phenomenon of commercial franchising is a growing trend in Pakistan.

3.2 Nontraditional Franchising in Pakistan

The growth of franchising in Pakistan is not limited to the so-called "traditional" sectors such as hotels and restaurants, clothing, etc. This business model is also gaining popularity in several nontraditional sectors such as the healthcare sector with UmeedSey in reproductive health, Green Star in family planning, FALAH in reproductive health and family planning, and Shaukat Khanum Memorial Cancer Hospital and Research Centre as well as the Aga Khan University Hospital for their laboratory collection centers located outside their hospitals. Other examples of social franchised chains are Rural Development Foundation of Pakistan, which is a facilitator to alleviate poverty and improve the quality of life of people in rural areas, and Utility Stores Corporation which distributes food at a cheap price through a public-private partnership.

3.3   Franchising in the Education Sector in Pakistan

Article 25-A of the Constitution of Pakistan recognizes free access to primary and secondary education as a fundamental constitutional and enforceable right of every child from ages 5 to 16 (Malik et al. 2014). Nevertheless, the public schools in Pakistan are unable to provide free and quality educational services for various reasons such as inappropriate facilities for school students[4] (e.g., buildings, furniture), lack of resources (e.g., financial, human, in terms of real estate), political instability, issues faced in enforcing governmental policies, poor teacher performance, inadequate monitoring, increasing population, and thus an impossibility to respond to the rapidly growing demand for education. The continuous poor performance of the public education sector has now resulted in declaring Pakistan the country with the second highest out-of-school children ratio in the world, with 5.1 million children out of the school system, among which two thirds are girls (UNESCO 2012). As a consequence, many parents do not trust the public schooling system anymore and prefer to pay school fees for their children to be educated in franchised schools. Recently, well-trusted private educational companies (e.g., the Beaconhouse School System), private universities (e.g., University of Management and Technology), and public universities (e.g., International Islamic University Islamabad) decided to adopt franchising to launch schools. Parents and students already trust these branded schools because of their experience and success in educational services. These franchised schools provide better educational services than public schools and charge lower fees than private schools not using franchising.

There are now many domestic franchised chains operating in Pakistan regardless of level, whether it be preprimary, primary, and middle education (e.g., Allied Schools, The Educators, The Knowledge School) or secondary and higher secondary education (e.g., Punjab Group of Colleges and The Leadership Colleges).[5] There are also several international franchised chains operating in primary, secondary, and higher secondary education (e.g., American Lyceum International School from the USA, PakTurk International Schools and Colleges from Turkey, and The International School of Choueifat from Lebanon). Recently, even some public Pakistani universities (e.g., University of Sargodha and The Virtual University of Pakistan) have also started to franchise their concept. Moreover, Beaconhouse Group, which franchises some of its concepts, has developed outside the Pakistani market and expanded to several developed and emerging markets such as Malaysia, Oman, the Philippines, Thailand, the UAE, and the UK (Beaconhouse

---

[4]School students are recognized as those students who are studying in primary to higher secondary education.

[5]Preprimary age group, 3–5 years; primary age group, 6–10 years; middle school age group, 11–13 years; secondary education, 14–15 years; higher secondary education, 16–17 years; and higher education, 18 years and above (Malik 2011)

School System Website 2016). Therefore, the growth of franchising in the education sector is similar to the growth of franchising in commercial sectors.

Currently, there are 22 franchised chains in Pakistan, including 2944 schools and approximately 1,050,900 students.[6] These franchised schools have promised to deliver greater accessibility and higher quality for preprimary, primary, middle, secondary, and higher secondary education in Pakistan.

The first franchised chain in the education sector in Pakistan, The Educators (A Project of Beaconhouse), was launched in 2002. The Educators now has 600 franchised campuses in 200 cities and villages and totals 150,000 students in urban and rural areas (The Educators Website 2015). Another example of a fast-growing franchised chain is Dar-e-Arqam which has 425 franchised campuses in 150 cities and villages and 100,000 students (Dar-e-Arqam Website 2015). Allied Schools is also a successful franchised chain. In 6 years, they opened 550 franchised campuses in 225 cities and villages and enrolled 160,000 students (Allied Schools Website 2015).

Recently, supranational organizations such as The World Bank and UNESCO, and some foreign governments, e.g., the United Arab Emirates, have started to invest in the education sector in Pakistan to strengthen nongovernmental educational companies (i.e., franchised chains) in order to make education accessible to everyone and specifically to residents of poor and rural areas (The World Bank 2015). Such growth and potential of franchising in the education sector in Pakistan have caught our attention, and we seek to explore how customers perceive this phenomenon.

4 Research Methodology

In order to assess customer perceptions regarding franchising in the education sector in Pakistan, we used a qualitative approach. More specifically, 17 semi-structured interviews were conducted face-to-face with customers of franchised schools (parents and students) in the province of Punjab[7] in August, September, and October 2014. The public and franchised schools are clearly two different streamlines in Pakistan, and customers have this distinguishing knowledge above all due to the advertising campaigns. We therefore assume that these customers know the franchised status of the school where they send their children and/or where they study. The dual approach involving parents and students is relevant because parents usually choose the school for their children, pay the tuition fees, and interact with school staff on the one hand, and students are the firsthand users by benefiting from

---

[6]These figures are estimated by the authors based on their review of franchised chain websites.

[7]The province of Punjab has a leading literacy rate of 62%, followed by the province of Sindh (60%), the province of Khyber Pakhtunkhwa (52%), and the province of Balochistan (44%). Fifty-six percent of Pakistan's total population resides in the Punjab Province.

Table 1 Information about the interviewee profiles

Interviewee	Franchised chain	Category of interview	Place of interview	City of interview	Duration of the interview (min:s)
Interviewee #1	Chain A	Parents	Home	Lahore	61:02
Interviewee #2	Chain C	Parents	Home	Lahore	47:38
Interviewee #3	Chain E	Parents	Home	Lahore	48:00
Interviewee #4	Chain F	Parents	Home	Gujranwala	45:16
Interviewee #5	Chain B	Parents	Home	Sialkot	59:08
Interviewee #6	Chain A	Parents	Home	Lahore	46:04
Interviewee #7	Chain A	Parents	Campus	Okara	47:32
Interviewee #8	Chain B	Parents	Home	Lahore	54:32
Interviewee #9	Chain C	Student	Home	Lahore	50:34
Interviewee #10	Chain E	Student	Campus	Gujarat	48:03
Interviewee #11	Chain A	Student	Home	Lahore	48:52
Interviewee #12	Chain A	Student	Home	Sheikhupura	47:36
Interviewee #13	Chain D	Student	Campus	Lahore	46:37
Interviewee #14	Chain B	Student	Home	Lahore	74:43
Interviewee #15	Chain A	Student	Home	Lahore	11:37
Interviewee #16	Chain E	Student	Home	Gujranwala	45:05
Interviewee #17	Chain A	Student	Campus	Lahore	45:33

the educational services. Their complementary perceptions are useful to better understand how customers perceive franchising in the education sector. Further, to ensure the validity of the collected data, we used an interview guide which, in addition to the introduction and conclusion, was composed of four main parts: (1) the education sector and franchising in the education sector, (2) the practices of franchised chains in the education sector, (3) the services provided, and (4) the improvements which franchising has brought to society. To increase the reliability of our approach, we selected interviewees who were costumers of several chains with different price levels and different school locations (urban and rural areas[8]) to gain different perspectives and perceptions. The profiles of the 17 interviewees vary in terms of age, gender, and location. Table 1 displays information about the profiles of the interviewees. All 17 interviews were conducted in Urdu,[9] audio-recorded and fully transcribed and translated into English. The average interview length was 49 min. The total length of recording was 14 h and 16 min and corresponds to a total of 234 transcribed pages. To abstract accurate and transparent data from these interviews, we used the qualitative data analysis software NVivo 10. The use of NVivo has been encouraged by researchers for qualitative data analysis (Hutchison et al. 2010; Siccama and Penna 2008). Indeed, coding out the text and running text queries helped us to approach interrelationships of thematic ideas.

---

[8]Sixty-three percent of the population in Pakistan lives in rural areas (Malik et al. 2014).

[9]Urdu is the official language in the Punjab Province.

5 Findings

5.1 Customer Perceptions Regarding Franchising in the Education Sector

5.1.1 Customer Perceptions Regarding Franchised Schools Versus Public Schools

Franchising in the education sector is growing at a tremendous pace. Franchised chains offer well-trained teachers, advanced teaching and learning techniques, innovative technologies such as digital classrooms, and healthy school-family relationships. By contrast, public schools are not widely spread over the territory and are facing financial and managerial difficulties. Many families have then shown their unwillingness toward public schools and have chosen franchised schools for their children. Several interviewees explain their perceptions regarding franchised schools compared to public schools.

> I prefer franchised chains for my children because they offer excellent teaching services at a low-cost fee which is indeed a very attractive feature for all parents. They use impressive advanced teaching and learning techniques that public schools are not using at all. I am completely satisfied with the performance of franchised schools. (Parents #1)
>
> I can assert that these franchised schools are far better than public schools. All franchised schools have appropriate buildings, qualified teachers and staff motivated to educate us whereas public schools do not even have enough schools in the territory. Generally, people have totally lost their trust in public schools because of unsatisfactory educational services and consistently poor results. I will never shift to a public school. (Student #6)
>
> Franchisee and teachers are always in contact with me. We are working like a team. I meet my children's teachers twice a month. We have detailed discussions on how to improve my children's learning and personal skills. It helps me a lot to understand my children's behavior of. Chains are doing a good job for our society. (Parents #7)
>
> If I compare franchised schools with public schools, without a doubt, franchised chains are far better than public schools. If I compare chains to one another, each one has its own specialty. Some chains focus on low fees, others on student grooming, others adopt international curriculums. Chains offer diversified products and services. And I can confidently say that franchised schools are better than public schools. (Student #9)

5.2 Customer Perceptions Regarding the Main Characteristics of Franchising in the Education Sector

5.2.1 Customer Perceptions Regarding the Brand Names of Franchised Chains

Brand names in the education sector are as important as in the commercial sector, e.g., food, hotel, and restaurants. They allow customers to identify the standards of the educational services and help new customers to get referrals. Similarly,

franchised chains in the education sector have implemented strong communication strategies to attract customers via different means such as TV and national newspapers. Nationwide advertisements target potential franchisees and simultaneously attract customers (parents and students) to study in nationwide standardized schools. These advertisements include slogans such as "call for franchise opportunities," "franchise opportunity in schools," "study in franchised schools," "invest in franchised schools," etc. Customers are therefore well aware that they are sending their children to and/or studying in franchised schools. Such communication strategies contribute to increasing customer satisfaction, trust, and commitment vis–àvis the franchised schools. Further, these advertisements become a source of enhancement of public awareness of franchising in the Pakistani market. Many interviewees mention that franchise brands in the education sector attract them because they are already customers of franchise brands in commercial sectors (e.g., McDonald's) and trust that these education brands can provide services better than public or individual schools through franchising.

> Brand name is very important for me. It isn't just about showing off, but it helps me to measure the level of the school services. I want my children to spend time with children who are from families like us. I do not want them to study with "ultra-rich" children or with children from uneducated families. In addition, when my children see TV advertisement about their schools, they get excited. I think the brand name has many positive impacts. (Parents #7)
>
> I am studying in [Brand Name]. If I need to introduce my school in a discussion, then I simply quote my school's brand name and people already know about it. I feel pleased and I am sure we have the same quality of education and services all over Pakistan. I haven't been to other campuses in other villages but I assume the same standards can be found everywhere. I wish we could have more brands so that other students could also study in branded schools. (Student #8)

In contrast, a few interviewees explain that a brand name in the education sector can have negative consequences in terms of social discrimination in society.

> I don't see franchised schools as a good idea for our society. It allows children and parents to discriminate against others on the basis of their school's brand name. I suggest that public schools should improve the quality of their education and there should only be one curriculum as well as the same facilities in public and franchised schools nationwide. (Parents #1)
>
> I am not in favor of franchised chains, nor of promoting brand names in education. All children are equal. Those who cannot afford to pay fees in branded schools are discriminated in many aspects of life. They are actually seen as poor students. (Parents #6)

5.2.2 Customer Perceptions Regarding Quality in Franchised Schools

Customers are generally satisfied with the quality of educational services in franchised schools. Some interviewees explain that the competition among chains to increase the number of enrollments contributes to providing high-quality educational services. Therefore, franchisors have used curricula from international schemes (e.g., Oxford, Cambridge). These curricula help franchisees to enhance

the analytical skills of students. Moreover, the focus of franchisors and franchisees on the continuous training of teachers and on program development allows them to increase the quality of education.

> The quality of education depends first on the quality of teachers and second on establishing appropriate monitoring of the whole system. I believe chains concentrate on both aspects because I have observed that my children and other students are confident enough to discuss many topics. Teachers are well-trained and children have access to all basic facilities. I am satisfied with the quality of education of [Brand Name]. (Parents #6)

Even though several interviewees seem to find it difficult to assess the quality of educational services in franchised schools, they often refer to teacher training and experience as well as student success ratio.

> There are so many schools around us. School selection is indeed a difficult decision for every mother. I don't know how to measure the quality of education in these schools. I can only compare tangible items, e.g., buildings, curriculum, facilities, but as a mother how do I measure the faculty's experience and teaching abilities? It is confusing for all mothers. (Parents #8)
>
> All chains are marketing their competitive advantages. They only advertise the attractive features but they cannot ensure teaching quality. My school has attractive facilities but some teachers are not so good. (Student #2)

5.2.3 Customer Perceptions Regarding Prices in Franchised Schools

Our interviewees point out the fact that franchised chains offer different fee structures; they talk about $10–$30 per month in primary and secondary schools and $50–$70 per month in higher secondary schools. Most of our respondents are satisfied and consider that the fees are adapted to their incomes.

> Fees in franchised schools are low and the quality of education is satisfactory. For parents who can't even afford to pay these reasonable fees, franchisees offer them a fee reduction. Personally, I am happy with the school fee structure and also with its services. (Parents #4)
>
> There is a wide range of fee structures within franchised chains. I am sure every chain focuses on different groups of customers according to their incomes. This is why we have diversified fee structures. It is a sad reality; we have a large number of poor people but fortunately we also have local franchised schools which are at least offering fees according to parents' spending capacity (Student #7)
>
> I am happy with the fees of franchised schools. Fees are reasonably structured for parents. Our children are also our asset. We must invest in them and especially in their education. I am so happy that these franchised schools have offered us an affordable opportunity to improve our children's education. (Parents #6)

A few interviewees agree that fees in franchised schools are reasonable but do not like the fact that franchisees are in business to make money. Some others consider the fees to be too high and argue that franchisees are making excessive profits.

> To be honest with you, I agree that fees in franchised schools are already low, but not completely justified. I am not asking franchisees to minimize their profits but as a senior citizen and a mother, I am just suggesting that education should not become an ultimate source of making money for anyone. In my view, when franchisees break even and enrolments still increase, then franchisees should reduce the fees. They would be able to

cover their expenses and have enough to live. I don't agree with educational franchisees focusing on maximizing their profits. (Parents #2)

Very few interviewees argue that there is no balance between the fees charged and the services provided by the franchised chains.

I don't see a good balance between fees and services in franchised schools. I can get the same services at a lower price in other, unknown schools. Maybe costs are higher in franchised schools because they advertise and spend money on managing the brand. But I believe that they charge more and provide fewer services than some of the other schools. (Student #3)

5.3 Customer Perceptions Regarding the Social Achievements of Franchising in the Education Sector

5.3.1 Customer Perceptions Regarding the Benefits of Franchising for Society

Several customers explain that franchising in the education sector offers multiple benefits for society, e.g., education provision, improvement of literacy rates,[10] creation of employment opportunities, and generation of entrepreneurial opportunities for local investors. Some respondents mention that even though franchised schools charge fees, they regularly offer scholarships,[11] awards,[12] and rewards[13] for bright students and students in need and/or reduce fee structures for orphans and/or even offer free education for deserving students.[14] In addition, the fees are designed according to the income and spending statistics of customers and are affordable for a large part of the population in Pakistan. Therefore, franchising in the education sector is serving a social cause in Pakistan and can thus be referred to as "social franchising."

Franchisors motivate parents to educate their children through TV advertisement. They are promoting education in our society. (Student #1)

Franchising has increased the importance given to education in our society. These chains are providing schools where children can study full-time. Even some famous private tutoring academies have started to franchise their concept. (Parents #8)

Teachers in franchised schools enable students to strengthen their communication skills and encourage them to interact and increase their confidence level. When a student is confident in his communication skills, he will then not hesitate to apply for jobs and he will

---

[10]Franchising in the education sector was launched in 2002. The literacy rate in the year 2000 was 42.7%, whereas in the year 2014, it was 59.90% for adults and young people aged 15 years or over by UNESCO.

[11]Some chains offer 100% scholarships for students who achieve 90% marks.

[12]Some chains give brand new cars to the top three students.

[13]Some chains offer financial rewards of up to Rs. 300,000 for top students along with fee reductions.

[14]If parents apply for a fee waiver because of poverty, some chains allow it if appropriate.

share his ideas with others and become an active member of society. In addition, he will be a model for those who don't want to continue their studies. I think many people will want to be educated because of franchising. (Student #9)

    If franchised schools weren't available, then we would have no other reasonable option. On the one hand, private schools like [Company Name] are very expensive. Most people can't pay the fees they ask for. On the other hand, the performance of public schools is very poor. Therefore, I see franchised schools as a suitable alternative for good-quality education. (Parents #1)

5.3.2 Customer Perceptions Regarding Benefits for Students in Rural Areas (Above All Girls)

Recently, supranational organizations (e.g., UNESCO, UNICEF, USAID, and OECD) and some governments (e.g., the USA and Germany) have started making massive investments in improving the education sector in Pakistan. One of their objectives is to eliminate the discrimination toward educating girls. It has slightly shifted the cultural norms regarding girl's education. This has slightly shifted the cultural norms regarding girls' education. Along with these investments, the religious ideology/belief in Pakistan already brings a strong support to educating girls. Franchised schools have provided education opportunities for girls, especially in rural areas. Several interviewees mention that educational chains have a special impact on girls. In the past, one of the reasons for low literacy rates in rural areas was parent concerns about the safety and mobility of their daughters from the rural areas[15] to towns or cities. Recently, the expansion of chains in rural areas has made education accessible to girls living in these areas. Additionally, the presence of schools in rural areas has reduced education costs for students who used to travel to other cities for education. Many parents see franchised schools as an affordable and accessible education opportunity for their daughters.

    There was only one school in our area; it was a public school. Now, I can't even count how many franchised schools there are in my area, and all the schools are full of students. Most of us remained uneducated because there were no schools around our village. Now, our children are educated thanks to these franchised schools. (Parents #2)

    Girls in my area were totally illiterate. Even my sister hardly passed primary. We had one primary public school for girls. Our cultural and social norms don't allow young girls to travel alone for education and, nowadays, I don't know a single girl in my village who isn't going to school. Indeed, it's a new trend; more and more girls are going to school and they usually get better grades than boys. Franchising has made education possible for girls. (Student #6)

---

[15]Sixty-two percent of the population lives in rural areas in Pakistan according to a 2014 World Bank report.

5.3.3 Customer Perceptions Regarding Benefits for Employment

Franchising has emerged as a positive competitive force for the economy. These chains have created numerous employment opportunities for graduates which have helped the labor market to stabilize in Pakistan. Indeed, some interviewees assert that educational chains constitute a new employment industry, with opportunities not limited to educated people (teaching staff) but also opened to untrained people (nonteaching staff, i.e., technicians).

I graduated from Lahore and I wanted to live in my village, so I applied for a job in a franchised school here and I got the job. My children are also studying on this campus. My colleagues are also from surrounding villages. Our government should be responsible for creating jobs for us. But in fact, these chains are making our dreams true, and not the government. (Parents #4)

> I see chains as an emerging source of employment opportunities for fresh graduates. My teachers are young and I would love to teach in a franchised school after graduation. (Student #5)
>
> Franchisees get returns on investments, teachers get employments and students get education. It's win-win situation for everyone. I guess there are many other microbusinesses connected to the schools such as food shops. They are all flourishing. (Student #9)

5.4 Customer Perceptions Regarding Opportunities and Challenges for Franchised Chains

5.4.1 Customer Perceptions Regarding Opportunities for Franchised Chains

The increasing population and educational demand have provided many growth opportunities for franchised chains. The public schooling sector, with very few established schools when compared to the increasing population and with a lack of financial, human, and strategic resources, is facing a severe crisis. Conversely, franchised chains are growing, and some of them (e.g., The Smart School) have recently expanded outside Pakistan into countries such as Bangladesh, the United Arab Emirates, and Saudi Arabia. According to many interviewees, franchised chains are growing fast.

> Franchising will grow because it is a solution to our social pain. Our government must support these educational groups because they have experience and potential for the future. They must be encouraged to serve our society. (Parents #8)
>
> These chains will grow fast because they know the demands of local markets and they have a lot of experience. Indeed, we will need more franchised chains in the future. (Parents #7)
>
> Franchising is an interesting concept for everyone. It's successful in Pakistan. I think other countries facing problems in terms of education should also adopt franchising. I am sure these franchised schools will grow and never close. (Student #1)

5.4.2 Customer Perceptions Regarding Issues Faced by and Drawbacks of Franchised Chains

Some customers identify a few issues franchised schools have to face, e.g., teacher recruitment in rural areas, increasing competition, finding the balance between commercial and social goals, etc.

> In my view, school performance depends on teacher skills. Some campuses have experienced teachers and some try to save money by hiring inexperienced teachers. (Parents #3)
>
> Franchisees concentrate on providing facilities like beautiful classrooms and comfortable furniture instead of investing in our learning and entertaining activities. (Student #4)
>
> I think educational chains are just like any other commercial businesses. Most franchisors are like politicians or businessmen and they simply want to maximize their investments. Anyhow, I also appreciate that they offer reasonable fees but they need to focus on education rather than money. (Parents #5)

6 Discussion

6.1 Summary of Findings

Franchising in the education sector in Pakistan is important; there are 22 franchised chains in the education sector, including 2944 schools and approximately 1,050,900 students.[16] Globally, our findings show that customers perceive franchising in the education sector in Pakistan as a successful phenomenon. First, interviewed customers usually consider that franchised schools are more performing than public schools. Second, the main characteristics of commercial franchising are also highlighted by our respondents, mainly in terms of the importance of brand name, the quality of services, and an adequate pricing policy. Third, interviewees also see the social aspect of franchising in the education sector, mainly in terms of the benefits of franchising for society, the benefits for students in rural areas (above all for girls), and the benefits for employment. Fourth, customers also perceive some opportunities, issues, and drawbacks associated with franchising in the education sector.

6.2 Contributions to Research

Our research contributes to the franchising literature in several ways. First, our findings on customer perceptions regarding franchising in the education sector in Pakistan widen the limited literature on customer perceptions regarding franchising. Second, our study builds on the franchising literature dealing with emerging

---

[16]These figures are estimated by the authors based on their review of franchised chain websites.

markets by focusing on an underexplored market, i.e., Pakistan. Third, our research contributes to the stream of franchising literature dealing with social franchising by focusing on the education sector. Fourth, our study provides insights that can be used by other markets facing similar education-related challenges. In summary, our research contributes to better assessing the application of business strategies to social enterprises and the way customers perceive this recent trend.

6.3 Contributions to Practice

Our research contributes to the practice in a number of ways. First, parent and student perceptions regarding franchising in the education sector are important factors for franchisors and franchisees to consider. Indeed, through a better understanding and assessment of these perceptions, franchisors can better adapt their concept and franchisees their local offers to these parent and student expectations. Moreover, this research can be viewed by franchise experts, franchisors, franchisees, and various stakeholders, such as NGOs, governments and supranational organizations, and public policy organizations, as an overview of franchising in the education sector in Pakistan. Finally, our research findings could be considered guidelines for international agencies—such as the OECD, the United Nations, the USAID, and the World Bank—that invest in improving the social sector in general, and education in particular, in emerging markets.

6.4 Limitations and Tracks for Future Research

This paper has some limitations that offer tracks for future research. First, this is a work in progress and only 17 interviews with parents and students have been conducted and analyzed. Mixing this customer approach with franchisor, franchisee and employee approaches will be relevant to get a global overview of franchising in the education sector in Pakistan. Second, our empirical study deals exclusively with Pakistan. A cross-country study would be of interest, for instance, comparing franchising in the education sector in Pakistan and in India or in South Africa. Third, there is a "positivity bias" in our empirical study. Indeed, most parents and students usually say that the school they have chosen—as well as its status: franchised, company owned, public, etc.—is good and provides good-quality education. They will not admit during an interview that they have made a bad decision in choosing that particular school. Fourth, a quantitative approach at customer, employee, and/or franchisee levels could also give relevant insights on the development of franchising in the education sector. Fifth, the development of franchising in other social sectors than education could be examined, e.g., in the healthcare sector.

References

Allied Schools Website (2015) http://www.alliedschools.edu.pk/about_us.php. Accessed 15 Oct 2015

Alon I, Welsh D (2002) Global franchising in emerging and transitioning economies. Int J Bus Econ 2(1):332–343

Augment (2015) Franchise opportunities in Pakistan. http://augmentfranchise.com/. Accessed 8 Jan 2015

Beaconhouse School System Website (2016) http://www.beaconhouse.edu.pk/. Accessed 10 Jan 2016

Brown P, Lauder H (1996) Education, globalization and economic development. J Educ Policy 11 (1):1–25

Casson M (2011) Franchising the American elementary and secondary educational system. Forum Soc Econ 34(1–2):61–70

Dant RP, Grünhagen M (2014) International franchising research: some thoughts on the what, where, when, and how. J Mark Channels 21(3):124–132

Dant RP, Meiseberg B (2015) A cross-national comparison of the role of habit in linkages between customer satisfaction and firm reputation and their effects on firm-level outcomes in franchising. In: Interfirm networks. Springer, New York, pp 99–124

Dar-e-Arqam Website (2015) http://dar-e-arqam.org.pk/. Accessed 15 Oct 2015

Davies S, Aurini J (2006) The franchising of private tutoring: a view from Canada. Phi Delta Kappan 88(2):123–128

Doherty AM, Chen X, Alexander N (2014) The franchise relationship in China: agency and institutional theory perspectives. Eur J Mark 48(9/10):1664–1689

Grünhagen M, Dant RP, Zhu M (2012) Emerging consumer perspectives on American franchise offerings: variety seeking behavior in China. J Small Bus Manag 50(4):596–620

Hutchison AJ, Johnston LH, Breckon JD (2010) Using QSR-NVivo to facilitate the development of a grounded theory project: an account of a worked example. Int J Soc Res Methodol 13 (4):283–302

Jeon HJJ, Dant RP, Gleiberman AM (2014) National versus local brands: examining the influences of credence and experience services on customer perceptions of quality in a franchise context. Eur J Mark 48(7/8):1511–1535

Jeon HJJ, Meiseberg B, Dant RP, Grünhagen M (2015) Cultural convergence in emerging markets: the case of McDonald's in China and India. J Small Bus Manag. doi:10.1111/jsbm.12168

Li Choy C, Goh M (1997) Franchising—a vehicle for entrepreneurship development in Singapore. Small Enterp Dev 8(2):47–53

Malik ZI (2011) Pakistan education statistics. Ministry of Professional and Technical Training, Government of Pakistan, Islamabad

Malik AB, Amin N, Ahmad K, Mukhtar ME, Saleem M, Kakli MB (2014) Pakistan education for all. Islamabad

Perrigot R, Herrbach O (2012) The plural form from the inside: a study of franchisee perception of company-owned outlets within their network. Int J Retail Distrib Manag 40(7):544–563

Perrigot R, Hussain D, Windsperger J (2015) An investigation into independent small business owners' perception of franchisee relationships. Int J Retail Distrib Manag 43(8):693–711

Perrigot R, Basset G, Meiseberg B (2017) Resale prices in franchising: insights from franchisee perspectives. J Prod Brand Manag

Preble JF, Hoffman RC (2006) Strategies for business format franchisors to expand into global markets. J Mark Channels 13(3):29–50

Siccama CJ, Penna S (2008) Enhancing validity of a qualitative dissertation research study by using NVivo. Qual Res J 8(2):91–103

The Educators Website (2015) http://www.educators.edu.pk/. Accessed 15 Oct 2015

The World Bank (2015) Investing in the education market: strengthening private schools for the rural poor. http://www.worldbank.org/en/programs/sief-trust-fund/brief/investing-in-the-edu cation-market-strengthening-private-schools-for-the-rural-poor. Accessed 18 Oct 2015

UNESCO (2012) Education in Pakistan: education for all global monitoring report

Watson A, Kirby DA (2004) Public perceptions of franchising in Britain: releasing the potential. J Small Bus Enterp Dev 11(1):75–83

Welsh DH, Alon I, Falbe CM (2006) An examination of international retail franchising in emerging markets. J Small Bus Manag 44(1):130–149

World Bank (2014) Global economic prospects. A World Bank Group, Washington, DC

Part II
Cooperatives

Profiling the Natural Food Cooperative Members: Strategic Implications in Terms of Market Positioning and Governance

Odile Streed, Gérard Cliquet, and Albert Kagan

Abstract This article contributes to current research by assessing the specificities and key points of differentiation of natural and organic food cooperative members versus customers of private natural food retailers. This is accomplished by identifying and comparing behavioral, attitudinal, and lifestyle characteristics of members and non-members in regard to organic food and sustainable practices such as buying local. Results reveal that food cooperative members are for the most part more "idealistic" than non-members but also identify a duality between idealism and pragmatism among members that could trigger serious governance issues. Consequently recommendations in terms of target market, positioning, communication, customer experience, and governance are determined.

1 Introduction

Popular in the 1960s and 1970s (Wertheim 1976), the "new wave" food cooperatives have experienced renewed interest in the USA fueled by the growing appeal for organic food. Simultaneously, chains such as Whole Foods Market (WFM), Natural Grocers, and Trader Joe's have emerged with sustained growth catering to middle- to upper-middle-class customers. At first glance, both private organic retailers and natural food cooperatives seem to target similar customers interested in purchasing quality fresh food from ethical-minded retailers. Overtime the specificity of the food cooperative model seems to have eroded as those organizations today tend to mimic other health food stores in their assortment and prices. Is this situation sustainable in the long range?

Food cooperatives have a long tradition in Europe starting with the Rochdale Equitable Pioneers' Society in England in 1844 (Lambert 1968). Many consumer

O. Streed (✉) • A. Kagan
Concordia College, Moorhead, MN, USA
e-mail: streed@cord.edu; aaajk@cord.edu

G. Cliquet
CREM UMR CNRS 6211, University of Rennes 1, Rennes, France
e-mail: Gerard.cliquet@univ-rennes1.fr

cooperatives have then been created throughout Europe, but few are still operational unlike retailer's cooperatives which are strongly represented in France (E. Leclerc, Intermarché, Système U), Germany (Edeka), the Netherlands (Spar), Switzerland (Migros), etc. In France, for instance, Coop, a food consumer cooperative, was important till the 1960s with a large number of food convenience stores. Then they could not invest enough in order to follow the hypermarket movement developed by company-owned retail companies or food retailer's cooperatives. And now only four regional Coop food cooperatives are still in business: Coop Alsace, Coop Atlantique, Coop Champagne, and Coop Normandie-Picardie (Clercet and Gouil 2006). Hence one can ponder whether these new food cooperatives can survive in the USA.

Ashforth and Reingen (2014) focused on the difficulty for food cooperatives to stay true to their mission due to the tension exacerbated by the growing competition on traditional grocers between idealism and pragmatism. This is not a new situation; Sommer et al. (1981) had already identified this dichotomy as a potential impediment for survival for consumer cooperatives. Sommer et al. criticized the conclusions reached by Curhan and Wertheim (1972–1973, 1975–1976) who believed that the main motivation for cooperative members was the sense of belonging along with social community identity, while other contemporary authors believed that low price and food quality were the main reasons for joining a cooperative. In view of these results, Curhan and Wertheim (1972–1973, 1975–1976) were concerned about the long-range survival of food cooperatives based on the competing value of social belongingness. As food cooperatives began to lose their low price advantage and uniqueness in product assortment, they tried to compete with their high-end competitors and started to attract more affluent customers, interested in the hedonic aspects of purchasing organic food. This competitive position was a departure from the traditional core membership of customers focused on social justice with strong community ties. However one may wonder whether this strategy is sustainable when high-end retailers such as WFM are present in local markets.

During the 1970s natural food cooperatives competed on price, food quality, and the availability of specialty items hard to find in regular supermarkets. With the development of large health food chains such as WFM, and the growing presence of traditional grocers in the organic and natural food distribution, food cooperatives needed to reinvent themselves. It is now unrealistic for a food cooperative to use low price as a sole competitive advantage against traditional supermarkets that may offer similar brands at lower prices. Natural food cooperatives are also known for implementing short distribution circuits and to favor local food supplies. However, both WFM and Natural Grocers are also positioning themselves as supporters of local sourcing. How can natural food cooperatives differentiate themselves versus their competition? What are the key motivations of their members?

In this paper, the authors propose to research whether food cooperative members still respond to social engagement values as well as continuing to support idealistic versus pragmatic or hedonic values. According to Zitcer (2015), food cooperatives today are wrestling with several moral challenges that conflict with their founding

principles of social justice and ethical consumption: co-op memberships have become exclusive and attract an elite who can afford to pay high prices and appreciate the food selection of this organizational model. To date few recent academic articles have focused on specificities and points of differentiation of the natural food cooperatives in comparison to traditional grocers and major health food retailers. This paper attempts to fill part of this research gap.

This paper starts with theoretical backgrounds and hypothesis definition. Then after a description of the methodology and the data, results are presented, analyzed, and discussed.

2 Theoretical Backgrounds

In this section food cooperatives are defined within the context of organic and local food products. Various motivations of cooperative members regarding as opposed to idealism and pragmatism are discussed prior to determining a number of hypotheses on the impetus to becoming a member of a food cooperative.

2.1 Food Cooperatives

According to Novkovic (2008), cooperatives serve as "laboratories for social innovation" and promote ethical business practices and social entrepreneurship. Cooperatives have the ability to function through democratic governance since they are owned by members. "The cooperative movement is composed of individuals working in groups and networks to bring people, materials and products together to meet people's needs without pursuing profits over social well-being" Beach (2011). Established at the turn of the twentieth century, the original purpose of the food cooperatives was to provide an outlet for farmers to sell their goods locally at a reasonable price. Grounded in their communities, food cooperatives maintained this tradition during the 1960s and 1970s by establishing themselves in economically challenged areas and acting as a lifeline for families below the poverty level (Gabriel and Lang 2005; Johnston 2008).

The founding purpose of cooperatives, as determined by the Rochdale pioneers, was to join forces to reduce costs (Mercer 1947; Thompson 1994). Therefore retail cooperatives became increasingly popular during difficult economic times but lost momentum during prosperous periods. Prevalent in the 1930s and 1940s, the "supermarket cooperatives" consisting of larger stores with professional management and staff started to compete in the 1960s with the "new wave" cooperatives, called participative cooperatives. These new wave outlets were small entities selling organic or natural food and relying mostly on volunteer labor. They emerged as an alternative model with leftist social movement tendencies. The new wave cooperative memberships have indeed been entrenched primarily on ideological

reasons such as social justice and community empowerment (Cox 1994; Hoyt 1995; Finch et al. 1998).

2.2   *Organic Versus Local*

Organic food shoppers are not only motivated by health concerns but are also about the environment (Schifferstein and Oude Ophuis 1998; Dimitri and Greene 2002; Harper and Makatouni 2002; Zepeda and Leviten-Reid 2004; Zepeda and Deal 2009; Bartels and Onwezen 2014). Heavy organic shoppers usually want to know the origin of their food and to build relationships with the farmers (Zepeda and Deal 2009). However, Wier et al. (2008) argue that personal values such as being health conscious are more important than social values when making a decision to purchase organic food. Bartels and Hoogendam (2010) argue that health, safety, quality, and hedonic elements are the leading factors for purchasing organic food.

Nie and Zepeda (2011) identified four lifestyle segments to categorize the US food shopper in regard to purchasing organic food: The adventurous segment comprises individuals who are the most active purchasers of organic and local food and are the most frequent purchasers at farmers markets. This group often follows special diets for health or religious reasons and is the most environmentally conscious. This category is younger and many belonging to minority groups. Rational customers who have a higher income are active organic and local food shoppers who are not as involved as the adventurous segment, but are also health conscious and like cooking. The rational group prefers to shop in specialty stores and farmers market. They are typically middle aged and white. Careless consumers are the least likely to purchase organic or local food. This category's primary motivation is convenience. Most do not enjoy cooking. The last segment, named conservative uninvolved consumers, also prioritizes convenience in their purchase decision. This group is occasional purchasers of organic food and is very brand oriented. Although they do not particularly enjoy cooking, they cook frequently due to their lower income level.

Roininen et al. (2006) determined that local and organic food buyers have distinct motives: local food shoppers bought local because it supported the local economy and products are fresher and more trustworthy, while organic shoppers stressed health, safety, and concern for the environment as their main reason for purchasing organic food. Jefferson-Moore et al. (2014) highlighted the fact that organic and local food was somewhat interchangeable in the customer's mind when consumers are not educated about nutrition issues. Similar to organic food, local food was perceived as healthier, more nutritious, and tastier than conventionally sourced food items.

According to Zepeda and Leviten-Reid (2004), local food shoppers are characterized by their concerns for the environment and their community involvement. Zepeda and Deal (2009) determined that approximately one third of the organic shoppers prioritized local versus organic food. This purchase decision stems mostly

from the consumer's distrust for large corporations while maintaining a positive and trusting perception of local farmers. They believe that buying closer to home is safer. Additionally, Jefferson-Moore et al. (2013) argue that consumers most often do not clearly differentiate between local food and certified organic food. Also Jefferson-Moore et al. (2013) found that consumers are willing to pay more for locally grown food, even without an organic label that they do not necessarily trust.

2.3   Trade-Off Between Ideology and Pragmatism

Johnston (2008) defines the modern "citizen consumer" as a consumer with strong environmental awareness who consumes carefully and differently, while the "hybrid citizen consumer" is characterized as a consumer trying to reconcile choice, status, and environmental concerns. She argues however that it is difficult to balance these three consumerist interests and that choice and status usually dominate in a traditional retailing model: these trade-offs are not necessarily attractive to the common natural food consumer who would be more rewarded by choice and status and a "feel good" impression for patronizing a self-positioned ethical and sustainable private retail chain. Various studies (Grunert 1993; Grunert and Juhl 1995; Bartels and Onwezen 2014) indicate consumers who are particularly concerned about social and environmental issues are less likely to have hedonic expectations in their shopping experience compared to other customers.

Paff-Ogle et al. (2004) argue that although consumption seems to act as the key motivator, certain purchases are still influenced by strong social consciousness (Kim and Damhorst 1998; Kim et al. 1999; Ray and Anderson 2000; Domina and Koch 2002; Shaw and Newholm 2002). Paff-Ogle et al. (2004) describe these "social-minded" consumers as "socially responsible, ethical, culturally creative, green and/or environmentally responsible." According to the authors, social identity stems from kinship and attachment to an organization. According to Curhan and Wertheim (1972–1973), cooperative memberships require certain sacrifices from their members in terms of restricted choices and governance uncertainties that could lead to dissatisfaction. Somerville (2007) considers that cooperatives could be characterized by their "institutional" form or their "values." He believes however that the institutional form is not sufficient by itself to distinguish it from other forms of enterprises and that its substance and long-term survival comes from its core values. Brown (2003) considers that cooperatives are a form of social enterprise. Somerville (2007) and Cornforth (1988) argue that over time the cooperative may lose its identity and become similar to other forms of capitalist enterprises. The tensions inside the cooperative may lead to degeneration where the cooperative starts abandoning its founding principles due to weak governance. Commenting on the current revival of cooperative enterprises, Somerville (2007) identifies a new form of enterprise called "community cooperatives." The difference between these organizations and the traditional cooperatives is that they emphasize above all community ownership by requiring employment and residence in a specific

geographic area to become a member. Their main purpose is to enhance the well-being of a community.

2.4   What Are the Motivations to Become a Member?

We examine here the motivations to become a food consumer cooperative member and develop hypotheses. It is important to note that the authors are comparing the motivations of members of food cooperatives to those of individuals who are also regular purchasers of organic food but haven't joined a food cooperative. The hypotheses below are therefore formulated accordingly.

Originally the motivations of members to shop at participatory cooperative were lower prices, quality, and natural foods (Finch et al. 1998), while the reasons to shop at supermarket cooperatives were convenience, low price, and organizational (cooperative) philosophy including consumer protection (Sommer and Fjeld 1983). By contrast, low prices, convenience, and a variety of assortments were the key motives to shop at commercial supermarkets. Today it is increasingly difficult to use those criteria to distinguish between these three forms of organizations. Participating cooperatives have evolved into organic supermarkets, while commercial supermarkets have started to offer organic foods. A number of retailers such as WFM or Natural Grocers are 100% organic and command higher prices. Therefore one may wonder what the criteria are that currently differentiate the members of contemporary food cooperatives from the customers of commercial supermarkets.

According to Wilkins (1996), food cooperative members have a strong preference for locally produced food versus non-members. This preference stems mostly from environmental concerns. Sommer et al. (1983) researched the respective profiles of both participatory and supermarket cooperative members and customers of commercial supermarkets. Reasons to buy local may vary: concerns for sustainability and environmental concerns may come first, while rejection of "industrialized" agriculture controlled by large conglomerates may also be present (Adams and Salois 2010). Additionally, Roininen et al. (2006) stress that organic and local food shoppers have different motivations and that local food shoppers mainly want to support their local community for altruistic reasons, while organic shoppers are mostly motivated by personal concerns. These postulates are used to pose the first hypotheses:

Hypothesis 1 (H1) *Members of food cooperatives are strongly concerned by environmental issues.*

Hypothesis 2 (H2) *Buying local food is more important than buying organic products for food cooperative members.*

According to Sommer et al. (1983), members in participatory cooperatives were also particularly satisfied with the social atmosphere and the ability to purchase organic products. Similarly, Curhan and Wertheim (1972, 1975) and Bartels and Onwezen (2014) emphasize the correlation between social identification among

members and positive attitudes toward organic and natural food. One can therefore develop the subsequent assumption:

Hypothesis 3 (H3) *Social belongingness is the main motivator for joining a food cooperative.*

Recently, Marini et al. (2015) showed that integration of consumer cooperatives could lead to a better welfare under some specific conditions compared to profit maximizing retail companies. Hibbert et al. (2003) highlighted the volunteer motivation for participating to a community-based food cooperative for disadvantaged people. One may also wonder if customers are ready to sacrifice hedonic features for their ideals (Grunert 1993; Grunert and Juhl 1995; Bartels and Onwezen 2014) and to potentially pay higher prices to support their values (Zitcer 2015). This leads us to the following hypotheses:

Hypothesis 4 (H4) *Food cooperatives' members are more community minded than non-members.*

Hypothesis 5 (H5) *Food cooperative members are more idealistic than non-members and are willing to make sacrifices in order to support their local food cooperative.*

Hypothesis 6 (H6) *Hedonic features are more important to non-members than to members of food cooperatives.*

Hypothesis 7 (H7) *Food cooperative members are willing to potentially pay higher prices in order to support their local food cooperative.*

Hypothesis 8 (H8) *Altruistic values are the strongest behavioral predictors for shopping at a food cooperative.*

3   Methodology

The preferred methodology was an empirical research study consisting of a self-administered questionnaire that was implemented as an electronic survey. In order to ensure that all respondents had an interest in natural and organic food, only individuals who regularly purchased organic food were selected for the survey. And to further qualify their responses, the authors also asked respondents to specify how much of their food purchase was made up of organic products.

3.1   Measurements

Scales used in the survey were adapted from the literature and are presented in Table 1. They consisted in the following constructs: community mindedness, green values, health consciousness, value consciousness, local preference, and social belongingness. All were measured on Likert scales of 1–5.

Table 1 Review of the variables selected for the empirical assessment

Selected constructs	Items	Authors
Community mindedness	I like to work on community projects Active on social or church org. Volunteer work	Wells and Tigert (1971) Lumpkin and Darden (1982) Lumpkin and Hunt (1989)
Green values	Products do not harm the environment Consider environment impact Purchase habits reflect environmental concerns Environmentally responsible Willing to be inconvenienced Willing to make personal sacrifices Willing to stop buying products from polluting companies	Haws et al. (2010)
Health consciousness	Very health conscious Sacrifices to eat healthy Important to know how to eat healthy	Schifferstein and Oude Ophuis (1998)
Value consciousness	Very concerned about low price and product quality Try to maximize the quality I get for the money I spend I like to get my money's worth When I buy organic food I choose stores with the lowest price	Lichtenstein et al. (1993)
Local preference	Local products are more environmentally friendly Local products are healthier Local products taste better The quality is better for local products Local products are cheaper I am ready to pay a premium for local products	Denver and Jensen (2014)
Social belongingness	I like to shop where people know me I try to get to know the clerks I like to shop where the clerks know me	Lumpkin (1985)
	I like to shop at locally owned stores	Gaski and Etzel (1986)

Each of the constructs outlined in Table 1 was tested for reliability using the Cronbach's α values. All were equal or higher than 0.70. The results are presented in Table 2.

3.2   Sample Description

Sample consisted of 88 usable questionnaires evenly distributed, 48 and 40 responses, respectively, between members and non-members of natural food cooperatives. A total of 58 of the respondents were under the age of 40 and 30 over

Table 2 Cronbach's α

elected Constructs	Cronbach's α
Community mindedness	0.768
Green values	0.900
Health consciousness	0.768
Value consciousness	0.707
Local preference	0.745
Social belongingness	0.874

40 years of age. The sample was composed of 20 students, while 22 were managers or professionals; another 26 were employees while 20 participants were placed in the other category based upon self-selection. Among the student respondents, 4 were cooperative members and 16 non-members. All respondents were regular purchasers of organic food. It is important to note that in the sample, the cooperative members were slightly older than non-members with 26 members under 40 vs. 32 non-members over 40 years of age.

4   Statistical Analysis

In order to test for differences between food cooperative members and non-members, an independent sample t-test was conducted on the entire sample. Key results are presented in Table 3. Although all respondents had to be regular purchasers of organic food, in order to participate in the survey, the authors wanted to take into consideration the percentage represented by organic products in their overall food purchase and control that factor. The same t-test was therefore conducted on a restricted sample of respondents whose overall food purchase was made up of at least 20% organic products. The findings of this second t-test analysis were fairly consistent between the two samples and are outlined in Table 4.

In both cases, the social aspect of the customer experience is essential to food cooperative members: these customers want to shop at a place where the clerks and other customers know them; they want to engage in relationships and support their community by buying local. They are also willing to pay a premium to support their local food cooperative if necessary. In this circumstance local takes even precedence over the USDA organic label. As a contrast, noncooperative members, who are also regular purchasers of organic food, are however more value conscious and will shop where prices are the lowest. They frequently compare prices across stores and are not as engaged socially. It is also interesting to note that there are no significant differences in terms of community mindedness and health consciousness between cooperative members and non-members. Therefore those two criteria are not distinguishable between food cooperatives and commercial supermarkets. In order to refine the analysis, three additional constructs were developed and tested for reliability: willingness to sacrifice, attitude toward organic food, and hedonic features. Their Cronbach's α scores are all above 0.70 at 0.88, 0.73, and 0.73,

Table 3 Differences between cooperative members and non-members (*t*-test results)

Variables	Member or non-member Y/N	Mean	Standard deviation	Sig.
Community mindedness	Y	3.61	1.004	0.332
	N	3.40	1.049	
Green values	Y	4.31	0.481	0.000***
	N	3.78	0.798	
Health consciousness	Y	4.35	0.476	0.382
	N	4.24	0.610	
Value consciousness	Y	3.81	0.621	0.065*
	N	4.04	0.532	
Local preference	Y	3.82	0.512	0.062*
	N	3.62	0.510	
Social belongingness	Y	3.84	0.670	0.000***
	N	2.99	0.881	
Willingness to sacrifice	Y	4.20	0.44	0.000***
	N	3.70	0.73	
Attitude toward organic food	Y	3.71	0.523	0.019**
	N	3.40	0.686	
Willing to pay a premium for locally grown food even without the USDA organic label	Y	3.88	0.815	0.002***
	N	3.27	0.949	
It is important to me to know the origin of my food as much as possible	Y	4.25	0.700	0.002***
	N	3.60	1.081	
Assortment variety is important	Y	3.21	1.031	0.020**
	N	3.73	1.049	
Will pay a premium to purchase from a food co-op versus a regular grocery chain	Y	4.08	0.613	0.000***
	N	3.05	1.011	
Hedonic features	Y	3.06	0.669	0.042**
	N	2.74	0.779	

Significance values: *P < 0.10, **P < 0.05, ***P < 0.01

respectively. More details about the composition of these three constructs are available in Appendix. All three constructs show statistically significant differences between members and non-members of food cooperatives. In consideration of these preliminary results, the willingness to sacrifice in terms of choice, prices, and/or convenience may be the key differentiator between members and non-members of food cooperatives. Very similar results were obtained by conducting a cross-tabulation analysis on median split values for these respective constructs. The results in Table 5 are consistent with the findings of the t-test analyses and confirm the clear distinctions between members and non-members in terms of values.

The construct "willingness to sacrifice" represents the idealistic aspirations of the respondents. The literature has identified a duality between idealism and pragmatism among organic food purchasers that potentially creates serious governance disparities

Table 4 Differences between cooperative members and non-members (median split, chi-square results)

Variables (median split)	Median	Chi-square	Sig.
Community mindedness	3.67	1.616	0.204
Green values	4.00	5.191	0.023**
Health consciousness	4.33	0.013	0.909
Value consciousness	4.00	2.085	0.149
Local preference	3.83	4.048	0.044**
Social belongingness	3.5	13.372	0.000***
Willingness to sacrifice	4.00	5.383	0.020**
Attitude toward organic food	3.60	3.046	0.081*
Willing to pay a premium for locally grown food even without the USDA organic label	4.00	4.826	0.028**
It is important to me to know the origin of my food as much as possible	4.00	2.530	0.112
Assortment variety is important	4.00	5.834	0.016**
Will pay a premium to purchase from a food co-op versus a regular grocery chain	4.00	5.769	0.016**
Hedonic features	3.00	2.272	0.132

Significance values: *P < 0.10, **P < 0.05, ***P < 0.01

for food cooperatives (Ashforth and Reingen 2014). In order to further research whether this duality was present in this study sample, several dummy variables were created and used to conduct a cross-tabulation analyses. The cross-tabulation analyses yielded the following results: it appears that only 56% of the members of food cooperatives scored high in their willingness to sacrifice (chi-square 0.020). This implies that a small majority has strong idealistic values while the rest of the members may be more pragmatic.

Additionally, the cross-tabulation of the two dummy variables social belongingness and willingness to sacrifice showed that the participants who had low idealistic scores also had low social belongingness scores. Since social belongingness appears to be one of the cohesive factors of a food cooperative, it is worrisome that almost half of the members do not highly respond to concept. There is indeed a moderate positive correlation (0.336, P < 0.05) between those two variables. This shows the duality between the idealists and pragmatists among food cooperative members. Pragmatic food cooperative members are likely to be tempted by commercial supermarkets that may offer better prices and/or better assortment, enhanced atmospherics, or superior convenience.

What is the profile of the respondents who score high on the sacrifice index? After conducting an independent t-test analysis comparing respondents with high and low scores of willingness to sacrifice, the following statistically significant differences appeared. Individuals with high scores are typically less willing to do price comparisons across brands and are not as interested in assortment variety or shopping convenience. Instead these consumers are ready to pay a premium to purchase from a food cooperative instead of from a commercial supermarket; they

Table 5 Differences between cooperative member and non-members (among the higher purchasers of organic food: >20%) (*t*-test results)

Variables	Member or non-member Y/N	Mean	Standard deviation	Sig.
Value consciousness	Y	3.68	0.609	0.040**
	N	4.04	0.564	
Social belongingness	Y	3.91	0.670	0.000***
	N	3.15	0.881	
Willing to pay a premium for locally grown food even without the USDA organic label	Y	3.97	0.810	0.029**
	N	3.39	0.916	
Will pay a premium to purchase from a food co-op versus a regular grocery chain	Y	4.14	0.593	0.003***
	N	3.24	1.033	

Significance values: *P < 0.10, **P < 0.05, ***P < 0.01

Table 6 Ranking comparisons between food cooperative members and non-members

Ranking	Food cooperative members	Mean	Non-members	Mean
#1	Health consciousness	4.35	Health consciousness	4.24
#2	Green consciousness	4.31	Value consciousness	4.04
#3	Willingness to sacrifice	4.20	Green consciousness	3.78
#4	Social belongingness	3.84	Willingness to sacrifice	3.70
#5	Local preference	3.82	Local preference	3.62
#6	Value consciousness	3.81	Community mindedness + (organic preference)	3.40
#7	Organic preference	3.71		
#8	Community mindedness	3.61	Social belongingness	2.99
#9	Hedonic features	3.06	Hedonic features	2.74

will also typically choose to shop at a food cooperative of equal price and quality. Fair-trade and GMO-free products are more important to this market segment who is more interested in shopping at locally owned stores, to buy mostly seasonal food and to know the origin of their food. They have a more positive attitude on purchasing organic food. In addition they are more likely to prepare meals from raw ingredients, to be vegetarians, to enjoy the arts, or to garden. Last, social belongingness seems more important to them.

In order to better understand the motivations of the food cooperative members, a ranking according to the mean obtained for each of the key constructs was developed (see Table 6). Health consciousness is the number one value among respondents of both members and non-members of food cooperatives. Environmental issues along with the willingness to sacrifice are rated higher among food cooperative members than non-members. Organic preference and community mindedness are among the lowest rated categories in both groups. Non-members rate value

Table 7 Regression results ("I typically shop at a food cooperative")

Variables	Full-model estimates		
	Estimates	t	VIF
Community mindedness	0.135	1.524	1.068
Green values	0.411	4.134***	1.336
Health values	0.023	0.242*	1.265
Value consciousness	0.072	0.797	1.105
Local food attitude	0.191	2.080**	1.136
Social belongingness	0.189	1.980*	1.236
F	9.035		
R^2	40.1%		
Adjusted R^2	35.7%		
p-Value	0.000		

Significance values: *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$

consciousness as their second highest value and social belongingness as their lowest.

A series of regressions (multiple and bivariate) help to predict participant behavioral intentions such as willingness to shop at a food cooperative or willingness to pay a higher price to shop at a food cooperative. The first model, presented in Table 7, attempts to predict the intention to shop at a food cooperative:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

where:

$Y =$ I typically choose to shop at a food coop
$X_1 =$ Community mindedness
$X_2 =$ Green values
$X_3 =$ Health values
$X_4 =$ Value consciousness
$X_5 =$ Local food preference
$X_6 =$ Social belongingness

A second regression was conducted in order to predict the willingness of consumer to pay a premium to purchase from a food cooperative versus a commercial supermarket. Results are presented in Table 8.

Both models displayed a reasonable explanatory power of 40.1 and 42.4, respectively. All the VIF were below 2.0. The variables, as indicated in Table 9, were for the most part non-correlated or moderately correlated.

Both regression models were significant at $P < 0.01$, and the following constructs were significant predictors for both models: green values, local food preference, and social belongingness. Health consciousness was a statistically significant predictor in the first regression.

After conducting bivariate regressions for the remaining three new constructs, it appears that the attitude toward organic food is a poor predictor of the intention to

Table 8 Regression results ("I will pay a premium to purchase from a food cooperative versus a regular grocery chain")

Variables	Full-model estimates		
	Estimates	t	VIF
Community mindedness	0.91	1.043	1.068
Green values	0.343	3.523***	1.336
Health values	0.060	0.638	1.265
Value consciousness	−0.36	−0.410	1.105
Local food attitude	0.243	2.701***	1.136
Social belongingness	0.243	2.596**	1.236
F	9.940		
R^2	42.4%		
Adjusted R^2	38.1%		
p-Value	0.000		

Significance values: *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$

buy at a food cooperative. The regression is statistically significant ($p = 0.016$), but the R-square is only 0.066. Similarly preference for hedonic features is a poor predictor. Willingness to sacrifice is however the best predictor with an R-square of 0.363 ($p = 0.000$).

In view of these findings, the following conclusions can be made in regard to the validity of our hypotheses. Members of food cooperatives are strongly concerned by environmental issues (H1). This hypothesis was verified. The variable "green consciousness" received the second highest rating among food cooperative members. In addition the t-test analysis comparing members and non-members showed that food cooperative members are more environmentally conscious than non-members with a mean of 4.31 versus 3.78 for non-members. This variable was also the strongest predictor in the regression models. Buying local food is more important than buying organic products for food cooperative members (H2). This hypothesis was also confirmed through the t-test analyses comparing members to non-members. Local preference appears to be a significant predictor in both regression models (0.191 and t value of 2.080 at $P < 0.05$ and 0.243 and t value of 2.701 at $p < 0.01$, respectively). Social belongingness is the main motivator for joining a food cooperative (H3). This hypothesis was partly validated. Social belongingness is definitely a discriminant criterion between members and non-members, but it does not appear to be the main motivator for joining a food cooperative. Social belongingness is a statistically significant component in both regression models (0.189 and t value of 1.980 at $P < 0.1$ and 0.243 and t value of 2.596 at $P < 0.05$, respectively). Food cooperatives' members are more community minded than non-members (H4). This hypothesis was not verified. Although members seem more concerned about local preferences and social belongingness, they do not appear to be more involved in their community through volunteer work or social engagement. Food cooperative members are more idealistic than non-members and are willing to make sacrifices in order to support their local food cooperative (H5). This hypothesis was verified by testing the construct "willingness to sacrifice." This construct combined items stating sacrifices for the sake of the environment, health,

Table 9 Correlations

		Community mindedness	Green customer values	Health values	Value consciousness	Local food attitude	Social belongingness
Community mindedness	Pearson correlation	1	0.165	0.191	0.042	0.137	0.127
	Sig. (2-tailed)		0.123	0.073	0.697	0.201	0.235
Green customer values	Pearson correlation	0.165	1	0.370**	−0.178	0.183	0.328**
	Sig. (2-tailed)	0.123		0	0.095	0.086	0.002
Health values	Pearson correlation	0.191	0.370**	1	0.136	0.129	0.271*
	Sig. (2-tailed)	0.073	0		0.204	0.228	0.01
Value consciousness	Pearson correlation	0.042	−0.178	0.136	1	0.072	−0.029
	Sig. (2-tailed)	0.697	0.095	0.204		0.501	0.784
Local food attitude	Pearson correlation	0.137	0.183	0.129	0.072	1	0.314**
	Sig. (2-tailed)	0.201	0.086	0.228	0.501		0.003
Social belongingness	Pearson correlation	0.127	0.328*	0.271*	−0.029	0.314**	1
	Sig. (2-tailed)	0.235	0.002	0.01	0.784	0.003	

and local support and seemed to be an adequate proxy for testing this hypothesis. Willingness to sacrifice appears to be among the strongest predictors for supporting a food cooperative. This construct is also a differentiation criterion between members and non-members. Hedonic features are more important to non-members than to members of food cooperatives (H6). Surprisingly this hypothesis was not verified. Furthermore, the opposite appears to be true, although the statistical results are fairly weak. This may be explained by the duality between idealistic values and pragmatic values among cooperative members. Certain members may be solely attracted to the ability to purchase certain items not available in commercial supermarkets but may still be attracted to the general shopping experience in natural food retailers such as WFM. Food cooperative members are willing to pay higher prices in order to support their local cooperative (H7). This hypothesis was strongly verified. Members are not as price conscious as non-members. Value consciousness is ranked as the second highest for non-members but is much lower for food cooperative members. Altruistic values are the strongest behavioral predictors for shopping at a food cooperative (H8). This hypothesis was verified in multiple instances. Green consciousness, willingness to sacrifice, local preferences, and willingness to pay higher prices to support the local cooperative seem to be an essential pillar for members of food cooperatives.

In addition to these hypotheses, one may also reflect on the role of health consciousness as a predictor for patronizing a food cooperative. Heath consciousness is actually the strongest motivator for both members and non-members to purchase organic food, and this construct is rated as the highest level for both groups. Health consciousness is not a discriminant criterion between food cooperative and natural commercial supermarkets. It is a point of parity.

5   Discussion

The empirical research conducted by the authors yielded the following results: food cooperative members are in general more interested in developing relationships and prefer to shop where people know them, particularly in locally owned stores. Buying local is important to members who are more willing to make some forms of "sacrifices" to buy homegrown goods such as purchasing only seasonal food, potentially at a higher price. It appears that members are usually less price conscious than non-members. However one may question whether the food cooperative members constitute a homogeneous segment. The findings indicate that there are two distinct segments among the food cooperative members: the idealistic and the pragmatic groups. These members seem to have different motivations for joining a food cooperative.

The idealistic members are willing to sacrifice in order to support altruistic values, while pragmatic members are more interested in the functional aspects of the food cooperative such as its organic product assortments. This duality in membership may be problematic: as described by Ashforth and Reingen (2014), this situation may lead to intergroup conflicts and governance issues. The second concern is that the pragmatic members may be less loyal and could be inclined to

patronize organic commercial supermarkets such as WFM that focus on the customer experience and variety of choices. Food cooperatives should therefore predominantly target "idealistic" members who will strengthen their identity and uniqueness versus the competition. Over time the points of differentiation between food cooperatives and private natural food retailers have eroded. On the one hand, the natural commercial supermarkets offer variety of choices, a high-end shopping experience in a pleasant environment, and hard-to-find gourmet and out-of-season goods. On the other hand, food cooperatives traditionally offered a less enhanced shopping environment, focusing on seasonal goods from local producers respectful of environmental issues. Today, food cooperatives may feel pressured to move away from their roots and to increase their overhead and therefore their prices to compete with private retailers. As a consequence, a local cooperative could stop appealing to their core membership base. Moreover, natural food retailers are also trying to position themselves as stringent defenders of the environment and ardent supporters of local communities and are challenging the food cooperatives on their own turf. Food cooperatives should remain true to their founding principles and reject the urge to mimic the natural food retailers. They should retain their authenticity and simplicity and minimize their overhead costs. It is obvious that the purpose of the food cooperative is more than just providing natural and organic food; it is promoting a certain philosophy of life that is appealing to their core, loyal members. This is their true point of differentiation from the competition. Trying to manage a cooperative as a traditional supermarket is problematic and likely to alienate the "idealistic" members. However current changes such as recent labor law modifications in the USA are also challenging the traditional mode of governance: originally, members were able to volunteer for the cooperative in return for discounts in the store, but this arrangement is under scrutiny as a potential violation of the "fair labor standard act" that regulates minimum wage payments. Trying to avoid potential lawsuits, many cooperatives are now abandoning a practice that was truly distinctive as well as a process to build loyalty and engagement by members. The "idealistic" members seem disturbed by this change which appears to lead to serious dissensions occurring across board members in that regard.

How can the organic food cooperatives adjust to current market demand, increasing competition and changing labor laws while preserving their identity and ability to differentiate from the competition? The answer could vary depending on the intensity of the competition in a given location and the overall market size. In areas where natural food retailers are prevalent, cooperative should mostly attract the "idealistic" segment as their target market remains true to their founding principles by selecting their assortments and processes accordingly. The cooperative becomes a "social" cause where a certain "green" lifestyle is prevalent. In other areas, where market sizes are smaller and without intense competition, cooperatives should try to attract both the "idealistic" and the "pragmatic" segments by paying additional attention to hedonic features as well as by broadening their assortment beyond local products with a special focus on the organic label. These compromises are not without likely disagreements among board members and may become problematic in the long term. This may be the only way for a cooperative to survive in a small market where the membership base is limited or declining.

   The following limitations are impacting the current research, and additional research should be conducted: due to the small sample used in this study, in addition, it would be important to collect data in multiple locations, with different competitive landscapes in order to verify the assumptions discussed above. "Willingness to pay" seems to be a critical point for organic product growth, and it could be of great interest for further research.

6   Conclusion

The objective of this research was to understand the motivations of members for joining food cooperatives and to determine whether new wave food cooperatives would be able to differentiate themselves from their competition. The findings confirm and expand the research of Zitcer (2015) and Ashforth and Reingen (2014) that examine the duality between idealistic and pragmatic values among cooperative members and highlight the potential governance issues resulting from this situation. In order to differentiate against competition, food cooperatives should return to their founding principles instead of diluting their focus and resources: this would clearly impact their governance and general business practices.

Appendix: Additional Constructs

Selected constructs	Items	Cronbach's α
Attitude toward organic food	Quality is better in organic products Organic products are healthier Organic products are always more environmentally friendly Buying organic is more important to me than buying local goods I am willing to pay a premium to purchase organic food	0.73
Willingness to sacrifice	It is important to me that the products I use do not harm the environment My purchase habits are affected by my concern for our environment I am willing to be inconvenienced in order to take actions that are more environmentally friendly I would be willing to make personal sacrifices for the sake of slowing down pollution I would be willing to stop buying products from companies guilty of polluting even though it might be inconvenient I am prepared to make sacrifices to eat as healthy as possible It is critical to avoid pollution from transportation of goods even if it limits my choices It is important to support the local community by buying locally grown goods even if it limits my choices	0.88

References

Adams DC, Salois MJ (2010) Local versus organic: a turn in consumer preferences and willingness to pay. Renew Agric Food Syst:1–11

Ashforth BE, Reingen PH (2014) Functions of dysfunction: managing the dynamics of an organizational duality in a natural food cooperative. Adm Sci Q 59(3):474–516

Bartels J, Hoogendam K (2010) The role of social identity and attitudes toward sustainability brands in buying behaviors for organic products. J Brand Manag 18(9):697–708

Bartels J, Onwezen MC (2014) Consumers' willingness to buy products with environmental and ethical claims: the roles of social representations and social identity. Int J Consum Stud 38:82–89

Beach S (2011) Actualizing values? Lessons from a bankrupt food cooperative social movement organization (SMO). Appetite 56:519

Brown C (2003) Consumers' preferences for locally produced food: a study in southeast Missouri. Am J Altern Agric 18(4):213–224

Clercet D, Gouil H (2006) Coopératives de consommation. *Alternatives Economiques Poche*, no. 022 – janvier.

Cornforth C (1988) Developing successful worker co-operatives. Sage, London

Cox C (1994) Storefront revolution: food and the counterculture. Rutgers University Press, New Brunswick, NJ

Curhan RC, Wertheim EG (1972–1973) Consumer food buying cooperatives - a market examined. J Retail 48(4):28–39

Curhan RC, Wertheim EG (1975–1976) Consumer food buying cooperatives revisited - a comparison from 1971 to 1974. J Retail 51(4):22–32

Denver S, Jensen JD (2014) Consumer preferences for organically and locally produced. Food Qual Prefer 31:129–134

Dimitri C, Greene C (2002) Recent growth patterns in the U.S. organic food market. U.S. Department of Agriculture, Economic Research Service, Washington, DC

Domina T, Koch K (2002) Convenience and frequency of recycling: implications for including textiles in curbside recycling programs. Environ Behav 34(2):216–238

Finch JE, Trombley CM, Rabas BJ (1998) The role of multiple consumption values in consumer cooperative patronage: an application of the theory of market choice behavior. J Mark Manag 8 (1):44–56

Gabriel Y, Lang T (2005) A brief history of consumer activism. In: Harrison R, Newholm T, Shaw D (eds) The ethical consumer. Sage, Thousand Oaks, CA, pp 39–53

Gaski JF, Etzel MJ (1986) The index of consumer sentiment toward marketing. J Mark 50 (3):71–81

Grunert SC (1993) Everybody seems concerned about the environment but is this concern reflected in consumers' food choice? Eur Adv Consum Res 1:428–433

Grunert SC, Juhl HL (1995) Values, environmental attitudes and buying of organic foods. J Econ Psychol 16:39–62

Harper GC, Makatouni A (2002) Consumer perception of organic food production and farm animal welfare. Br Food J 104:287–299

Haws KL, Winterich KP, Naylor RW (2010) Seeing the world through green-tinted glasses: motivated reasoning and consumer response to environmentally friendly products. Working paper, Texas A&M University, College Station, TX.

Hibbert S, Piacentini M, Al Dajani H (2003) Understanding volunteer motivation for participation in a community-based food cooperative. Int J Nonprofit Volunt Sect Mark 8(1):30–42

Hoyt A (1995) The world of cooperative enterprise. The Plunkett Foundation, Oxford

Jefferson-Moore KY, Robbins RD, Johnson D (2013) Consumer choices for organic and local food products in North Carolina. J Food Distrib Res 44(1):94–95

Jefferson-Moore KY, Robbins RD, Johnson D, Bradford J (2014) Consumer preferences for local food products in North Carolina. J Food Distrib Res 45(1):41–46

Johnston J (2008) The citizen-consumer hybrid: ideological tensions and the case of whole foods market. Theory Soc 37:229–270

Kim HS, Damhorst ML (1998) Environmental concern and apparel consumption. Cloth Text Res J 16(3):126–133

Kim HS, Littrell MA, Ogle JLP (1999) The relative importance of social responsibility as a predictor of purchase intentions for clothing. J Fash Mark Manag 3(3):207–218

Lambert P (1968) The Rochdale pioneer as originators. Ann Public Coop Econ 39:559–561

Lichtenstein DR, Ridgway NM, Netemeyer RG (1993) Price perceptions and consumer shopping behavior: a field study. J Mark Res 30:234–245

Lumpkin JR (1985) Shopping orientation segmentation of the elderly customer. JAMS 13 (Spring):271–289

Lumpkin JR, Darden WR (1982) Relating television preference viewing to shopping orientations, lifestyles and demographics. J Advert 11(4):56–67

Lumpkin JR, Hunt JB (1989) Mobility as an influence on retail patronage behavior of the elderly: testing conventional wisdom. J Acad Mark Sci 17(1):1–2

Marini MA, Polidori P, Tesbaldelli D, Zevi A (2015) Welfare enhancing coordination in consumer cooperatives under mixed oligopoly. Ann Public Coop Econ 86(3):505–527

Mercer TW (1947) Co-operation is prophet. The Co-operative Union, Manchester

Nie C, Zepeda L (2011) Lifestyle segmentation of US food shoppers to examine organic and local food consumption. Appetite 57:28–37

Novkovic S (2008) Defining the co-operative difference. J Socio-Econ 37:2168–2177

Paff-Ogle J, Hyllegard K, Dunbar BH (2004) Predicting patronage behaviors in a sustainable retail environment. Adding retail characteristics and consumer lifestyle orientation to the belief-attitude-behavior intention model. Environ Behav 36(5):717–741

Ray PH, Anderson SR (2000) The cultural creatives: how 50 million people are changing the world. Harmony Books, New York

Roininen K, Arvola A, Lahteenmaki L (2006) Exploring consumers' perceptions of local food with two different qualitative techniques: laddering and word association. Food Qual Prefer 17(1): 20–30

Schiffterstein HNJ, Oude Ophuis PAM (1998) Health-related determinants of organic food consumption in the Netherlands. Food Qual Prefer 9(3):119–133

Shaw DG, Newholm T (2002) Voluntary simplicity and the ethics of consumption. Psychol Mark 19(2):167–185

Sommer R, Fjeld C (1983) Consumer protection programs in food cooperatives. Policy Stud Rev 2 (3):455–464

Sommer R, Hohn WE, Tyburczy J (1981) Motivation of food cooperative members: reply to Curhan and Wertheim. J Retail 57(4):114–117

Sommer R, Becker F, Hown W, Warholic J (1983) Customer characteristics and attitudes at participatory and supermarket cooperatives. J Consum Aff 17(1):134–148

Somerville P (2007) Co-operative identity. J Coop Stud 40(1):5–17

Thompson DJ (1994) Weaver of dreams: founders of the modern cooperative movement. Center For Cooperatives, University of California, Davis, CA

Wells WD, Tigert D (1971) Activities, interests, and opinions. J Advert Res 11(4):27–35

Wertheim EG (1976) Evolution of structure and process in voluntary organizations: a study of thirty-five consumer food cooperatives. Nonprofit Volunt Sect Q 5(4):4–15

Wier M, O' Doherty Jensen K, Morch-Andersen L, Millock K (2008) The character of demand in mature organic food markets: Great Britain and Denmark compared. Food Policy 33:406–421

Wilkins JL (1996) Seasonality, food origin, and food preference: a comparison between food cooperative members and non-members. J Nutr Educ 28(6):329–337

Zepeda L, Deal D (2009) Organic and local food consumer behavior: alphabet theory. Int J Consum Stud 33:697–705

Zepeda L, Leviten-Reid C (2004) Consumers' views on local food. J Food Distrib Res 35:1–6

Zitcer A (2015) Food co-ops and the paradox of exclusivity. Antipode 47:812–828

Farmer Cooperatives as Systems of Attributes: An Analysis of Ownership and Investment Complementarities

Jasper Grashuis and Michael L. Cook

Abstract The long-term economic viability of the farmer cooperative mode of organization is often assumed to be jeopardized by an equity constraint. To inform possible solutions, the farmer cooperative is conceptualized as an independent firm comprising a system of attributes, thus facilitating a better understanding of the dual function of organized farm producers as both patrons and capitalists. We place emphasis on the hybrid assignment and configuration of claim rights to find possible complementarities between ownership and investment so as to loosen the equity constraint. Based on survey data on US farmer cooperatives, we analyze multiple configurations of membership access, ownership transferability, equity redeemability, preferred stock provision and ownership, and upfront capital contribution in relation to the desire to patronize and the obligation to capitalize the cooperative. Thus, we inform constitutional responses to rapid developments in the agri-food industry, which force farmer cooperatives to find additional equity for necessary growth in scale and scope.

1 Introduction

The rights to claim profits and the rights to control resources relate to the boundaries of the firm (Demsetz 1983). For the firm, its main characteristic is the dispersion of claim rights to capital suppliers and the delegation of control rights to decision specialists (Fama and Jensen 1983). The separation of control and ownership, or the separation of risk bearing and decision management, is therefore at its absolute in the firm. In general, shareholders claim income but do not participate in the day-to-day management of the business operations. Formal control is only exercised at annual meetings when voting on board proposals.

By comparison, the farmer cooperative is both owned and controlled by farm operators who act as its patrons as well as its capitalists. Traditionally, the rights to claim profits are nontransferable, non-appreciable, and redeemable (Chaddad and

J. Grashuis (✉) • M.L. Cook
University of Missouri, 125C Mumford Hall, Columbia, MO 65211, USA
e-mail: grashuisj@missouri.edu; cookml@missouri.edu

Cook 2004). Also, as opposed to the firm, the rights to control cooperatively owned assets and resources are only delegated to board directors, who are member patrons and also often serve as managers. Thus, the separation of control and ownership is often limited to its legal requirement.[1] Such a unique assignment and configuration of the rights to claim profits and control resources is characteristic of the classical cooperative (Chaddad and Cook 2004).

Over time, however, farmer cooperatives have made adaptations to the assignment as well as the configuration of claim and control rights, as documented by various researchers in Europe and North America. For example, Nilsson (2001) observed cooperatives with subsidiary organizations to spur growth in nonmember business, and Van Bekkum and Bijman (2006) discussed farmer cooperatives with nonvoting preferred stock to induce nonmember investment yet preserve member control of joint assets and resources. All such structures are considered to be hybrid modes of organization with market-like and hierarchy-like attributes (Menard 2007). In fact, considering the diversity in structure, Chaddad (2012) declared the cooperative the true hybrid mode of organization.

The hybrid character of the farmer cooperative is arguably best summarized in Cook and Chaddad (2004), who advanced a typology of ownership structures with claim rights as the basis. Including the classical cooperative, Cook and Chaddad (2004) identified eight common structures with various assignments and configurations of claim rights. However, the typology may not constitute an accurate portrayal of the current landscape as the agri-food industry is characterized by rapid evolution. For example, James et al. (2007) noted how increasingly more value is coordinated by means of nonmarket arrangements, which is related to increased concentration in the processing sector and particularly the retail sector (Sexton 2013; Katchova 2013). Further indication of the increased industrialization of US agriculture is the 4.3% decrease in farm operations and the 3.8% increase in average farm size between 2007 and 2012 (USDA 2014). Correspondingly, farmer cooperatives face pressure to consolidate as internal equity is not always sufficient for necessary growth in scale and scope (Briggeman et al. 2016).

As its current function is different as compared to one decade ago, the objective of the present chapter is therefore to further analyze the assignment and configuration of claim rights in farmer cooperatives so as to better understand the constitutional responses to dynamic agri-food market conditions. Considering the crucial importance of equity availability, we place primary emphasis on the formal interrelationship of ownership and investment as organized farm producers both patronize and capitalize the cooperative. In doing so, we conceptualize the cooperative as an independent firm comprising a system of attributes, including ownership, leadership, administrative control, incentive intensity, and others (Hendrikse and Veerman 1997; Feng and Hendrikse 2008; Makadok and Coff 2009; Chaddad 2012). We thus inform the ongoing discussion of the conceptual and theoretical interpretation of the cooperative as an extension of the farm, a coalition of

---

[1]Cooperative law mandates the formation of a board of directors.

independent farm enterprises, or an independent firm. Our findings and conclusions may also inform cooperative policy in terms of the legal foundation of claim right configurations.

The chapter proceeds as follows. We give a brief literature review of comparative organization in Sect. 2, placing emphasis on hybrid modes of organization. In Sect. 3, we conceptualize the farmer cooperative as an independent firm comprising a system of attributes, which includes its own attributes in addition to complementary farm attributes. We do so to better understand the dual function of the member, who patronizes as well as capitalizes the cooperative. With emphasis on the interrelationship of ownership and equity investment, Sect. 4 reviews the observed claim rights assignments and configurations, and Sect. 5 uses survey data on US farmer cooperatives to inform a richer conceptualization of novel claim rights configurations. Section 6 relates the observations to an advanced interpretation of farmer cooperatives as systems of attributes, and Sect. 7 summarizes and concludes.

2 Hybrid Modes of Organization

Modes of organization can be positioned on a spectrum or continuum with the market and the hierarchy at the two extremes (Williamson 1991). The price mechanism serves as the defining characteristic of the anonymous spot market, offering buyers and sellers a strong incentive to exploit discrepancies in the prices of today and tomorrow. By comparison, the hierarchy, in which ownership of the rights to profits and resources of two or more organizations is combined in one, adapts to economic change with managed coordination. While the market and the hierarchy are polar opposites with unique combinations of mechanisms and instruments, hybrids are modes of organization for which subsets of assets, rights, and profits are shared by individuals and organizations (Ménard 2004, 2013). The hybrid is thus conceptualized as a market-like hierarchy or a hierarchy-like market or a mixture of competition and cooperation.

While the sole proprietorship and the firm are the stereotypical market and hierarchy representatives, respectively, there exist many examples of observed as well as unobserved hybrid organizations (Baker et al. 2008). For example, Makadok and Coff (2009) identified piece-rate employment, empowerment, and quasi-integration as nonmarket and non-hierarchy arrangements. Parmigiani and Rivera-Santos (2011) discovered other examples of prevalent hybrid arrangements, such as alliances, joint ventures, partnerships, licensing, franchises, networks, condominiums, trade associations, and consortia. In consideration of the great diversity in possible arrangements, Ebers and Oerlemans (2016) observed hybrid organizations do not necessarily combine market-like and hierarchy-like attributes, but may actually be characterized by an intermediate arrangement of such attributes as profit allocation, input sourcing, and asset investment.

While acknowledging its great diversity, Menard (2007) applied emphasis on one particular type of hybrid arrangement, namely, the cooperative mode of

organization. He again envisioned a spectrum, characterized at one end by cooperatives in which control and ownership are for the most part separated and at the other end by cooperatives with tight coordination of joint activities, such as the separation of low- and high-quality supply, the equity investment in asset growth, or the negotiation of pooled supply. Menard (2007) identified three pillars of hybrid cooperatives: (i) pooled resources; (ii) intra-cooperative contractual relationships, which are defined to various extents in the bylaws and the supply agreements; and (iii) competition parameters, which promote alignment of member objectives and joint strategies. Menard (2007) thus described hybrid cooperatives in terms of attributes but did not explicitly use the term system to emphasize complementarity.

3   Hybrid Systems of Attributes

Milgrom and Roberts (1990, 1994) first advanced the conceptualization of an economic organization as a system of attributes by emphasizing synergy or complementarity between activities. An organization is assumed to be composed of many activities or attributes, such as sourcing, financing, accounting, and manufacturing. The payoff associated with an attribute is dependent on its complementarity with other attributes, which intensifies the notion of a system (Milgrom and Roberts 1994). If complementary, the total economic value of two attributes is greater in combination than in isolation ($\pi_{ab} > \pi_a + \pi_b$). Different attributes must thus be in alignment to ensure optimal performance. For example, complementarity is likely between invention and human capital yet not likely between product quality and piece-rate compensation. Altogether, when examining the boundaries of the firm, complementarity may explain the observed combination or system of activities. By extension, the concept of complementarities is useful to inform make-or-buy decisions and mergers and acquisitions (Brynjolfsson and Milgrom 2013).

Hendrikse and Veerman (1997) first approached the farmer cooperative mode of organization as a system of attributes, which Feng and Hendrikse (2008) later refined. In their framework, the cooperative is conceptualized as an independent firm collectively owned and controlled by individual farm producers who are its patrons and its capitalists. Similar to Menard (2007), the cooperative is comprised of multiple attributes, including its commodity pooling arrangement, its price-quality schedule, and its patronage refund policy, and each individual member farm is also comprised of a system of attributes. The boundaries of the cooperative thus include its own attributes as well as the complementary farm attributes of its member patrons (Feng and Hendrikse 2008). For example, a grain marketing cooperative is characterized by closed membership, a quality premium, and exclusive supply agreements with diversified member producers, many of whom also supply a local dairy cooperative and a livestock marketing firm. In theory, each member maximizes the payoff associated with joint attributes, which in turn facilitates a spillover effect on the other attributes (Baker et al. 2008).

In contrast to Feng and Hendrikse (2008), Makadok and Coff (2009) extended the system of attributes theory to an analysis of hybrid organizations. Specifically, Makadok and Coff (2009) dismissed the hybrid mode of organization as a two-dimensional construct, instead offering a taxonomy with authority, ownership, and incentive intensity as the three dimensions. Examples given are networks, partnerships, joint ventures, and cooperatives, which did not feature as the main focus. By contrast, Chaddad (2012) did specifically study the cooperative mode of organization in terms of its attributes, placing emphasis on bargaining associations, marketing cooperatives, and so-called new generation cooperatives. For example, the marketing cooperative is described as having market-like attributes such as strong incentive intensity and autonomous adaptation and hierarchy-like attributes such as formal authority and central administration. In observing the great diversity in structures and attributes, Chaddad (2012) declared the cooperative the true hybrid mode of organization. In the process he thus combined two similar conceptualizations of the cooperative firm, one concentrating on comparative organization (hybrids) and the other on complementary rights, assets, and payoffs (systems of attributes).

4 Cooperative Modes of Organization: A Claim Rights Approach

A specific emphasis on claim rights is warranted as the long-term economic viability of the farmer cooperative mode of organization is believed to be jeopardized by an inherent equity constraint (Cook 1995). Specifically, Richards and Manfredo (2003) claimed the equity constraint is the primary cause of mergers and acquisitions by farmer cooperatives, and Van der Krogt et al. (2007) also concluded the preference for mergers, partnerships, and joint ventures in the cooperative sector is motivated by insufficient access to equity. Similarly, Chaddad et al. (2005) empirically tested the financial constraint hypothesis and concluded investment is very much dependent on the availability of internal equity, which is an important observation as Baarda (2006) and Briggeman et al. (2016) each discussed how new capital requirements for cooperative growth in scale and scope put pressure on the ownership structure. As such, emphasis is placed on two specific attributes of the cooperative: ownership and equity investment incentives.

The base case is the classical cooperative, which is characterized by the full restriction of ownership to individuals who are its patrons and capitalists (Van Bekkum and Bijman 2006). Put differently, the farm producers who supply the cooperative with equity and patronage have full formal control and ownership, although real control is at least delegated to board directors. In addition, shares of the classical cooperative are non-tradable, non-appreciable, and redeemable, which imposes a hard limit on member equity investment. The classical structure is most

applicable to small local supply and marketing cooperatives, such as collectively owned grain elevators.

Over time, many cooperatives have adapted the ownership structure of the classical cooperative, seemingly in response to the equity constraint (Chaddad and Cook 2004). One example is the proportional investment cooperative (PIC), in which equity and patronage proportionality is supposed to limit the relative over- or underinvestment of member patrons (Chaddad and Cook 2004). Proportionality of patronage and equity investment is best accomplished via a base capital plan, although over- or underinvestment is also at times treated by facilitating an inside market for equity. Altogether, improvement in financial flexibility is likely only marginal as member equity is still redeemable and non-appreciable.

Another configuration of the ownership structure is the member-investor cooperative, which distributes net earnings on the basis of share ownership, not patronage.[2] Hence, each member patron is considered an investor, akin to a firm shareholder (Nilsson 1999). Of course, the member-investor cooperative is not traded on the stock exchange, and outside ownership or investment is not allowed. In addition to common stock, member investment is facilitated by such financial instruments as participation units, capital units, and preferred stock (Chaddad and Cook 2004). The appreciability of shares, including bonus shares and participation unit shares, serves as motivation to retain equity for future growth opportunities.

Theoretically, even greater financial flexibility is achieved in the new generation cooperative (NGC), which features both transferable and appreciable shares (Harris et al. 1996; Cook and Iliopoulos 1999; Nilsson 1999). Similar to the member-investor cooperative, member patrons can thus align risk portfolios to risk preferences by buying or selling ownership if the perceived risk of equity investment in the cooperative is relatively low or high, respectively. Two other characteristics, closed membership and a relatively high upfront capital requirement, have an ambiguous impact on financial flexibility. As an ownership right is synonymous to a delivery right and supply is controlled by marketing agreements (Chaddad and Cook 2004), the NGC structure is likely to support a relatively small, homogeneous group of large producers. As noted by Baarda (2006), NGCs are active in swine processing, pasta production, beer manufacturing, ethanol production, and other agri-food sectors.

The equity constraint is further loosened in cooperative modes of organization in which ownership is not restricted to member patrons. One example is the participation shares cooperative or the investor-share cooperative, featuring a combination of member patrons who receive net earnings on the basis of patronage and investors who receive net earnings on the basis of equity (Nilsson 1999; Chaddad and Cook 2004). Thus, the defining characteristic of the participation shares cooperative is the presence of nonmember equity inside the cooperative. The equity

---

[2]Confusingly, Nilsson (1999) applied the term member-investor cooperative to the new generation cooperative and the public limited company. In the present chapter, member investor is defined as in Chaddad and Cook (2004).

is invested by means of preferred stock, nonvoting common stock, and participation unit shares, which are accessible to any investor, including member patrons and other cooperatives (Chaddad and Cook 2004). The participation shares cooperative is thus analogous to the member-investor cooperative, except ownership in the cooperative is open to outside investors.

The addition of subsidiary joint-stock entities is common to so-called comaker or subsidiary cooperatives (Nilsson 1999, 2001). The subsidiary entity, whose ownership is a mixture of members and investors, is primarily used for value-added or nonmember business.[3] The subsidiary thus serves as a complementary activity, such as dairy product manufacturing, to the core activity of the cooperative, such as raw milk marketing. Contrary to the investor-share cooperative, nonmember equity is not held inside the cooperative but instead in the subsidiary entity, which may be a joint venture, a partnership, a trust company, or even a public company (Chaddad and Cook 2004). Thus, the organizational form of the subsidiary entity may or may not correspond to the organizational form of the cooperative itself. In fact, in many instances the subsidiary entity is a limited liability company (LLC) so as to separate member and investor objectives (Lund 2013). If the subsidiary entity is traded on the public market, the cooperative is considered a hybrid listed cooperative (Van Bekkum and Bijman 2006).

A different legal entity is manifested in the limited liability cooperative, also called a public limited company (Harte 1997; Nilsson 1999), which is almost analogous to the LLC structure.[4] The creation of the limited liability cooperative is spurred by state legislature.[5] Similar to the NGC structure, each owner is primarily considered an investor, which implies ownership is both transferable and appreciable. A key difference is the possibility of outside ownership, which is not necessarily public in character. In fact, the organization is only considered a cooperative if its suppliers hold majority ownership. Thus, there exist two types of stock owners: member patrons and member investors. In addition to dynamic ownership, the structure of the limited liability cooperative is defined by proportionality of control to investment, not patronage, similar to the proportional cooperative. Baarda (2006) argued the LLC structure poses a viable long-term alternative to the cooperative mode of organization, yet Lund (2013), who used the term limited cooperative association, observed a low adoption rate as member-patron and member-investor preferences often conflict.

---

[3]Subsidiary formation is not exclusive to the comaker structure. However, the defining characteristic of the comaker cooperative is combined member and investor ownership, not full member ownership as is applicable to other structures with vertical investment (Cook and Chaddad 2004).

[4]In reference to Südzucker, the German sugar producer, Filippi et al. (2012) used the term cooperative investor-owned firm to describe its ownership structure. Südzucker is traded on the public market, but majority ownership is held by Süddeutsche Zuckerrübenverwertungs-Genossenschaft (SZVG), the sugar producer cooperative.

[5]For example, see the Wyoming Processing Cooperative Statute, the Minnesota Cooperative Associations Act, the Iowa Cooperative Associations Act, and the Tennessee Processing Cooperative Law.

The most radical adjustment to the ownership structure of the classical cooperative is the converted listed cooperative, whose ownership is traded on the stock exchange (Chaddad and Cook 2004; Van Bekkum and Bijman 2006). Individual, unorganized farm producers are now just suppliers or customers of the organization, which is no longer user-owned, user-controlled, or user-benefited. Recent examples of such conversions are South Dakota Soybean Processors in 2002, FCStone in 2004, and Diamond Walnut Growers in 2005 (Fulton and Hueth 2009).

5   A Richer Conceptualization of Claim Right Configurations

The above description and categorization of claim rights assignments and configurations is based on the combination of seven dimensions: ownership of common stock, equity and patronage proportionality, ownership transferability among members, equity appreciability, equity redeemability, subsidiary organization(s), and ownership of subsidiary organization(s). However, there are other dimensions to be considered, including but not limited to ownership transferability among members and nonmembers, equity redemption period, preferred stock provision and ownership, membership access, and upfront capital contribution. Together, these dimensions inform the tension between patronizing and capitalizing the cooperative. Supported by survey data on 371 US farmer cooperatives, the next section describes each dimension and its importance to the interrelationship of ownership and member equity investment.[6]

5.1   Membership Access

One of the main characteristics of the classical cooperative is open membership, which in most instances is attained by means of patronage in addition to some equity investment. The member patrons of a supply cooperative are primarily farm producers who buy seed, fertilizer, and other inputs. For a marketing cooperative, its member patrons are primarily farm producers who supply raw agricultural commodities, such as corn, milk, livestock, or fruits and vegetables. Membership implies ownership, which is manifested by (i) the right to claim profits, and (ii) the right to control resources (Chaddad and Cook 2004; Baker et al. 2008). In case of the marketing cooperative, membership is also often evidenced by a supply, delivery, or marketing agreement, which solidifies the transactional nature of the member-cooperative relationship.

---

[6]For a full description of the survey data, see Grashuis and Cook (2017).

The membership policy of the cooperative is important as open access facilitates free riding (Cook 1995). Specifically, new members can free ride on past investment by old members, in particular if equity is non-appreciable. If free riding is applicable, member patrons face disincentive to invest equity as the future payoff to farm attributes shared in the cooperative is diluted by the noninvestment or relative underinvestment of free riders (Cook and Iliopoulos 2000; Sykuta and Cook 2001). A relatively recent response to the free rider problem is the implementation of closed membership to prevent inclusion of farm producers who over-consume or under-produce.[7] In our sample, 133 of the 371 respondents (36%) do not have open membership access (see Table 1). However, such a restrictive access policy may cause excessive taxation and under-inclusion of newcomers with severe business and antitrust consequences (Rey and Tirole 2007). As exhibited by Organic Valley, closed access is also possible on an ad-hoc basis to respond to market supply and demand fluctuation (Su and Cook 2015).

In addition to the free rider problem, open access also facilitates an adverse selection problem in terms of product quality. Mérel et al. (2009) examined the impact of heterogeneous product quality for the farmer cooperative, where heterogeneity is apparent in land quality, operator skill, technology, and other characteristics and less apparent in free riding behavior in the open access cooperative. Because of heterogeneity in product quality, the cooperative is expected to be less competitive in the differentiated product market as the firm is the recipient of high-quality supply (Mérel et al. 2009). After making similar observations, Deng and Hendrikse (2013) advocated for partial pooling with variable price structures, which serves as incentive for high-quality producers to supply the cooperative (Liang and Hendrikse 2016). Subsequently, Mérel et al. (2015) investigated the optimal pooling ratio based on ex ante heterogeneity in member characteristics. A stable solution is available if risk aversion is not too low and member heterogeneity is not too high, which implies a narrow margin for incentivizing member equity investment.

5.2   Equity Redemption Date

While conceptualization of equity redeemability is often binary, much more intuition is required for its practical implementation. Equity redemption is standard practice in the classical cooperative, but the actual date or period of redemption is variable. Considering the vast heterogeneity in member preferences and joint strategies, it is not surprising to observe wide variation in the survey responses. While 194 of our 371 respondents do not redeem equity, the remaining 177 do but

---

[7]Closed membership is arguably the key characteristic of the new generation cooperative, as discussed by Cook and Iliopoulos (1999) and Nilsson (1999). Because of its closed membership, the new generation cooperative is hypothesized to offer greater incentive to invest member equity.

Table 1 Claim rights configurations of surveyed US farmer cooperatives

Claim rights characteristic	Definition	% of respondents
Common stock ownership	Closed to outside investors	96%
	Open to outside investors	4%
Equity-patronage proportionality	No	52%
	Yes	48%
Ownership transferability	No	89%
	Yes, among members	9%
	Yes, among members and nonmembers	2%
Equity appreciability	No	91%
	Yes	9%
Equity redeemability	No	55%
	Yes, within 0–5 years	5%
	Yes, within 6–10 years	9%
	Yes, within 11–15 years	10%
	Yes, after 16 or more years	20%
Preferred stock provision	No	65%
	Yes, to members	35%
	Yes, to members and nonmembers	9%
Membership access	Open	64%
	Closed	36%
Upfront capital contribution	No	44%
	Yes, a nominal amount below $1000	42%
	Yes, a nominal amount above $1000	4%
	Other	10%
Subsidiary formation	No	75%
	Yes, with member ownership	21%
	Yes, with dual ownership	4%

use different return windows. Twenty cooperatives redeem equity within 0–5 years, while 74 wait 16 or more years.

In practice, cooperatives redeem and invest equity by means of (i) the revolving fund financing system or (ii) the base capital plan system. In the revolving fund financing system, the oldest member equity is redeemed and replaced by new member equity, which is often based on patronage. In the base capital plan system, equity is redeemed or invested if the amount is above or below the desired share of total equity (Baarda 2006). Examples of cooperatives with a base capital plan are Coulee Region Organic Produce Pool (CROPP), Riceland, Land O'Lakes, and Dairy Farmers of America (Chaddad and Cook 2004). In practice, however, a combination of both systems is possible (Lund 2013).

The matter of equity redemption is related to the horizon problem, which applies if the residual claim of a member patron on the income stream of an asset is shorter than the lifespan of the income stream (Porter and Scully 1987). If so, the member patron has disincentive to invest because part of the return on investment is beyond the claim right. Generally, the horizon problem inspires a preference for "current cash flow at the expense of future earnings" (Staatz 1987). Member patrons with a horizon problem will be relatively uninterested in investing in long-term growth

opportunities, in particular such activities as research and development, if the revolement period is too long (Cook 1995). Such member patrons may pursue an increase in patronage refund or even full dissolution of the cooperative. Similarly, Baarda (2006) described the horizon problem as the equity redemption problem, noting how the situation is exacerbated by retired farm producers whose equity is still in the cooperative. As such, the cooperative may instead consider an exit payment. Altogether, the cooperative must find a balance between preferences for equity redemption at the farm and equity retention in the cooperative.

5.3 Ownership Transferability

In addition to equity investment and equity redemption, another mechanism to align risk preferences to risk portfolios is ownership transferability, which in part defines the NGC structure. Non-transferability of ownership is in particular problematic in case of equity and patronage proportionality, which facilitates a portfolio problem (Porter and Scully 1987; Cook 1995). The portfolio problem is probable when a liquid secondary market for ownership is nonexistent. As in the classical cooperative, ownership cannot be sold or traded to facilitate risk alignment, which implies under- or overinvestment. If underinvested, a member patron likely has a preference for risky activities for which the return and the variance is relatively high, and if overinvested, a member patron likely has a preference for safe activities for which the return and the variance is relatively low. Interestingly, only 9% and 2% of our survey respondents report the use of ownership transferability among members and among outside investors, respectively. As such, an internal market for ownership is rarely facilitated.

5.4 Preferred Stock Provision and Ownership

In addition to common stock ownership and retained patronage, a cooperative may use other financial instruments to attain member or nonmember equity. Arguably the most common financial instrument to induce member as well as nonmember investment inside and outside the cooperative is preferred stock, which is typically nonvoting (Lund 2013). In addition, the return to preferred stock is proportional to capital investment, and preferred stock carries a senior claim on assets and dividends. As preferred stock at times involves a redemption date, it is not always considered to be permanent equity. As indicated by the survey data, 35% of the respondents have issued preferred stock, and 9% issued preferred stock to outside investors. When preferred stock is owned by nonmember patrons, the cooperative has two objectives: (i) generating a return on patronage and (ii) generating a return on investment. Perhaps the most prominent example of preferred stock provision by any farmer cooperative is CHS, which first listed preferred stock on NASDAQ in

2003 (Goldberg and Preble 2011). However, as the return to dividends is by law capped at 8%, public interest in preferred stock in farmer cooperatives is often not high enough to pursue a time- and cost-consuming public listing (Lund 2013).

5.5 Upfront Capital Contribution

As indicated by the survey data, 56% of the farmer cooperatives require an upfront capital contribution, which is synonymous to a one-time membership fee. However, in most instances the nominal contribution is less than $1000 (42%).The main reason behind the upfront contribution is to secure startup capital (Lund 2013). For example, a marketing cooperative must invest in storage capacity in order to handle member supply. The necessity of an upfront contribution is even greater in case of vertical integration into processing or other value-added business activities. As opposed to the equity invested in relation to common or preferred stock ownership, the upfront contribution is nonrefundable or non-redeemable in most instances.

Similar to the concept of equity appreciability, the magnitude of the upfront capital contribution should be dynamic to reflect any decreases or increases in the value of the cooperative. If static, a $100 membership fee is not the same in 2016 as compared to 1986, which implies new member patrons may free ride on past capital investment by old member patrons. Altogether, the exact impact of the upfront capital contribution on the interrelationship of ownership and equity investment is rather ambiguous as there are two opposing forces: (i) capital constitutes a barrier to entry at the farm level, yet (ii) startup capital is needed to fund business activities at the cooperative level.

6 Hybrid Systems of Attributes: Ownership and Investment Complementarity

By conceptualizing the cooperative as an independent firm comprising a system of attributes, emphasis is placed on the complementarity between attributes of the farm and the cooperative. Here, specific attention is paid to the complementarity between the desire to patronize, which relates to certain attributes of the farm, and the desire to capitalize, which relates to certain attributes of the cooperative. Complementarity is not straightforward, however, as there exist many different assignments and configurations of claim rights, which influence the capital structure as well as the ownership structure of the cooperative. Correspondingly, as the optimal assignment and configuration of claim rights is dependent on multiple attributes of the farm as well as multiple attributes of the cooperative, there may exist multiple equilibria (Milgrom and Roberts 1994). At each equilibrium, there is assumed to be an optimal balance between the desire to patronize and the obligation

to capitalize the cooperative, which relates to its balance between individuality and communality (Puusa et al. 2016).

For example, free riding may warrant an upfront capital contribution or an exclusive supply agreement for member patrons to invest additional equity for nonmember business activities (Cook and Chaddad 2004). Similarly, closed membership may prevent dilution of average product quality, but so may the implementation of two commodity pools to separate low- and high-quality member supply, thus providing a price incentive for product differentiation if there is member interest in value-added business activity (Hovelaque et al. 2009). In terms of management, leadership is also important as an outside CEO is preferable to a member CEO when marginal productivities in upstream and downstream value chain segments are not complementary (Liang and Hendrikse 2013). Furthermore, in case of an outside CEO, remuneration should be in part based on member welfare parameters, and nonmember leadership must be supported by board directors who represent all member interests. As another example, risky nonmember business is arguably better organized in a subsidiary entity with an LLC structure for member ownership of preferred stock to be attractive (Lund 2013), although the same outcome is possible if equity is allowed to appreciate in value (Cook and Iliopoulos 2016). The cooperative may also consider faster revolvement of member equity or enable internal ownership transferability, particularly if investment in research and development is to be incentivized.

As illustrated by the examples in the previous paragraph, conceptualizing the cooperative as an independent firm comprising a system of attributes facilitates a clear emphasis on the tension between patronizing and capitalizing the cooperative. Said tension is encapsulated by the equity problem, which is driven by the free rider problem, the horizon problem, and the portfolio problem (Cook 1995). As such, lack of complementarity between attributes of the farm and attributes of the cooperative is in part caused by suboptimality in the assignment and configuration of claim rights. Such suboptimality may decrease the expected complementarity between, for example, corn production at the farm and ethanol production by the cooperative, thus preventing its combination. Consequently, as farmer cooperatives face pressure to grow in scale and scope (Briggeman et al. 2016), approaching the cooperative as an independent firm comprising a system of attributes is thus useful to inform constitutional responses for long-term survival and success (Grashuis and Cook 2016; Cook and Iliopoulos 2016).

Of course, complementarity between attributes of the farm and attributes of the cooperative is only productive if there is also complementarity between attributes of the cooperative. It is therefore important to consider the interrelationships of leadership, strategic orientation, personnel, administration, governance, and other attributes which in part define the boundaries of the cooperative (Chaddad 2012). Specifically, a member CEO is likely optimal if the cooperative places emphasis on commodity market access as opposed to differentiated product development (Liang and Hendrikse 2013). Alternatively, in case of an outside CEO, if the cooperative is pursuing a higher margin by means of product differentiation, specific investment in human capital for market research and product development is likely necessary if

the market-oriented strategy is to be successful (Benos et al. 2016). Regardless of CEO identity, leadership must be supported by board directors who possess relevant industry knowledge in order to evaluate strategic decisions and recommendations, which may require directorship by decision specialists who are not member patrons. Also, as in any other organization, formal systems and processes must be in place to allow efficient communication between managers, directors, administrators, advertisers, and other employees to improve coordination across various attributes of the cooperative.

7 Summary and Conclusion

Skepticism of the long-term economic viability of the cooperative mode of organization in the agri-food industry has warranted new attention to its hybrid structure. To begin, we conceptualized the farmer cooperative as an independent firm to better describe its hybrid arrangement of various attributes. By focusing on the assignment and configuration of rights to claim profits, we placed specific emphasis on ownership and equity investment to inform constitutional responses to rapid developments in the agri-food industry, which force farmer cooperatives to find additional equity for future growth in scale and scope. While consideration of claim right configurations is not necessarily new, we considered characteristics which are often omitted in the analysis of joint ownership by organized farm producers. Supported by survey data on 371 US farmer cooperatives, we analyzed the possible configurations of membership access, equity redemption date, ownership transferability, preferred stock provision and ownership, and upfront capital contribution. In doing so, we informed possible complementarities between attributes of the farm and attributes of the cooperative in terms of ownership and equity investment. Moreover, we formed recommendations to help farmer cooperatives and its member patrons find a balance between the desire to patronize and the obligation to capitalize.

While we believe our research contributes to the literature on cooperative finance and ownership, there remain many open questions. For example, to what extent is member equity investment driven by adaptations to claim rights? What other attributes impact member equity investment? Should cooperative policy address challenges to the survival of the cooperative mode of organization? What is the relationship of organizational design to organizational purpose? How many different hybrid cooperatives exist? Future research is therefore recommended to direct attention toward (i) the causal impact of various claim right characteristics on the dual responsibility of member patrons to both patronize and capitalize the business, (ii) the complementarity between farm attributes and control right configurations, (iii) the relative optimality of different hybrid arrangements within the farmer cooperative sector, and (iv) the complementarity between claim and control right configurations. Such research is expected to help ensure the continued existence of farmer cooperatives with long histories in the agri-food industry.

References

Baarda JR (2006) Current issues in cooperative finance and governance. Cooperative Programs, Rural Development, U.S. Department of Agriculture, Washington, DC

Baker GP, Gibbons R, Murphy KJ (2008) Strategic alliances: bridges between "islands of conscious power". J Jpn Int Econ 22(2):146–163

Benos T, Kalogeras N, Verhees FJ, Sergaki P, Pennings JM (2016) Cooperatives' organizational restructuring, strategic attributes, and performance: the case of agribusiness cooperatives in Greece. Agribusiness 32(1):127–150

Briggeman BC, Jacobs KL, Kenkel P, Mckee G (2016) Current trends in cooperative finance. Agric Financ Rev 76(3):402–410

Brynjolfsson E, Milgrom P (2013) Complementarity between organizations. In: The handbook of organizational economics. Princeton University Press, Princeton, NJ, pp 11–55

Chaddad F (2012) Advancing the theory of the cooperative organization: the cooperative as a true hybrid. Ann Public Coop Econ 83(4):445–461

Chaddad FR, Cook ML (2004) Understanding new cooperative models: an ownership–control rights typology. Appl Econ Perspect Policy 26(3):348–360

Chaddad FR, Cook ML, Heckelei T (2005) Testing for the presence of financial constraints in US agricultural cooperatives: an investment behaviour approach. J Agric Econ 56(3):385–397

Cook ML (1995) The future of US agricultural cooperatives: a neo-institutional approach. Am J Agric Econ 77(5):1153–1159

Cook ML, Chaddad FR (2004) Redesigning cooperative boundaries: the emergence of new models. Am J Agric Econ 86(5):1249–1253

Cook ML, Iliopoulos C (1999) Beginning to inform the theory of the cooperative firm: emergence of the new generation cooperative. Finn J Bus Econ 4(99):525–535

Cook ML, Iliopoulos C (2000) Ill-defined property rights in collective action: the case of US agricultural cooperatives. In: Menard C (ed) Institutions, contracts, and organizations: perspectives from new institutional economics. Edward Elgar, London, pp 335–348

Cook ML, Iliopoulos C (2016) Generic solutions to coordination and organizational costs: informing cooperative longevity. J Chain Netw Sci 16(1):19–27

Demsetz H (1983) Structure of ownership and the theory of the firm. J Law Econ 26(2):375–390

Deng W, Hendrikse G (2013) Uncertainties and governance structure in incentives provision for product quality. In: Network governance. Springer, Heidelberg, pp 179–203

Ebers M, Oerlemans L (2016) The variety of governance structures beyond market and hierarchy. J Manag 42(6):1491–1529

Fama EF, Jensen MC (1983) Separation of ownership and control. J Law Econ 26(2):301–325

Feng L, Hendrikse G (2008) On the nature of a cooperative: a system of attributes perspective. In: Strategy and governance of networks. Physica-Verlag, Heidelberg, pp 13–26

Filippi M, Kühl R, Smit AB (2012) Support for farmers' cooperatives: internationalisation of sugar cooperatives: Cosun, Südzucker/Agrana, Tereos. Wageningen UR, Wagening

Fulton ME, Hueth B (2009) Cooperative conversions, failures and restructurings: an overview. J Coop 23:1–11

Goldberg RA, Preble M (2011) CHS Inc.: cooperative leadership in a global economy. In: Harvard business school teaching note 911–418. Harvard University Press, Cambridge, MA

Grashuis J, Cook ML (2016) Tinkering and reinventing: economic adaptation by farmer cooperatives. Selected paper presented at the World Interdisciplinary Network for institutional research conference – WINIR, Boston, Massachusetts, September 4, 2016

Grashuis J, Cook ML (2017) Toward an updated typology of U.S. farmer cooperatives: survey evidence of recent hybrid ownership restructuring. In: Hendrikse G, Cliquet G, Ehrmann T, Windsperger J (eds) Management and governance of networks: franchising, cooperatives and strategic alliances. Springer, Heidelberg

Harris A, Stefanson B, Fulton M (1996) New generation cooperatives and cooperative theory. J Agric Coop 11:15–28

Harte LN (1997) Creeping privatisation of Irish co-operatives: a transaction cost explanation. In: Strategies and structures in the agro-food industries. Van Gorcum, Assen, pp 31–53

Hendrikse G, Veerman C (1997) Marketing cooperatives as a system of attributes. In: Strategies and structures in the agro-food industries. Van Gorcum, Assen, pp 111–130

Hovelaque V, Duvaleix-Tréguer S, Cordier J (2009) Effects of constrained supply and price contracts on agricultural cooperatives. Eur J Oper Res 199(3):769–780

James HS, Klein PG, Sykuta ME (2007) Markets, contracts, or integration? The adoption, diffusion, and evolution of organizational form. Contracting and Organizations Research Institute, University of Missouri

Katchova AL (2013) Agricultural contracting and agrifood competition. In: The ethics and economics of agrifood competition. Springer, Netherlands, pp 177–191

Liang Q, Hendrikse G (2013) Cooperative CEO identity and efficient governance: member or outside CEO? Agribusiness 29(1):23–38

Liang Q, Hendrikse G (2016) Pooling and the yardstick effect of cooperatives. Agric Syst 143:97–105

Lund M (2013) Cooperative equity and ownership: an introduction. University of Wisconsin Center for Cooperatives, Madison, WI

Makadok R, Coff R (2009) Both market and hierarchy: an incentive-system theory of hybrid governance forms. Acad Manag Rev 34(2):297–319

Ménard C (2004) The economics of hybrid organizations. J Inst Theor Econ 160(3):345–376

Menard C (2007) Cooperatives: hierarchies or hybrids? In: Vertical markets and cooperative hierarchies. Springer, Netherlands, pp 1–18

Menard C (2013) Hybrid modes of organization. In: The handbook of organizational economics. Princeton University Press, Princeton, NJ, pp 1066–1105

Mérel PR, Saitone TL, Sexton RJ (2009) Cooperatives and quality-differentiated markets: strengths, weaknesses, and modeling approaches. J Rural Coop 37(2):201

Mérel PR, Saitone TL, Sexton RJ (2015) Cooperative stability under stochastic quality and farmer heterogeneity. Eur Rev Agric Econ 42(5):765–795

Milgrom P, Roberts J (1990) Rationalizability, learning, and equilibrium in games with strategic complementarities. Econometrica 58(6):1255–1277

Milgrom P, Roberts J (1994) Complementarities and systems: understanding Japanese economic organization. Estud Econ 9(1):3–42

Nilsson J (1999) Co-operative organisational models as reflections of the business environments. Finn J Bus Econ 4(99):449–470

Nilsson J (2001) Organisational principles for co-operative firms. Scand J Manag 17(3):329–356

Parmigiani A, Rivera-Santos M (2011) Clearing a path through the forest: a meta-review of interorganizational relationships. J Manag 37(4):1108–1136

Porter PK, Scully GW (1987) Economic efficiency in cooperatives. J Law Econ 30(2):489–512

Puusa A, Hokkila K, Varis A (2016) Individuality vs. communality—a new dual role of co-operatives? J Coop Organ Manag 4(1):22–30

Rey P, Tirole J (2007) Financing and access in cooperatives. Int J Ind Organ 25(5):1061–1088

Richards TJ, Manfredo MR (2003) Cooperative mergers and acquisitions: the role of capital constraints. J Agric Resour Econ 28(1):152–168

Sexton RJ (2013) Market power, misconceptions, and modern agricultural markets. Am J Agric Econ 95(2):209–219

Staatz JM (1987) The structural characteristics of farmer cooperatives and their behavioral consequences. Coop Theory New Approach 18:33–60

Su Y, Cook ML (2015) Price stability and economic sustainability–achievable goals? A case study of organic valley. Am J Agric Econ 97:635–651

Sykuta ME, Cook ML (2001) A new institutional economics approach to contracts and cooperatives. Am J Agric Econ 83(5):1273–1279

United States Department of Agriculture (2014) Cooperative statistics, 2013. Service report 75. U.S. Department of Agriculture, Washington, DC

Van Bekkum O, Bijman J (2006) Innovations in cooperative ownership: converted and hybrid listed cooperatives. In 7th international conference on management in agrifood chains and networks, vol. 31, Ede, The Netherlands

Van der Krogt D, Nilsson J, Høst V (2007) The impact of cooperatives' risk aversion and equity capital constraints on their inter-firm consolidation and collaboration strategies—with an empirical study of the European dairy industry. Agribusiness 23(4):453–472

Williamson OE (1991) Comparative economic organization: the analysis of discrete structural alternatives. Adm Sci Q 36(2):269–296

Toward an Updated Typology of US Farmer Cooperatives: Survey Evidence of Recent Hybrid Ownership Restructuring

Jasper Grashuis and Michael L. Cook

Abstract Primary survey data on 371 US farmer cooperatives is used to study the diffusion of traditional and novel ownership structures. We conclude the existing typology of claim right configurations is an imperfect representation of the current population of US farmer cooperatives, which is interpreted as strong evidence of much ownership structure adaptation in the last decade. Using 12 ownership structure characteristics, an updated typology is proposed with classic structure variations in which equity redeemability is allowed, as well as new hybrid discoveries which combine different characteristics. Introduced are the classical investor cooperative, a structure common to small local multipurpose cooperatives; the proportional trader cooperative, which is adopted by several large dairy and supply cooperatives; and the proportional investor cooperative. The multiple pairwise comparison method is used to reveal significant differences in the competitive scope, the organizational size and type, as well as the capital structure of classic and hybrid ownership structures. Future research is recommended to further investigate claim right characteristics to inform complementarity between ownership and investment, which is necessary to ensure the long-term economic viability of each farmer cooperative.

1   Introduction

The organization of any transaction is often categorized on a spectrum or continuum, where its cost determines the optimal mode of organization (Williamson 1991). Generally, the anonymous spot market suffices for day-to-day exchanges of basic commodities, such as food, gasoline, and money. By contrast, the hierarchy is often optimal for the production and transaction of complex products which necessitate high degrees of ex ante capital investment and input-output coordination. In the agricultural production sector, the transaction cost of many commodities is minimized by the family farm (Allen and Lueck 2004). However, because of

J. Grashuis (✉) • M.L. Cook
University of Missouri, 125C Mumford Hall, Columbia, MO 65211, USA
e-mail: grashuisj@missouri.edu; cookml@missouri.edu

limited bargaining power vis-a-vis input sellers and output buyers, the family farm is often motivated to engage in group action via the formation of farmer cooperatives (Valentinov 2007). On the market-hierarchy continuum, such farmer-owned and farmer-controlled business enterprises are categorized as hybrids (Menard 2007). Indeed, because there exist a great number of different ownership and governance arrangements, Chaddad (2012) even labeled the farmer cooperative the true hybrid mode of organization.

The diversity in hybrid ownership structures of farmer cooperatives is arguably best captured by Chaddad and Cook (2004) and Cook and Chaddad (2004), who advanced typologies on the basis of claim right characteristics.[1] Since the introduction of the typologies, however, the agri-food industry has evolved. For example, James et al. (2011) noted the increased prevalence of nonmarket arrangements to coordinate value, which implies a departure from spot market organization. Contracting in particular is on the rise, from 11% in 1969 to 41% of total agricultural value in 2005 (MacDonald and Korb 2011). The change in vertical coordination is related to increasing market thinness in the downstream part of the value chain, which implies lower bargaining power vis-a-vis food processors and retailers (Adjemian et al. 2016). Thus, considering the evolving interrelationship of food producers, processors, and retailers, the current function of farmer cooperatives is likely different as compared to one decade ago. Indeed, in the current environment many farmer cooperatives face pressure to engage in ownership structure adaptation so as to raise capital for net asset investment requirements (Briggeman et al. 2016).

Consequently, our study has four objectives: (i) to test Cook and Chaddad (2004) with primary data, (ii) to identify new hybrid ownership structures, (iii) to measure the current diffusion of both classic and hybrid ownership structures, and (iv) to study differences in terms of the finance and performance of such classic and hybrid ownership structures. We make several important contributions to the literature. First, it is determined approximately half of the 371 survey respondents do not fit the typology by Cook and Chaddad (2004), which is strong indication of much ownership structure adaptation in the last decade. Second, using 12 claim right characteristics, an updated typology is proposed to better represent the current population of US farmer cooperatives. Specifically, it is suggested to relax assumptions of equity redeemability for two classic ownership structures. Third, in addition to the 7 observed ownership structures in the literature, 5 more common hybrid structures are identified from over 100 observed combinations. Fourth, the multiple pairwise comparison method is used to reveal significant differences in the financial characteristics of classic versus hybrid structures, while performance as proxied by common financial ratios is determined to be independent to ownership structure.

---

[1]The typologies in Chaddad and Cook (2004) and Cook and Chaddad (2004) bear great similarity. In fact, Cook and Chaddad (2004) is considered to be an expansion of Chaddad and Cook (2004). The remainder of the chapter therefore emphasizes Cook and Chaddad (2004) in order to avoid duplication.

The remainder of the chapter is organized as follows. Section 2 presents an overview of the various ownership structures observed and discussed in the academic literature on farmer cooperatives. Section 3 follows with a basic description of the primary survey data. Section 4 reports the summary statistics of the various claim right configurations in relation to competitive scope, organizational type, and organizational size and design. The ownership structure typology by Cook and Chaddad (2004) is tested in Sect. 5, after which a new typology is proposed in Sect. 6. Section 7 presents a statistical analysis of ownership structure in relation to finance and performance. Finally, Sect. 8 summarizes our main findings and concludes with recommendations for future research.

2 Observed Hybrid Arrangements

As noted by Nilsson (1997), "[t]he concept of cooperative organization is far from homogeneous" (see Table 1). The base case is the classical cooperative, which is defined by the ownership and governance of organized farm producers who are its patrons and capitalists. Traditionally, ownership is nontransferable, and equity is both redeemable and non-appreciable, which is in contrast to the investor-owned firm. The unique character of its ownership structure is often believed to be at the foundation of an equity constraint (Cook 1995; Hart and Moore 1996). As access to private and public debt sources is limited or even nonexistent, capital acquisition is primarily in the form of member equity, which is complicated by the free rider problem, the horizon problem, and the portfolio problem (Cook and Iliopoulos 2000; Borgen 2004; Bogetoft and Olesen 2007). As such, the classical cooperative is constrained in its ability to acquire risk capital by its own ownership structure, which Richards and Manfredo (2003) and Van der Krogt et al. (2007) identified as the primary explanation for mergers and acquisitions of farmer cooperatives. Furthermore, Briggeman et al. (2016) also argued recent consolidation in the cooperative sector is driven by net capital requirements for growth in scale and scope.

Over time, many cooperatives have adjusted the classical ownership structure, seemingly in response to the equity constraint (Cook and Chaddad 2004). For example, ownership of the proportional investment cooperative (PIC) is transferable among member patrons, whose equity contribution is use-proportional to limit over- or underinvestment. Another configuration of the ownership structure is the member-investor cooperative (MIC), which distributes net earnings on the basis of ownership or equity investment, not patronage. Moreover, equity is appreciable as all types of shares, including bonus shares and participation unit shares, increase or decrease in value to reflect the dynamic worth of the cooperative. Much research is published on the new generation cooperative (NGC), for which equity ownership is both appreciable and transferable among member patrons, but membership is often closed and restrictive (Cook and Iliopoulos 1999; Nilsson 1999).

Table 1 Overview of observed ownership structures

Name	Key characteristics	Author(s)
Classical	1. Pure member ownership 2. Non-proportionality 3. Non-transferability 4. Non-appreciability 5. Redeemability	Nilsson (1997); Van Bekkum and Bijman (2006)
Proportional investment	1. Pure member ownership 2. Proportionality 3. Non-transferability 4.Non-appreciability 5. Redeemability	Chaddad and Cook (2004)
Member-investor	1. Pure member ownership 2. Share-based earnings 3. Non-transferability 4. Appreciability 5. Redeemability	Nilsson (1999); Chaddad and Cook (2004)
New generation	1. Pure member ownership 2. Transferability 3. Appreciability 4. Non-redeemability 5. Closed membership 6. High upfront contribution	Harris et al. (1996); Cook and Iliopoulos (1999)
Investor-share	1. Mixed ownership 2. Nonmember equity inside the cooperative	Nilsson (1999); Chaddad and Cook (2004)
Comaker	1. Mixed ownership 2. Nonmember equity outside the cooperative	Nilsson (1999, 2001)
Hybrid-listed	1. Mixed ownership 2. Nonmember equity outside the cooperative 3. Stock listed on the stock exchange	Van Bekkum and Bijman (2006)
Converted-listed	1. Pure investor ownership	Van Bekkum and Bijman (2006)

Other cooperative modes of organization feature outside ownership. One example is the participation share cooperative or the investor-share cooperative (ISC) with a combination of member patrons who receive net earnings on the basis of patronage and outside investors who receive net earnings on the basis of ownership (Nilsson 1999; Chaddad and Cook 2004). While ownership is accessible to nonmember individuals and organizations, including other cooperatives, full formal control of joint assets and resources is retained by the member patrons.[2] In addition to outside ownership, the defining characteristic of the comaker cooperative (CMC) is the inclusion of subsidiary joint-stock companies with mixed ownership (Nilsson 2001). As such, outside ownership may or may not be present in both the

---

[2]As opposed to common stock, no right to control is associated with participation unit shares.

cooperative and its subsidiary, where the latter is more likely to be organized as a limited liability corporation (Baarda 2006). The hybrid-listed cooperative is similar in structure, but ownership of the subsidiary is held by investors, which implies ownership is traded on the public stock market (Van Bekkum and Bijman 2006).[3] A different legal form is established by the limited liability cooperative, or the limited cooperative association, a mode of organization in which all member patrons are investors (Nilsson 1999; Lund 2013).[4] The most radical adjustment to the ownership structure of the classical cooperative is the converted-listed cooperative, whose equity is traded on the stock exchange (Van Bekkum and Bijman 2006). Individual farm producers become suppliers or customers of the organization, which is no longer user-owned, user-controlled, and user-benefited. In general, the equity constraint is assumed to be loosened by each adaptation of the traditional claim right characteristics.

3 Data

Primary survey data is collected to inform the current landscape of ownership structures of US farmer cooperatives. The survey population is comprised of 2000 US farmer cooperatives which reported revenue in fiscal year 2014 to USDA. The online survey is directed at the CEOs, CFOs, or board chairmen of the cooperatives, people with intimate knowledge of the ownership and governance of the organization. Online contact information for CEOs, CFOs, or board chairmen proved to be available for 1164 of the 2000 cooperatives on file. Each contact received a survey invitation in early December 2015. Nonrespondents then received a series of reminders in December 2015 and January 2016. By February 2016, the final sample comprised 381 observations for a response rate of 32.73%. After deleting ten observations with missing data, the effective response rate came to 31.87%.

Table 2 presents the basic respondent characteristics. Almost 74% of the sampled cooperatives report to be active on the local level, which likely implies the state level. 14 of the 371 cooperatives are active nationally, and another 13 are active internationally. Most of the cooperatives are supply or marketing cooperatives, while vertical integration is exhibited by 210 cooperatives which combine two or more value chain activities.[5] The commonness of supply and marketing

---

[3]The investors may or may not be member patrons of the cooperative. Often, initial ownership is sold or granted to member patrons, who subsequently have the option to sell or trade as soon as the stock is listed. One example of such an arrangement is Saskatchewan Wheat Pool, which first issued B shares of common stock in 1996 at C$12 per share (Fulton and Larson 2009).

[4]The organization is only considered to be a cooperative if member patrons hold majority ownership.

[5]For clarification, a cooperative is determined to be primarily active in supply or marketing if the majority of its business volume is generated by the supply of farm inputs (feed, seed, fertilizer, etc.) or the marketing of farm commodities (corn, soybeans, cotton, etc.).

Table 2 Categorical characteristics of survey respondents

	% of sample	% of population
Level of operation		
Local	73.85%	–
Regional	18.87%	–
National	3.77%	–
International	3.50%	–
Supply chain segment		
Supply	81.67%	–
Marketing	64.42%	–
Processing	27.76%	–
Multipurpose	56.60%	–
Commodity sector		
Bean and pea	0.54%	0.23%
Cotton	5.39%	7.32%
Dairy	5.66%	5.81%
Fish	0.54%	1.78%
Fruit and vegetable	4.85%	6.63%
Grain and oilseed	35.04%	22.42%
Livestock	6.47%	4.16%
Nut	0.81%	0.82%
Poultry	0.27%	0.55%
Rice	0.81%	0.55%
Sugar	1.62%	1.24%
Other marketing	1.89%	1.05%
Artificial insemination	0.54%	0.55%
Other supply	26.15%	39.30%
Other service	1.35%	4.48%
Other	8.09%	1.00%

cooperatives in the sample is reinforced by the commodity sector classifications. Overall, 64% of the respondents are marketing cooperatives, while 27% are primarily supply cooperatives. The percentages for the sample are not much different as compared to the percentages for the population. While grain marketing cooperatives and supply cooperatives are somewhat over- and underrepresented, respectively, the sample overall is quite representative of the full population of US farmer cooperatives, at least in terms of type.

In terms of gross business volume, however, the sample is over- and underrepresented by large and small cooperatives, respectively (see Table 3).[6] For the sample, 57% and 14% of the observations have a gross business volume under $50 million and $100 million, respectively. The comparable percentages for the population are 75% and 10%. Moreover, as compared to 4% of the population, 10%

---

[6]According to USDA, gross business volume is the combination of total sales, total service receipts, total dividends, and total non-operating expenses.

Table 3 Data distributions by business volume in fiscal year 2014

Interval ($)	Sample			Population		
	Total	Share	Cumulative	Total	Share	Cumulative
50,000,000	210	57%	57%	1504	75%	75%
100,000,000	53	14%	72%	202	10%	85%
150,000,000	20	5%	77%	67	3%	89%
200,000,000	14	4%	81%	51	3%	91%
250,000,000	11	3%	84%	35	2%	93%
300,000,000	6	2%	86%	17	1%	94%
350,000,000	8	2%	88%	21	1%	95%
400,000,000	2	1%	88%	10	1%	95%
450,000,000	6	2%	90%	11	1%	96%
500,000,000	5	1%	91%	11	1%	96%
550,000,000	3	1%	92%	7	0%	97%
600,000,000	0	0%	92%	2	0%	97%
650,000,000	4	1%	93%	7	0%	97%
700,000,000	2	1%	94%	4	0%	97%
750,000,000	1	0%	94%	3	0%	98%
800,000,000	4	1%	95%	4	0%	98%
850,000,000	1	0%	95%	2	0%	98%
900,000,000	6	2%	97%	8	0%	98%
950,000,000	1	0%	97%	1	0%	98%
1,000,000,000	0	0%	97%	3	0%	98%
>1,000,000,000	14	4%	100%	30	2%	100%

of the sample recorded a gross business volume of $500 million or more in 2014. The discrepancy is likely explained by the fact that online contact information for relatively small cooperatives proved to be difficult to obtain. Although noncontact bias is possible, any negative impact is doubtful for two reasons: (i) the sample size is large enough to represent each business volume category, and (ii) as will be revealed, most relatively small cooperatives have a common structure. Consequently, the relative shortage of small cooperatives is unlikely to affect the analysis or hinder the generalizability of findings and conclusions.

4 Summary Statistics

In total, the survey informed 12 characteristics of the assignment and configuration of claim rights: common stock ownership, equity and patronage proportionality, ownership transferability among member patrons, ownership transferability among members and nonmembers, equity appreciability, equity redeemability, preferred stock provision, preferred stock ownership, open membership, upfront capital requirement, subsidiary organization(s), and ownership of subsidiary organization

Table 4 Overview and description of claim right characteristics

Variable	Definition	Mean
Common stock ownership	1 if ownership of common stock is open to outside investors; 0 if other	0.04
Equity-patronage proportionality	1 if member capital investment is proportional to patronage; 0 if other	0.48
Member-member share transferability	1 if it is common for member patrons to transfer ownership to other member patrons; 0 if other	0.09
Member-investor share transferability	1 if it is possible for member patrons to transfer ownership to outside investors; 0 if other	0.02
Equity appreciability	1 if the value of member equity can increase or decrease over time; 0 if other	0.09
Equity redeemability	1 if it is possible for member patrons to redeem member equity; 0 if other	0.46
Preferred stock availability	1 if preferred stock is available in the cooperative; 0 if other	0.35
Preferred stock ownership	1 if ownership of preferred stock is open to outside investors; 0 if other	0.09
Membership openness	1 if membership is open; 0 if other	0.64
Upfront capital contribution	1 if an upfront capital contribution is required for membership; 0 if other	0.56
Subsidiary	1 if the cooperative has one or more subsidiaries; 0 if other	0.25
Subsidiary ownership	1 if ownership of common stock in the subsidiary(ies) is open to outside investors; 0 if other	0.04

(s) (see Table 4). Together, the claim right characteristics inform the interrelationship of ownership and investment or the dual function of members as both patrons and capitalists of the cooperative (Feng and Hendrikse 2008; Grashuis and Cook 2017). We first report results of mean group comparisons in relation to the competitive scope, organizational type, and organizational size and design of our survey respondents. To conserve space, we only report significant differences at the 90% confidence level.

4.1 Competitive Scope

The competitive scope of the cooperative is measured in terms of business activities on the local, regional, national, or international scale. As illustrated in Table 5, significant differences in competitive scope are observed for cooperatives with various different claim right configurations. The presence of outside ownership, which implies dual or mixed ownership by members and nonmembers, is associated with greater probability of business activity on the regional and the national scale. By contrast, pure member ownership of the cooperative is associated with local business activity. A greater and smaller proportion of local and regional activity, respectively, is also observed for survey respondents which redeem equity and issue

Table 5 Summary statistics of claim right configurations in relation to competitive scope

Claim right configuration	Competitive scope			
	Local	Regional	National	International
Mixed ownership				
No	0.76	0.18	0.03	–
Yes	0.40	0.40	0.13	–
Ownership transferability				
No	–	–	0.03	–
Yes	–	–	0.09	–
Equity appreciability				
No	–	–	0.03	–
Yes	–	–	0.12	–
Equity redeemability				
No	0.70	0.22	–	–
Yes	0.78	0.15	–	–
Preferred stock provision				
No	0.69	0.24	–	–
Yes	0.82	0.09	–	–
Upfront capital requirement				
No	–	–	0.02	–
Yes	–	–	0.05	–
Subsidiary organization				
No	0.79	0.17	–	0.01
Yes	0.58	0.26	–	0.11

preferred stock. Adaptation of other traditional claim right characteristics (ownership transferability, equity appreciability, and upfront capital requirement) is observed in combination with a greater proportion of business activity on the international scale. Finally, the formation of subsidiary organizations is also associated with advanced competitive scope, as evidenced by significant differences for the local, regional, and international levels.

4.2 Organizational Type

Table 6 reports the few significant differences in terms of organizational type, which concerns the value chain segments of the agri-food industry. As indicated, the assignment and configuration of claim right characteristics, whether traditional or nontraditional, is independent of activity in input supply. The processing stage is characterized by a greater proportion of cooperatives which allow ownership transferability, and if an upfront capital contribution is required, the cooperative is more likely to have multiple functions. Again, most significant differences relate to the formation of subsidiary organizations, which is observed to have strong association with activity in marketing and processing.

Table 6 Summary statistics of claim right configurations in relation to organizational type

Claim right configuration	Organizational type			
	Supply	Marketing	Processing	Multipurpose
Ownership transferability				
No	–	–	0.26	–
Yes	–	–	0.47	–
Upfront capital requirement				
No	–	–	–	0.52
Yes	–	–	–	0.61
Subsidiary organization				
No	–	0.60	0.22	0.51
Yes	–	0.77	0.45	0.72

Table 7 Summary statistics of claim right configurations in relation to organizational size

Claim right configuration	Organizational size determinant			
	Federated	Total members	Total employees	Total assets (million)
Mixed ownership				
No	–	2757.2	120.2	–
Yes	–	908.5	43.57	–
Ownership transferability				
No	–	2811.2	–	–
Yes	–	1321.3	–	–
Equity appreciability				
No	–	2830.30	123.90	–
Yes	–	1221.30	51.25	–
Equity redeemability				
No	0.63	–	–	–
Yes	0.72	–	–	–
Preferred stock provision				
No	0.62	–	–	–
Yes	0.76	–	–	–
Subsidiary organization				
No	–	1195.40	46.61	13.53
Yes	–	7194.30	335.30	148.85

4.3 Organizational Size and Design

Mixed ownership of the cooperative is associated with smaller size, both in terms of total members and total employees (see Table 7). A similar significant difference is also observed in terms of ownership transferability and equity appreciability, where adaptation of the classical structure is associated with fewer members and employees. Cooperatives which redeem equity and issue preferred stock are more

likely to be federated as opposed to centralized.[7] Finally, the organization of member or nonmember business in a subsidiary organization is associated with greater size in terms of total members, total employees, as well as total assets.

5 Testing Typologies

For the purpose of testing the ownership structure typology by Cook and Chaddad (2004), it is first necessary to abstract (see Fig. 1). Following the typology, eight claim right characteristics are considered, namely, ownership of common stock, proportionality of equity and patronage, share transferability among members, share appreciability, equity redeemability, subsidiary organization(s), outside ownership in subsidiary organization(s), and public ownership of subsidiary organization(s). As indicated in Table 8, approximately half of the observations fit one of the seven ownership structures.[8] Interestingly, many of the cooperatives conform to the mold of the classical cooperative (18%). Few cooperatives fit the rigid description of the new generation cooperative (1%), while a fair percentage is observed to have adopted an ownership structure with outside capital in the cooperative or in its subsidiary organization(s) as the main characteristic (16%).[9] Overall, 49.33% of the sample is not represented by the typology.

6 Novel Structures

Altogether, as each dimension is recorded in binary form, there are $2^{12} = 4096$ possible ownership structures. Based on our survey data, we observe 132 different structures, which implies there exist many hybrid arrangements which are not observed or recognized in the literature (Baker et al. 2008). As the ownership structures of 183 survey respondents are not captured by Cook and Chaddad (2004), a closer look is warranted to inform a better representation of the current population of US farmer cooperatives. We for now do not consider membership

---

[7]For clarification, a cooperative is considered to be federated if there exist multiple local or regional cooperatives which together own another cooperative. By contrast, a cooperative is centralized if it is not owned by other cooperatives.

[8]The seventh ownership structure in Cook and Chaddad (2004), the investor-oriented firm, is of course unobserved in the data. Instead, the hybrid-listed cooperative (Van Bekkum and Bijman 2006) is considered to accommodate the single observation with a public market presence.

[9]The observed irrelevance of the NGC structure to the sample is surprising considering the large amount of academic attention. Chaddad and Cook (2004) noted "[t]here are many examples of new generation cooperatives," which gives reason to believe the NGC structure is not as rigid in practice as in theory.
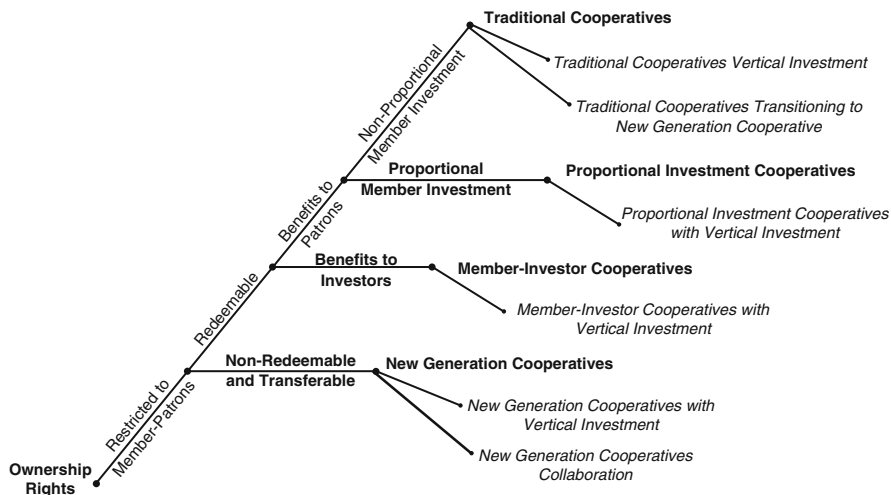
Fig. 1 Typology of ownership structures (adapted from Cook and Chaddad 2004)

Table 8 Diffusion of common hybrid ownership structures (based on Cook and Chaddad 2004)

Name	Total	Percentage
Classical	67	18
Proportional investment	55	15
Member-investor	2	1
New generation	4	1
Investor-share	45	12
Comaker	14	4
Hybrid-listed	1	0
Other	183	49
Total	49	100

openness and upfront capital requirement so as to facilitate better analysis and categorization.[10]

Among the 183 survey respondents which do not fit the typology, the structure of 46 observations has the following characteristics: ownership is restricted; equity and patronage are not proportional; equity is nontransferable, non-appreciable, and non-redeemable; no preferred stock is available; and no subsidiary entity is established. Another structure is identical, except for the availability of preferred

---

[10]Approximately half of the survey respondents have an open membership policy and an equity redemption system. As indicated by the summary statistics in Tables 5, 6, and 7, open membership and equity redemption do not facilitate significant differences in competitive scope, organizational type, or organizational size and design. Also, the causal impact of each claim right characteristic on the equity constraint is rather ambiguous. Therefore, its exclusion is expected to improve our analysis.

stock to member patrons. Of course, there exist other possible combinations of preferred stock provision, preferred stock ownership, subsidiary organization(s), and outside ownership in subsidiary organization(s). Altogether, 71 of the 183 cooperatives have an ownership structure which is almost identical to the classical cooperative. The only practical difference is the non-redeemability of equity. For now, the name Classical Cooperative II suffices.

Similar to the above paragraph, a common ownership structure is observed with great similarity to the proportional cooperative. In fact, the difference is again manifested in the non-redeemability of equity. When preferred stock provision, preferred stock ownership, subsidiary organization(s), and ownership of subsidiary organization(s) are not considered, 69 cooperatives have an ownership structure characterized by pure member ownership, equity and patronage proportionality, and non-transferability, non-appreciability, and non-redeemability of equity. Similar to the previous structure, the name Proportional Cooperative II seems appropriate for the moment.

The analysis is now turned to the 43 other ownership structures. Three combinations have multiple observations. First, the structure of 15 cooperatives is defined by proportionality of equity and patronage as well as appreciable equity, which implies equity investment is encouraged by two nonclassical configurations. The structure, which is adopted by small and large cooperatives active on the local or the regional level, is essentially a hybrid proportional cooperative with a member-investor element, only ownership is nontransferable@@. Second, several large dairy and supply cooperatives have a similar structure with equity and patronage proportionality, but equity is non-appreciable as in the classical cooperative and the proportional cooperative yet transferable as in the NGC, thus combining the core elements of various ownership structures with full member ownership. Third, a structure characterized by equity transferability is common to eight small grain and supply cooperatives with a membership size of several hundred. While relatively small and local, almost each cooperative is considered to be multipurpose in its business activity. For the sake of simplicity, the three structures are for now named proportional investor cooperative, proportional trader cooperative, and classical investor cooperative, respectively. Each type is possibly a manifestation of classical cooperatives in transition to new generation cooperatives (Cook and Chaddad 2004).

The remainder (11 cooperatives) is comprised of unique structures. Obviously, some cooperatives adopt claim right characteristics of various different structures, thus forming new hybrid structures. When interpreting the typology as a spectrum or continuum with the classical cooperative and the hybrid-listed cooperative at the two extremes (Menard 2007), such hybrid structures fall somewhere in between. Altogether, considering the observed variation in ownership structures, there is apparently much truth to (i) the presumed existence of many unobserved hybrid arrangements (Baker et al. 2008) and (ii) the proclamation of the cooperative as the true hybrid mode of organization (Chaddad 2012).

Given the foregoing discussion on classic and novel hybrid ownership structures, an update to the existing typology in Cook and Chaddad (2004) is proposed. In

order to better represent the full population of US farmer cooperatives, a minor adjustment to the descriptions of the classical cooperative and the proportional investment cooperative is warranted. In each case, equity redeemability is the dividing dimension. Relaxing the assumption of equity redeemability for both ownership structures will allow 39% more of the survey respondents to be covered. In addition, the proportional investor cooperative, the proportional trader cooperative, and the classical investor cooperative are each included to increase the coverage rate to 95%. Figure 2 presents the updated typology and the diffusion rate of each structure. As indicated, only a small portion of the sample is registered in the bottom half of the tree. As such, despite ongoing concentration and industrialization in the agri-food industry (Adjemian et al. 2016), the two classic structures remain the most common ownership structures for the joint ownership and governance of profits and resources in the farmer cooperative sector.

The foremost explanation for hybrid structuring and restructuring by US farmer cooperatives is economic efficiency. Traditionally, the cooperative is often formed in response to concentrated input supply and output demand markets (Sexton 1990), which is why individual farm producers take joint control of multiple value chain activities, such as collective price negotiation or even processing of pooled commodities (Valentinov 2007). While the cooperative is considered to be the most efficient mode of organization, in the dynamic economic environment there is no guarantee of its long-term efficiency or its survival. In fact, there is good reason to suspect inefficiency as claim and control right assignments and configurations often cause equity and control problems (Cook 1995). In response, US farmer cooperatives tinker and reinvent, which is interpreted as economic adaptation or, more precisely, an institutional response to inefficiency (Grashuis and Cook 2016). A similar interpretation is advanced by Grashuis and Cook (2017), who approached the cooperative as an independent firm comprising a system of attributes, which places tinkering and reinventing in context of pursuing complementarities between various attributes. Novel hybrid structures are manifestations of such behavior.

7   Structure and Firm and Finance Characteristics

While categorization is useful, it is pertinent to recall the hypothesized reason behind ownership structure adaptation. Owing to the suboptimal assignment and configuration of rights to claim profits and control resources, the classical cooperative is believed to suffer an inherent equity constraint (Cook 1995). Relaxing or relieving the equity constraint is often pursued by changing the classical claim right characteristics (Chaddad and Cook 2004). Therefore, it is reasonable to expect differences in terms of the finance and performance of the various ownership structures. Hence, multiple pairwise comparisons are conducted for various variables. In Table 9, Panel A presents the means and standard deviations for 11 firm characteristics and Panel B comparable information for 11 indicators of
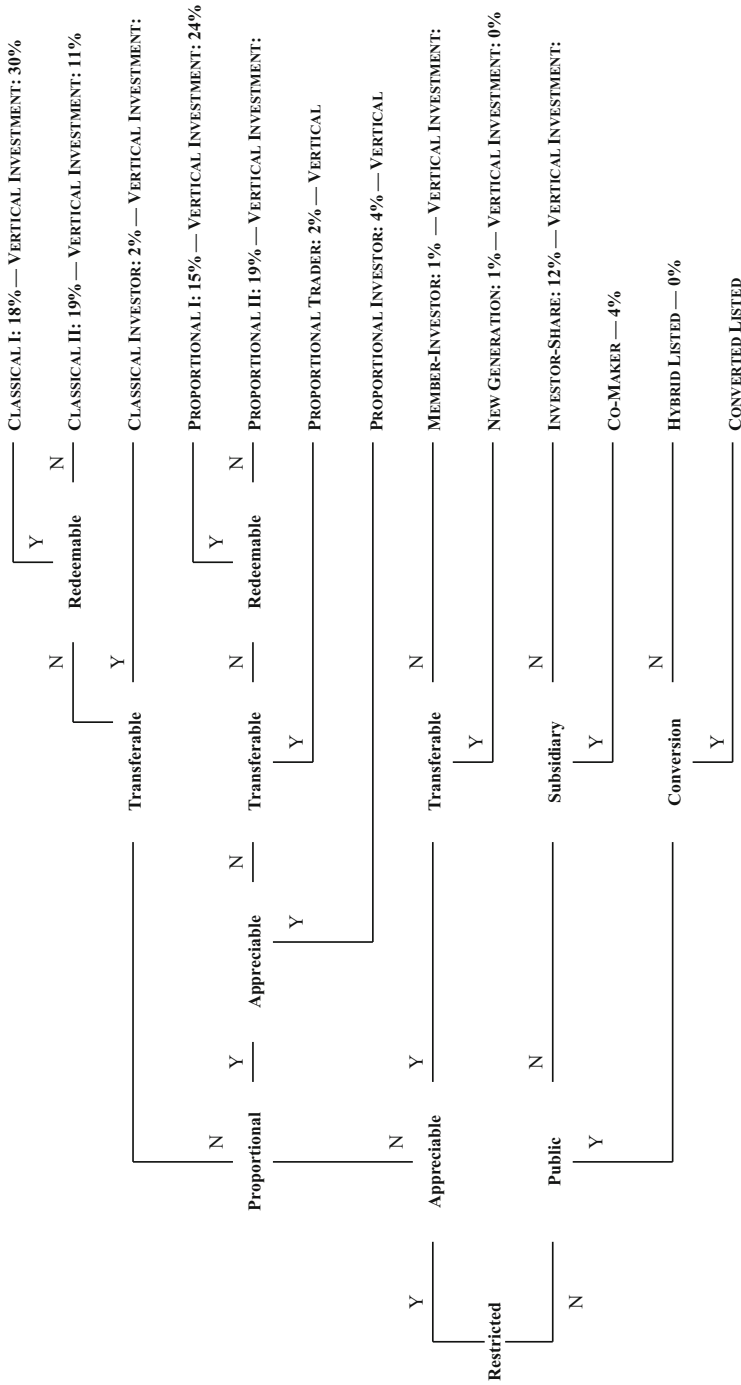
Fig. 2 Updated typology of hybrid ownership structures of US farmer cooperatives

Table 9 Summary statistics by ownership structure

	Ownership structure											
	CC (N = 67)	CCII (N = 71)	CIC (N = 8)	PC (N = 55)	PCII (N = 69)	PTC (N = 9)	PIC (N = 15)	MIC (N = 2)	NGC (N = 4)	CMC (N = 14)	ISC (N = 45)	HLC (N = 1)
Panel A: organization												
Local	0.81 (0.40)	0.68 (0.47)	0.88 (0.35)	0.84 (0.37)	0.72 (0.45)	0.67 (0.50)	0.80 (0.41)	0.50 (0.71)	0.50 (0.58)	0.86 (0.36)	0.69 (0.47)	0.00 (–)
Regional	0.15 (0.36)	0.23 (0.42)	0.13 (0.35)	0.15 (0.36)	0.19 (0.39)	0.22 (0.44)	0.20 (0.41)	0.00 (0.00)	0.50 (0.58)	0.14 (0.36)	0.20 (0.40)	0.00 (–)
National	0.03 (0.17)	0.06 (0.23)	0.00 (0.00)	0.00 (0.00)	0.03 (0.17)	0.00 (0.00)	0.00 (0.00)	0.50 (0.71)	0.00 (0.00)	0.00 (0.00)	0.04 (0.21)	0.00 (–)
International	0.01 (0.12)	0.04 (0.20)	0.00 (0.00)	0.02 (0.13)	0.04 (0.21)	0.11 (0.33)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.07 (0.25)	1.00 (–)
Supply	0.81 (0.40)	0.77 (0.42)	0.75 (0.46)	0.87 (0.34)	0.80 (0.41)	0.89 (0.33)	0.80 (0.41)	0.50 (0.71)	0.75 (0.50)	1.00 (0.00)	0.89 (0.32)	1.00 (–)
Marketing	0.69 (0.47)	0.66 (0.48)	0.75 (0.46)	0.62 (0.49)	0.64 (0.48)	0.44 (0.53)	0.60 (0.51)	1.00 (0.00)	0.75 (0.50)	0.86 (0.36)	0.58 (0.50)	1.00 (–)
Processing	0.28 (0.45)	0.23 (0.42)	0.63 (0.52)	0.22 (0.42)	0.30 (0.46)	0.44 (0.53)	0.27 (0.46)	0.00 (0.00)	0.50 (0.58)	0.21 (0.43)	0.27 (0.45)	1.00 (–)
Multipurpose	0.57 (0.50)	0.51 (0.50)	0.75 (0.46)	0.62 (0.49)	0.57 (0.50)	0.56 (0.53)	0.53 (0.52)	0.50 (0.71)	0.75 (0.50)	0.86 (0.36)	0.51 (0.51)	1.00 (–)
Federation	0.75 (0.44)	0.58 (0.50)	1.00 (0.00)	0.69 (0.47)	0.67 (0.47)	0.56 (0.53)	0.53 (0.52)	0.50 (0.71)	0.50 (0.58)	0.79 (0.43)	0.64 (0.48)	1.00 (–)
Membership size (thousands)	2.36 (5.75)	2.53 (8.19)	0.53 (0.33)	2.61 (6.14)	1.06 (1.48)	1.86 (4.21)	1.10 (1.90)	0.73 (0.15)	0.88 (0.55)	4.79 (5.19)	6.48 (29.86)	75.00 (–)
Panel B: finance and performance												
Business volume (millions)	118.56 (203.99)	177.81 (309.83)	78.02 (160.12)	184.80 (652.56)	94.45 (168.83)	2029.93 (5935)	131.79 (389.18)	340.07 (392.82)	492.08 (692.12)	378.72 (290.42)	554.37 (2287)	42885 (–)

Total assets (millions)	45.70 (81.10)	67.01 (129.95)	43.20 (99.81)	61.33 (162.45)	35.28 (62.85)	394.32 (1129)	56.58 (166.98)	75.15 (74.65)	79.46 (61.84)	180.86 (141.94)	242.89 (1062)	15146 (–)
Total liabilities (millions)	25.51 (45.50)	31.32 (60.38)	27.43 (68.20)	37.16 (122.42)	18.41 (37.61)	306.11 (899.28)	35.66 (112.02)	70.81 (83.11)	47.59 (63.51)	113.10 (112.23)	160.18 (825.32)	8680.15 (–)
Total equity (millions)	20.19 (41.63)	35.69 (81.75)	15.78 (31.64)	24.17 (49.83)	16.87 (26.48)	88.21 (230.50)	20.92 (55.36)	4.34 (8.46)	31.87 (26.51)	67.76 (39.62)	82.72 (285.01)	6466.83 (–)
Income (millions)	3.00 (7.64)	5.12 (21.99)	0.84 (1.01)	2.56 (6.06)	2.06 (2.85)	7.43 (17.47)	2.41 (5.22)	5.82 (7.10)	12.16 (24.11)	8.13 (8.99)	10.74 (44.85)	1083.01 (–)
Return on assets	0.06 (0.08)	0.08 (0.11)	0.10 (0.09)	0.06 (0.05)	0.10 (0.34)	0.07 (0.06)	0.04 (0.06)	0.06 (0.03)	0.21 (0.26)	0.06 (0.06)	0.25 (1.30)	0.07 (–)
Return on equity	0.10 (0.24)	0.34 (1.42)	0.15 (0.13)	0.11 (0.07)	1.75 (13.83)	0.13 (0.12)	0.13 (0.18)	−3.27 (4.74)	0.20 (0.54)	0.12 (0.10)	0.30 (1.30)	0.17 (–)
Return on sales	0.06 (0.20)	0.03 (0.07)	0.05 (0.06)	0.03 (0.03)	0.04 (0.08)	0.02 (0.02)	0.01 (0.06)	0.01 (0.00)	0.11 (0.14)	0.06 (0.13)	0.05 (0.14)	0.03 (–)
Debt ratio	0.48 (0.21)	0.45 (0.24)	0.35 (0.20)	0.48 (0.21)	0.47 (0.20)	0.39 (0.24)	0.43 (0.29)	0.78 (0.34)	0.51 (0.29)	0.54 (0.20)	0.46 (0.21)	0.57 (–)
Current ratio	2.91 (9.56)	39.12 (303.55)	2.77 (1.77)	1.84 (1.14)	1.93 (1.27)	1.73 (0.56)	6.47 (13.64)	1.04 (0.35)	2.18 (1.41)	1.44 (0.59)	3.74 (12.69)	1.52 (–)
Asset turnover	2.91 (3.31)	4.53 (9.23)	2.79 (1.26)	3.03 (4.29)	3.45 (3.30)	6.92 (10.05)	3.17 (4.91)	3.90 (1.63)	4.07 (3.49)	2.29 (1.07)	3.18 (2.79)	2.82 (–)

CC classical cooperative, *CCII* classical cooperative II, *CIC* classical investor cooperative, *PC* proportional cooperative, *PCII* proportional cooperative II, *PTC* proportional trader cooperative, *PIC* proportional investor cooperative, *MIC* member-investor cooperative, *NGC* new generation cooperative, *CMC* comaker cooperative, *ISC* investor-share cooperative, *HLC* hybrid-listed cooperative

performance and financial flexibility.[11] The choice of test or method is motivated by the character and distribution of the data, which varies by variable. When binary, the chi-square test is conducted to measure differences in proportions or alternatively Fisher's exact test if the count is below five (McDonald 2008). When continuous, data transformation is preferred to allow the Tukey test. However, when normality or near normality of the data is not within reason, the nonparametric Kruskal-Wallis test is conducted by means of the Dwass-Steel-Critchlow-Fligner procedure, which requires data to be ranked.

Table 10 lists the pairwise comparisons which are characterized by statistical significance at 90% and 95% confidence levels for each variable. Considering the total number of possible pairwise comparisons is $[(12-1)12]/2 = 66$ for each variable, the list is remarkably short. However, several observations are possible:

1. Significant differences for the most part involve the ownership structures of the comaker cooperative and the hybrid-listed cooperative, which are both defined by the presence of nonmember equity in subsidiary organizations.
2. Often the significant difference is in relation to variations of the classical cooperative and the proportional cooperative, for which means and proportions are relatively low.
3. In the case of the comaker cooperative, significant differences relate to its type, its membership size, and its balance sheet. Eighty-four percent of comaker cooperatives are active in two or more core value chain segments, and the mean membership size is close to 5000. Also, while total assets and total liabilities are significantly different as compared to the classical cooperative and the proportional cooperative, its mean asset turnover ratio is actually the lowest across the sample.
4. Few significant differences exist between the classical cooperative, the proportional cooperative, and its various hybrid variations, which raise the question if changing one or two claim right characteristics is at all meaningful.
5. The hybrid-listed structure is interesting as its adoption is limited to the largest cooperative in terms of business volume. Consequently, it is no surprise to see significant differences in total assets, total liabilities, and other indicators of firm size.
6. While differences in balance sheet items are characterized by statistical significance for several pairwise comparisons, financial ratios in general lack statistical significance at the usual confidence level. Consequently, ownership structure and efficiency and profitability appear to be independent. However, financial performance is not necessarily of primary interest to each cooperative, which implies ROA and ROE cannot be studied in isolation (Soboh et al. 2009).

---

[11]Return on assets (ROA) and return on equity (ROE) are the most common indicators of efficiency and profitability, while the debt ratio and the current ratio are considered to be the two primary capital structure indicators.

Table 10 Overview of significant pairwise comparisons

Variable	Significant mean comparison	Test
Competitive scope		
Local	0–1*, 1–3**, 3–10*	Chi-square
National	0–7*, 3–7**, 4–7**	Fisher's
International	0–11**, 1–11*, 3–11**, 4–11*, 6–11*, 9–11*, 10–11*	Fisher's
Organizational type		
Supply	1–9*, 1–10*	Fisher's
Multipurpose	0–9**, 1–9**, 4–9**, 6–9*, 9–10**	Chi-square
Organizational size and design		
Federated	0–1*	Chi-square
	0–5*	Fisher's
Membership size	1–9*, 4–9*, 6–9**	Tukey
Business volume	0–11**, 1–9*, 1–11**, 2–11*, 3–11*, 4–11**, 6–9**, 6–11**,	Tukey
	10–11*	Tukey
Capital structure and performance		
Total assets	0–9*, 0–11*, 1–9**, 1–11**, 2–11*, 4–9**, 4–11*, 5–11*, 6–9**,	Tukey
	6–11**, 10–11*	Tukey
Total liabilities	0–9*, 0–11*, 1–9**, 1–11**, 2–9*, 2–11**, 3–9*, 3–11*, 4–9**,	Tukey
	4–11**, 5–11*, 6–9**, 6–11**, 10–11*	Tukey
Total equity	0–11*, 1–9**, 1–11**, 2–11*, 3–11*, 4–9**, 4–11**, 5–11*,	Tukey
	6–9**, 6–11**, 9–10*, 10–11**	Tukey
Income	0–9*, 0–11**, 1–9**, 1–11**, 2–9**, 2–11**, 3–9**, 3–11**,	Tukey
	4–9**, 4–11**, 5–11**, 6–11*, 9–10*, 10–11**	Tukey

* and ** denote statistical significance at $\alpha = 0.10$ and $\alpha = 0.05$, respectively
0 = classical, 1 = classical II, 2 = classical investor, 3 = proportional, 4 = proportional II,
5 = proportional trader, 6 = proportional investor, 7 = member-investor, 8 = new generation,
9 = comaker, 10 = investor-share, 11 = hybrid-listed

The absence of statistical significance is in some instances in part explained by the small sample. While differences in the proportions and the means and standard deviations are not necessarily small, some pairwise comparisons use less than 20 or 30 observations, which raises the statistical power threshold for rejecting the null hypothesis of no mean difference. The result is therefore less than conclusive. Further testing, whether by means of large-sample empirical analysis or small-sample qualitative work, is required to determine with certainty in what respect the hybrid ownership structures are different. For example, it is perhaps worthwhile to examine if a dichotomy, pure or mixed farmer ownership, is superior to an ownership structure

typology on the basis of many claim right configurations in order to explain or predict the relationship to finance and performance.

8   Summary and Conclusion

Prompted by recent developments in the agri-food industry, we used survey data to examine the current diversity and diffusion of hybrid ownership structures of US farmer cooperatives. Testing of the ownership structure typology by Cook and Chaddad (2004) revealed great heterogeneity in structure, as well as the general shortcomings of rigid ownership structure descriptions. Approximately half of our 371 survey respondents did not fit the typology, which served as confirmation of recent ownership structure adaptation and motivation for the identification of novel structures to inform an updated typology.

When relaxing the claim right characteristic of equity redeemability, a large group conformed to the structure of the classical cooperative. Hence, the classic ownership structure introduced in the nineteenth and twentieth centuries is still of great relevance today. Additionally, another large group has adopted a similar structure in which member equity investment is proportional to patronage. Together, the two groups represent 80% of the sample. Although the classical cooperative and the proportional cooperative remain popular, the prolific use of preferred stock and subsidiary organizations across the sample is indicative of hybrid structuring and restructuring beyond what is captured by abstract typologies.

In addition to the aforementioned two structures, there exist various combinations of the classical cooperative and the proportional cooperative in conjunction with ownership transferability and equity appreciability. Three popular structures are observed in the sample: (i) the proportional investor cooperative, which is adopted by both small and large cooperatives which drive financial flexibility by means of equity and patronage proportionality as well as equity appreciability; (ii) the proportional trader cooperative, which is common to several large dairy and supply cooperatives with local and regional scope; and (iii) the classical investor cooperative, which is identical to the basic structure only with equity transferability. Altogether, such hybrid structures fall somewhere in between the classical cooperative and the hybrid-listed cooperative on the spectrum of discrete ownership.

The multiple pairwise comparison method revealed a list of significant differences in terms of firm and financial characteristics. With several exceptions, firm characteristics are not significantly different across the ownership structures. For the financial characteristics, differences in the three major balance sheet items (total assets, total liabilities, and total equity) are characterized by statistical significance for the classical structures in comparison to the hybrid structures. In terms of efficiency and profitability, differences in ROA and ROE are not different across the ownership structures at the 90% or 95% confidence level. However, rejection of the null hypothesis is complicated by the relatively small sample and the even

smaller subsamples for the various ownership structures, which leads to future research questions and recommendations. For example, what drives ownership structure adaptation? What is the causal impact of each claim right configuration on the equity constraint? What is the relationship of the ownership structure to the governance structure? Is the typology representative of farmer cooperatives in other regions, such as Europe, Africa, and Asia? We need answers to such questions to further our collective understanding of the future economic viability of farmer cooperatives.

References

Adjemian MK, Brorsen BW, Hahn W, Saitone TL, Sexton RJ (2016) Thinning markets in U.S. agriculture. Economic information bulletin number 148. U.S. Department of Agriculture, Washington, DC

Allen DW, Lueck D (2004) The nature of the farm: contracts, risk, and organization in agriculture. MIT Press, Cambridge, MA

Baarda JR (2006) Current issues in cooperative finance and governance. USDA, Cooperative Programs, Rural Development, U.S. Department of Agriculture, Washington, DC

Baker GP, Gibbons R, Murphy KJ (2008) Strategic alliances: bridges between "islands of conscious power". J Jpn Int Econ 22(2):146–163

Bogetoft P, Olesen HB (2007) Sales distortion in heterogeneous cooperatives. In: Vertical markets and cooperative hierarchies. Springer, Netherlands, pp 213–223

Borgen SV (2004) Rethinking incentive problems in cooperative organizations. J Socio-Econ 33 (4):383–393

Briggeman BC, Jacobs KL, Kenkel P, Mckee G (2016) Current trends in cooperative finance. Agric Financ Rev 76(3):402–410

Chaddad F (2012) Advancing the theory of the cooperative organization: the cooperative as a true hybrid. Ann Public Coop Econ 83(4):445–461

Chaddad FR, Cook ML (2004) Understanding new cooperative models: an ownership–control rights typology. Appl Econ Perspect Policy 26(3):348–360

Cook ML (1995) The future of US agricultural cooperatives: a neo-institutional approach. Am J Agric Econ 77(5):1153–1159

Cook ML, Chaddad FR (2004) Redesigning cooperative boundaries: the emergence of new models. Am J Agric Econ 86(5):1249–1253

Cook ML, Iliopoulos C (1999) Beginning to inform the theory of the cooperative firm: emergence of the new generation cooperative. Finn J Bus Econ 4(99):525–535

Cook ML, Iliopoulos C (2000) Ill-defined property rights in collective action: the case of US agricultural cooperatives. In: Menard C (ed) Institutions, contracts, and organizations: perspectives from new institutional economics. Edward Elgar, London, pp 335–348

Feng L, Hendrikse G (2008) On the nature of a cooperative: a system of attributes perspective. In: Strategy and governance of networks. Physica-Verlag, Heidelberg, pp 13–26

Fulton ME, Larson K (2009) The restructuring of the Saskatchewan wheat pool: overconfidence and agency. J Coop 23:1–19

Grashuis J, Cook ML (2016) Tinkering and reinventing: economic adaptation by farmer cooperatives. Selected paper presented at the World Interdisciplinary Network for institutional research conference – WINIR, Boston, Massachusetts, September 4, 2016

Grashuis J, Cook ML (2017) Farmer cooperatives as systems of attributes: an analysis of ownership and investment complementarities. In: Hendrikse G, Cliquet G, Ehrmann T, Windsperger J (eds) Management and governance of networks: franchising, cooperatives and strategic alliances. Springer, Heidelberg

Harris A, Stefanson B, Fulton M (1996) New generation cooperatives and cooperative theory. J Agric Coop 11:15–28

Hart O, Moore J (1996) The governance of exchanges: members' cooperatives versus outside ownership. Oxf Rev Econ Policy 12(4):53–69

James HS, Klein PG, Sykuta ME (2011) The adoption, diffusion, and evolution of organizational form: insights from the agrifood sector. Manag Decis Econ 32(4):243–259

Lund M (2013) Cooperative equity and ownership: an introduction. University of Wisconsin Center for Cooperatives, Madison, WI

MacDonald JM, Korb P (2011) Agricultural contracting update: contracts in 2008. U.S. Department of Agriculture, Washington, DC

McDonald JH (2008) Handbook of biological statistics. Sparky House Publishing, Baltimore, MD

Menard C (2007) Cooperatives: hierarchies or hybrids? In: Vertical markets and cooperative hierarchies. Springer, Netherlands, pp 1–18

Nilsson J (1997) New generation farmer co-ops. Rev Int Coop 90:32–38

Nilsson J (1999) Co-operative organisational models as reflections of the business environments. Finn J Bus Econ 4(99):449–470

Nilsson J (2001) Organisational principles for co-operative firms. Scand J Manag 17(3):329–356

Richards TJ, Manfredo MR (2003) Cooperative mergers and acquisitions: the role of capital constraints. J Agric Resour Econ 28(1):152–168

Sexton RJ (1990) Imperfect competition in agricultural markets and the role of cooperatives: a spatial analysis. Am J Agric Econ 72(3):709–720

Soboh RA, Lansink AO, Giesen G, Van Dijk G (2009) Performance measurement of the agricultural marketing cooperatives: the gap between theory and practice. Rev Agric Econ 31 (3):446–469

Valentinov V (2007) Why are cooperatives important in agriculture? An organizational economics perspective. J Inst Econ 3(01):55–69

Van Bekkum O, Bijman J (2006) Innovations in cooperative ownership: converted and hybrid listed cooperatives. In 7th international conference on management in agrifood chains and networks, vol. 31, Ede, The Netherlands

Van der Krogt D, Nilsson J, Høst V (2007) The impact of cooperatives' risk aversion and equity capital constraints on their inter-firm consolidation and collaboration strategies—with an empirical study of the European dairy industry. Agribusiness 23(4):453–472

Williamson OE (1991) Comparative economic organization: the analysis of discrete structural alternatives. Adm Sci Q 36(2):269–296

Innovations in Cooperatively Organized Breeding Networks: Analysis of Cluster Structures in Dairy Cattle Breeding in Germany

Julia Höhler and Rainer Kühl

Abstract This article examines the innovation activity of cooperatives in dairy cattle breeding and especially the links between profitability, organization, and innovation in the case of Germany. The combination of an explorative approach and multivariate data analysis, of case studies and data from the official estimation of breeding values, is intended to provide a better understanding of the interdependencies. Our cluster analysis suggests a positive effect of network activity and innovation activity on the profitability of breeding companies. Our results imply that network organizations should be supported by the members. The insights on small cooperatives with a high number of shares per member reveal a second way that could combine the benefits of networks and small cooperatives: the establishment of networks and their splitting in strategic groups with a size-related distribution of shares per member.

1 Introduction

The future needs of the world food market challenge the Agribusiness. Changing consumer habits, national interests, and an increasing world population demand the adjustment of production. Animal breeding, standing at the beginning of the supply chain, contributes by providing improved breeds which meet the consumers' needs (Höhler and Kühl 2015; Höhler 2016). The resulting strong demand for high-quality genetics is accompanied by increasing globalization, enhanced innovative efforts (Napel and Veerkamp 2015), and tougher competition (Herold et al. 2012a) in the breeding market.

In 2012, livestock production accounted for 39% of the net production value in world agriculture. An important product segment is the production of fresh cow milk (FAO 2015b). Milk yield per cow is steadily increasing (FAO 2015a). This is

J. Höhler (✉) • R. Kühl
Institute of Agribusiness Management and Food Economics, Justus Liebig University Giessen, Senckenbergstr. 3, 35390 Giessen, Germany
e-mail: julia.hoehler@agrar.uni-giessen.de; rainer.kuehl@agrar.uni-giessen.de

especially remarkable as dairy cattle breeding is mainly organized by cooperatives (Bo 2005; Funk 2006), enterprises owned by a society of many independent downstream farmers. Cooperatives are seldom thought of as being a driving force for innovation. They rather often develop away from the traditional cooperative structures. Ownership rights are relaxed in the face of environmental and structural changes, increasing globalization and competition (Chaddad and Cook 2004). Nevertheless, breeding cooperatives with their traditional cooperative structures are still outperforming other organizational forms, particularly in Germany. Pelhak (2011) describes their position in the German market as a quasi-monopoly. As the theoretical considerations of Höhler and Kühl (2015) suggest, breeding cooperatives possess several economic advantages in cattle breeding compared to IOFs. Members provide genetic material in the form of breeding animals. The cooperatives choose the best animals and use them to produce semen. The free rider problems which are often discussed within the context of other sectors do not seem to exist. This is probably due to the special structure of the value chain and the related incentive mechanisms (Höhler and Kühl 2015). Genetic material is duplicated and sold back to the breeders. Breeders and cooperatives simultaneously act as buyers and suppliers within the market for genetic material.

Breeding within cooperatives allows the exchange of knowledge and information between its members while eliminating double marginalization. Innovation driving aspects are based on the pooling of risks, the reduction of information deficits, the exploitation of scale effects, the development of strategic resources, as well as the internalization of spillover effects (Höhler and Kühl 2015). Höhler and Kühl (2015) examine the revenue maximization of breeding cooperatives compared to IOFs from a theoretical point of view. The access to information about the members' breeding animals offers an economic advantage for cooperatives. More open information and constant interaction between the participating groups are considered as advantages for technological innovation (Teece 1996). Each member is able to use the advances made by the others and develop by himself. The underlying network structure, that is the differences, similarities and connections between agents, is crucial for the emergence of collective innovation, its speed, and the innovative performance at the aggregate level (Cowan and Jonard 2003; Teece 1996). While some breeding cooperatives address the abovementioned developments by an increase in network activity through cooperation with other breeding cooperatives, others still conduct their own breeding and marketing programs.

The impact of organization on innovation and thus on success in increasingly concentrated markets for intermediate products with limited protection of property rights offers an interesting field of research. Both, animal breeding and breeding success as the related intermediate good contribute to the adaption of production to changing demand conditions. Therefore, a deeper understanding of the connections and operating modes is necessary (see also Höhler 2016). We pose the following research questions:

– Are there any differences between the innovation activity, the organization, and the economic success of the established cooperatives that can provide strategic advantages?
– Can the organization in networks positively influence the innovation activity of cooperatively organized cattle breeding?
– How does the innovation activity influence a breeding cooperative's success?

This article examines the impact of organization on innovation activity in dairy cattle breeding and consequently the impact of innovation activity on profitability. Moreover, the increasing network activities between the cooperatives are taken into consideration. Case studies present an appropriate method for examining these complex relationships in a rather small sample of firms (Vissak 2010; Yin 2014). The combination of an explorative approach and multivariate data analysis, of case studies and data from the official estimation of breeding values, is intended to provide a better understanding of the interdependencies. We focus on Germany as animal production has above average relevance for the country's agricultural production value and so has the underlying innovation process. The market is characterized by the coexistence of independently operated cooperatives and network organizations of cooperatives. Differences between the organizations and consequences for their members, strategic possibilities, and policy implications are identified.

In order to understand the organization of animal breeding, the article begins with the explanation of the goals and tasks of breeding cooperatives. Section 3 provides a literature review. In Sect. 4, the explorative research approach is presented. Section 5 presents the results and the article ends with a conclusion.

2 Goals and Tasks of Breeding Associations

Breeding success is the sum of genetic improvements achieved at the level of the single breeders. The breeding population is the base for the selection of valuable breeding animals. Its size also influences breeding success. However, the increase in milk yield can be attributed to many factors (Höhler 2016). Examples are improved management skills and enhanced methods of feeding (Rendel and Robertson 1950).

The influence of breeding can be determined via breeding values. Breeding values describe the heritable influence of animals on their descendants' performance. They are estimated using performance data from the entire population as well as information on the progeny of the animal. The overall breeding value combines all relevant breeding values under consideration of their importance for the breeding goal of the population: breeding values for milk production, useful life, conformation, fertility, udder health, and calving traits. These breeding values consist of the evaluations of single characteristics. A breeding value of 100 refers to the average whereas values above 100 are desirable. The estimation includes a

correction for environmental effects (DHV 2014). Recently published breeding values also contain genomic values based on the evaluation of animal genetic material. The overall breeding value has increased steadily (VIT 2015) which shows that the rise in milk yield is also a result of the breeding cooperatives' successful breeding work (Höhler 2016).

In Germany, systematic breeding via breeding organizations began at the beginning of the twentieth century (Pelhak 2011). Besides the achievement of scale effects in breeding organization, cooperative breeding associations facilitated the protection of developments and breedings of single breeders (Rothschild and Newman 2002). Breeding based on appearance and performance was complemented by the use of herdbooks. They contain pedigree data on the breeding animals and their descent.

The value chain in cattle breeding contains two reciprocally connected stages: breeding cooperatives and breeders. Breeding cooperatives coordinate breeding activities, select valuable breeding animals and buy them from their members, sell semen, and thus generate and spread innovation. They are oriented toward the breeding goals. Furthermore, they keep herdbook records, market genetic material, and consult their members. The members are buyers and sellers of genetic material. They use semen to produce dairy cattle, sell their valuable animals to the breeding cooperative, and participate in the breeding program. Furthermore, they provide equity capital, knowledge, skills, and information. Their activities influence the breeding success to different degrees and thus affect the future benefits and costs for all members (Höhler 2016).

In addition, the members have rights and obligations according to the cooperative law as well as the statutes of the breeding cooperative. They are obliged to acquire shares and pay a deposit on them, to take part in the breeding program, provide information about diseases as well as performance. In return, they are allowed to participate in the residual income and elect representatives (Höhler and Kühl 2015).

The German animal breeding law describes a breeding association in paragraph 2 as a corporate merger of breeders in order to promote animal breeding. A corporate merger can be realized in various legal forms. In most cases, breeding associations operate under the legal form of a cooperative. According to paragraph 6, every breeder in the breeding association's scope of activity has the right on admission. Herold et al. (2012b) understand the idea of cooperative breeding associations as a self-supply with high-quality breeding animals as well as the achievement of a joint genetic gain.

Over a long period, success of breeding associations was measured by genetic progress. However, breeding associations have tasks beyond the pure breeding work. These additional tasks can be evaluated with economic performance indicators. Grandke (2002) suggests that bulls have a significant influence on a breeding association's economic success. The share of top 50 bulls in the German estimation of breeding values is an indicator for their marketability and is thus proposed as an indicator of a breeding association's success. A single breeder is, moreover,

Fig. 1 Organizations in German cattle breeding 2015. Based on own research and Höhler (2016)
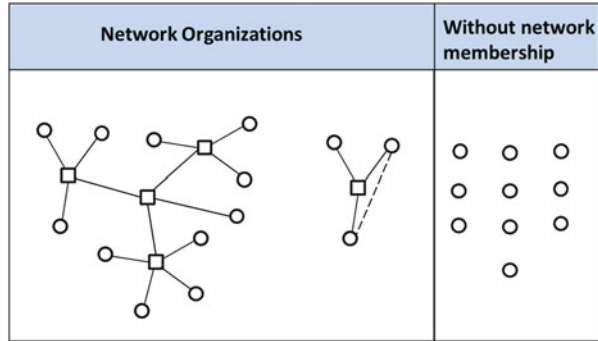
interested in improved milk yield and thus increased turnover as well as improved functional traits and decreased production costs (Höhler 2016).

Networks of breeding cooperatives are characterized by a pooling of breeding and marketing activities of the participating breeding firms. They are often organized in the legal form of a limited liability company (e.g., Masterrind GmbH, Rinderzucht Berlin-Brandenburg GmbH). As networks of firms, they coordinate in order to minimize costs and create value (Ménard 2004). The following (Fig. 1) shows the connections in 2015 between the breeding cooperatives whose breeding animals were listed in the German estimation of breeding values in December 2014 for black-and-white Holstein (VIT 2014). For the sake of completeness, their networks are also included even if they have no placement. The sector consists of exclusive groups. Each circle presents one company. The breeding companies in the right part do not belong to a higher-level network. The breeding companies in the left part have joint breeding networks. They can be described as star network according to Goyal (2009). The core contains a single node. The network organizations are pictured as squares which are connected to the member organizations. Three networks operate a joint network. The right network is characterized by an additional bilateral partnership between two of its members.

3 Cooperatives and Innovation Activity

The number of members provides information on the size of the cooperative in terms of the number of claimants. The higher the numbers of members, the larger is the base for the selection of valuable breeding animals and the resulting likelihood for innovation. Galizzi and Venturini (1996) found a positive relationship between size and innovation for US firms in the food industry: large firms have higher innovation rates than smaller firms. Our first proposition is:

Proposition P1 *The size of the breeding cooperatives has a positive influence on their innovation activity.*

Property rights are distributed among the members of the breeding cooperatives. As owners of the animals, breeders have the right to use the genetic material for breeding and the right to sell it (Tvedt et al. 2007). The property rights regarding their own breeding animals belong to the members whereas breeding success as the sum of genetic improvements belongs jointly to all of them. Property rights in a cooperative can be approximated by the members' shares. Their absolute height equals the number of individual claims toward the cooperative (Höhler 2016). An examination of breeding cooperatives' statutes (Höhler and Kühl 2015) shows that members often have to subscribe additional shares with an increase in the number of their first inseminations. The number of shares per member thus is an indication of the property rights allocation and the potential influence of single members on the breeding activities of the cooperative. Though members with more shares still have one vote, the patronage refund is divided according to patronage and a high number of first inseminations indicates a higher share of breeding animals in the whole population compared to the average member.

In the context of other sectors, cooperatives are seldom thought of as being a driving force for innovation (Höhler and Kühl 2015). According to Porter and Scully (1987), their reduced innovative efforts are mainly caused by their imperfect property rights structure. According to Cook (1995), free rider problems result if property rights are untradeable, unassigned, or insecure. Members do not bear the full costs and do not get the full profits arising from their actions. As a result, a lack of incentives inhibits investments in the cooperative. Furthermore, enhanced innovative efforts and increasing competition drive down the semen prices (Ogden and Weigel 2007) and thus the incentives for innovation. As a consequence of sector characteristics, intellectual property protection schemes like patents or copyrights do not protect or recoup expenses of the breeding companies' innovations sufficiently (Ogden and Weigel 2007). Classic breeding methods are widespread and thus not considered as innovative. A breeding animal cannot be replicated easily, which is why patents do not work either. But these schemes can also trigger underinvestment. In contrast to innovation barriers due to vaguely defined property rights, Heller and Eisenberg (1998) describe an "overallocation" of property rights. Too many owners block each other. This leads to the "tragedy of the anticommons" and an underuse of a common property resource. If a user needs access to multiple patented inputs to create the intended product, an underinvestment in desirable innovative activities is likely. The relationship between the allocation of property rights and innovation activity is thus unclear. We state a positive influence in our second proposition:

Proposition P2 *The allocation of property rights within the breeding cooperatives has a positive influence on their innovation activity.*

Why do farmers cooperate in innovation networks even though they can be considered as competitors? Braguinsky and Rose (2009) discuss the "neighboring farmer effect": farmers share information on innovations as they know that the output of any farmer is too small to change the market price. The effect can occur within a "sufficiently competitive market structure" (Braguinsky and Rose 2009,

p. 364). Höhler and Kühl (2015) analyze the impact of the internal relations between members and breeding cooperatives as well as the related decision rights on the revenue functions of the members. They show that member production decisions in the short run are equivalent to the decision behavior in a perfectly competitive market. In the long run, breeding cooperatives face a quality control problem. According to Höhler and Kühl, the cooperation of breeders facilitates the exchange of information on breeding and produces efficiency gains. Moreover, the breeding population can be seen as a strategic resource. Its rarity, limited imitability, and the lack of substitutes provide competitive advantages for the breeding cooperatives (see also Barney 1991).

D'Aspremont and Jacquemin (1988) show the influence of cooperation in research and development (R&D) in industries with few firms and R&D spillover effects on R&D expenditures. Spillover effects are caused if knowledge from one firm flows freely to other firms without being charged. D'Aspremont and Jacquemin analyze a two-stage game in a duopoly with a R&D and a production stage. They distinguish two forms of cooperation:

1. Cooperative research efforts bring competitors together. In the "precompetitive stage," they share basic information and efforts in the R&D stage but remain competitors on the product markets. A main intention is to protect intellectual property.
2. The second type of cooperation is an extended collusion between competitors, creating common policies at the product level. This extension is justified with difficulties of protecting intellectual property. The cooperating firms also control together the processes and products which result from their collaboration.

Transferred to breeding cooperatives, this means that cooperatively organized breeding as well as the higher-level networks of breeding organizations can be interpreted as cooperations in R&D (see also Höhler 2016).

By comparing situations with and without cooperation, D'Aspremont and Jacquemin show that the first type of cooperation increases expenditures in R&D and quantities of production if the spillover effect is large enough. In addition to spillover effects, network resources are crucial for the success of a network (Dyer and Hatch 2006; Wernerfelt 1984). Some authors demonstrate the positive effect of network effects on innovation (Dyer and Hatch 2006; Ahuja 2000). Sharing of risks, exploitation of scale effects, access to new markets, a new positioning in competition, as well as the sharing of R&D expenditures are considered as additional advantages of networking (2000). Suzumura (1992) criticizes the findings of D'Aspremont and Jacquemin. He emphasizes the competing effects of cost reduction through R&D and reduced R&D incentives through spillovers. Dyer and Hatch (2006) explain that knowledge transfers through networks entail the risk that knowledge spillovers to competitors with the same suppliers destroy the value of the transfer. Moreover, coordination problems and additional coordination costs may arise (Hagedoorn et al. 2000). The mentioned results lead us to our third proposition:

Proposition P3 *The cooperation of breeding cooperatives within a network has a positive influence on their innovation activity.*

Geroski (1994) finds a positive effect of the number of innovations on a firm's profitability. He considers that innovators are likely to be more flexible and adaptable than non-innovating firms. Their organizational structures seem to fit the challenges of change. At the same time, each innovation affects the structure of the market (Langinier and Moschini 2002). The success of breeding cooperatives influences the patronage refund. A positive feedback between the innovation activity and the incentivizing effect of patronage refund might exist. However, the above elaborated property rights problems might inhibit the incentivizing effect.

Proposition P4 *The innovation activity has a positive effect on the breeding cooperatives' success.*

Proposition 4 implies that size and network activity also have a positive impact on the breeding cooperatives' success.

Overall, there are innovation inhibiting as well as innovation driving aspects of cooperative organization. Property rights problems, the resulting free rider problem, and the lack of protection by traditional property right protection schemes point to an insufficient innovation activity of cooperatives. The cooperation in networks is likely to have a positive influence on innovation activity. Besides, innovation activity and profitability seem to be positively related (see also Höhler 2016).

Empirical results on the impact of networking on R&D in breeding cooperatives are missing so far. As the indicated relationships have not yet been examined for dairy cattle breeding and the necessary operationalizations are missing, we employ an explorative approach.

4   Methodology and Data

In order to examine the relationships between the different variables, we want to apply the case study approach proposed by Eisenhardt (1989). It allows the building of theories, constructs, and propositions from single or multiple cases. As an explorative approach, it builds on the examination of each variable as a separate entity. Afterwards, pairs of variables and their relationships are analyzed. Finally, groups of variables are examined via multivariate models. Data analysis should be based on a literature review and characterized by both, openness and skepticism (Hartwig and Dearing 1979). The methodology and sampling of the cases should be carefully justified (Vissak 2010).

Our sample contains eight cases from the population of breeding cooperatives and their networks in Germany, two networks of cooperatives and six coopera-tives.[1] Different expressions of the network activity allow multiple comparisons.

---

[1]The same data set is also used in the German contribution Höhler (2016).

Therefore, cases were selected out of a sample of 30 firms according to average and extreme manifestations of this variable. Two cooperatives are not organized within a network, two cooperatives are member in one network and two are member in two networks as well as in a bilateral partnership. The investigated cases cover 68.7% of the top breeding animals in the official estimation of breeding values (black-and-white Holstein, December 2014). Our approach differs from previous studies on networking firms which often dealt exclusively with successful networks (Hagedoorn et al. 2000).

4.1 Measurement

For our data collection, we use multiple sources. The prior specification of constructs helps to measure them more accurately. Innovation is measured as the number of placements in the official estimation of breeding values as well as their ranking. As Geroski (1994) points out, innovation counts are a natural measure for examining innovative activity. Success is measured by profitability indicators which are calculated based on annual accounts. Organization is approximated by the number of members, the number of shares as well as the number of shares per member. Thereby, we consider scale effects as well as effects of the property rights distribution in our analysis. The websites of the breeding cooperatives are used as a source of information on network activity. Based on the related categories, we look for similarities and differences within and between the groups. Figure 2 shows the key figures as well as their assignment to the constructs.

Further developed representation according to Höhler (2016).

4.2 Descriptive Statistics

Table 1 shows our cases sorted by cooperation intensity. Cooperation intensity is determined by the number of ties within networks. The second column provides information on the type of network. Furthermore, the table contains the number of members and the number of shares in 2012 and 2013. For the network organizations, the number of network members is provided. The table shows that the cooperation intensity as well as the number of members and shares vary considerably from one cooperative to another. With one exception, all of the cooperatives lost members between 2012 and 2013. This is due to the structural change in agriculture. In some cases, the number of shares nearly equals the number of members, whereas in other cases, especially in the non-networking cooperatives, the number of shares is significantly higher than the number of members.

Table 2 provides information on annual profit, cash flow, and turnover in 2012 and 2013 (in thousand Euros). Based on data from the annual accounts, cash flow
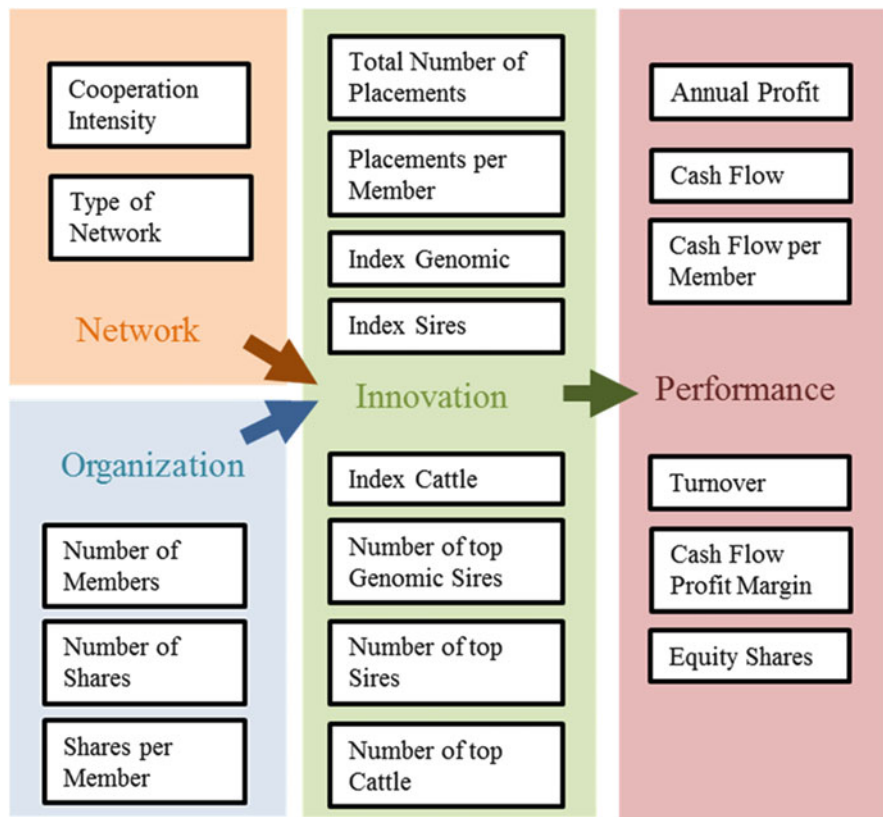
Fig. 2 Figures of the constructs to be analyzed

Table 1 Network and organization characteristics of the sample in 2012 and 2013

Name	Type of network	Number of members		Number of shares	
		2012	2013	2012	2013
Case 1	Network organization	3	3	–	–
Case 2	Network organization	3	4	–	–
Case 3	Bilateral partnership and one network	855	862	9206	9169
Case 4	Bilateral partnership and one network	25,612	25,281	25,771	25,446
Case 5	Member in one network	5608	5455	6341	6394
Case 6	Member in one network	17,434	17,316	17,727	17,604
Case 7	No membership	2171	2086	52,469	51,977
Case 8	No membership	2531	2458	22,616	22,220

Based on Höhler (2016)

Table 2 Annual profit, cash flow, and turnover (in thousand Euros) of the sample in 2012 and 2013

Name	Annual profit		Cash flow		Turnover	
	2012	2013	2012	2013	2012	2013
Case 1	772	817	1165	1261	12,541	12,790
Case 2	1894	1234	–[a]	2675	119,523	125,085
Case 3	322	457	889	777	13,241	12,857
Case 4	486	398	834	1082	23,136	22,249
Case 5	398	486	1468	1245	21,686	22,094
Case 6	559	289	2348	3219	44,686	44,334
Case 7	248	428	828	723	15,091	14,874
Case 8	190	520	2935	1168	62,243	62,275

Based on Höhler (2016)
[a]Not available

Table 3 Cash flow per member, turnover per member, and cash flow profit margin for the cases 2012 in 2013

Name	Cash flow per member (in € per member)		Turnover per member (in € per member)		Cash flow profit margin (in %)	
	2012	2013	2012	2013	2012	2013
Case 1	388,387	420,397	4,180,323	4,263,376	9.3	9.9
Case 2	–[a]	668,835	39,841,080	31,271,167	–[a]	2.1
Case 3	1039.93	901.88	15,487.10	14,915.65	6.7	6.1
Case 4	32.56	42.80	903.34	880.07	3.6	4.9
Case 5	261.78	228.20	3866.97	4050.15	6.8	5.6
Case 6	134.68	185.91	2563.17	2560.27	5.3	7.3
Case 7	381.55	346.47	6951.13	7130.39	5.5	4.9
Case 8	1159.67	475.14	24,592.20	25,335.76	4.7	1.9

Based on Höhler (2016)
[a]Not available

was calculated by correcting annual profit for noncash expenses and income. It is a measure of the net inflow of liquid funds.

To improve comparability, Table 3 shows the figures in terms of the number of members. Network organizations and cooperatives cannot be compared as their members are different in their legal form and number. In our analysis, we focus on the cooperatives and thus treat the number of the network organizations' members as missing values.

The cash flow profit margin equals the cash flow divided by turnover. It indicates the percentage of turnover which is available for investments, credit repayments, and patronage refund. Table 3 indicates differences between the firms which were not presented in Table 2. For example, case 4 and case 5 have a similar turnover but differ significantly in their turnover per member.

Data on innovation was obtained from the official estimation of breeding values which is conducted by Vereinigte Informationssysteme Tierhaltung (VIT 2014), a provider of IT solutions for animal production. The values for the German top lists are published three times a year for black-and-white Holstein and red-and-white Holstein. They provide top lists for the categories sires (active, daughter-proven), sires [genomic (gen.)], sires (daughter proven with 98% certainty) and for cattle. For the operationalization of innovation activity, we counted the placements in the lists in December 2014 for black-and-white Holstein (Höhler 2016). Black-and-white Holstein was chosen as it is the biggest population within the German performance tested cattle population (VIT 2015). The time lag between the variables for profitability and organization on the one hand and innovation activity on the other hand was chosen because of the time lag between the breeder's activity and the listing of the resulting animal in the official estimation of breeding values (Höhler and Kühl 2015).

We calculated an index value based on the ranking (see Table 4). Placements were given points from n = number of places to 1, in descending order. The total amount of points per firm was weighted by the number of total places and based on 100. The index ranges from 0 to 100. The higher the value, the better is the average placement of the firm. In addition, we calculated the number of placements per member (see also Höhler 2016). The row for case 5 contains additional information on the corresponding network organization's placements. They are not part of our examination as case 5 is an independent breeding cooperative with a minor share (25%) in the network.

Table 4 Innovation activity of the sample (black-and-white Holstein, December 2014)

Name	Top cattle	Top sires	Top sires gen.	Placements per member	Index value cattle	Index value sires	Index value sires gen.
Case 1	27	18	21	–[a]	43.9	63.2	47.4
Case 2	93	71	91	–[a]	47.6	52.3	52.5
Case 3	12	18	17 with case 4	0.035	55.6	44.2	44.7
Case 4	29	15	17 with case 3	0.002	56.2	41.9	44.7
Case 5	34	13	19	0.010	50.5	38.1	47.8
+ Network	–	+66	+36	–	–	47.4	52.1
Case 6	102	26	43	0.010	51.7	51.8	49.1
Case 7	85	26	24	0.065	53.1	52.5	48.8
Case 8	12	26	17	0.018	42.6	46.0	47.3

[a]Was not calculated due to the mentioned differences in legal form and number
Based on Höhler (2016)

5   Analysis and Results

For a first analysis, we used the nonparametric correlation coefficient Spearman's Rho. The significant correlation coefficients with values above 0.5 are shown in Table 5:

Of particular note are the various correlations within the placements and indices of the innovation construct. For example, the average placement in genomic sires is positively associated with the number of genomic sires, the number of sires, as well as the number of total placements. The correlations within organization indicate that particularly small cooperatives (measured by the number of members) have a high number of shares per member. The annual profit is negatively correlated with the turnover per member.

Additional correlations between the constructs are reported in Table 6. The number of shares per member is positively correlated with the number of placements per member. The number of members is negatively correlated with the placements per member as well as with various profitability figures related to the number of members.

Among the variables within the construct "Profitability," only the annual profit has several significant correlations with variables of other constructs. It is negatively correlated with the number of shares per member and weakly positively correlated with various innovation variables. Cooperation intensity is solely correlated with the annual profit. Their correlation is positive.

Based upon the various correlations within the construct of innovation activity, a factor analysis is run in order to reduce the number of dimensions. Two factors are identified (see Appendix 1). Factor 1 (innovation activity 1) is associated with all of

Table 5 Selected nonparametric correlations within the examined constructs by their affiliation to the constructs

	Correlation (Spearman's Rho)
Within innovation	
Top sires genomic × total placements	0.988[***]
Index value genomic × total placements	0.988[***]
Index value genomic × top sires genomic	0.957[***]
Top cattle × total placements	0.867[***]
Index value genomic × top cattle	0.861[***]
Top cattle × top sires genomic	0.859[***]
Index value sires × top sires	0.626[*]
Index value genomic × top sires	0.624[*]
Within organization	
Shares per member 2013 × number of members 2013	−0.943[***]
Within profitability	
Annual profit 2013 × turnover per member 2013	−0.886[**]

Significance levels: ***0.01, **0.05, *0.1
Based on Höhler (2016)

Table 6 Selected nonparametric correlations between the examined constructs by their affiliation to the constructs

	Correlation (Spearman's Rho)
Between organization and innovation	
Shares per member 2013 × placements per member	1.000[***]
Number of members 2013 × placements per member	−0.943[***]
Between organization and profitability	
Number of members 2013 × cash flow per member 2013	−0.943[***]
Number of members 2013 × annual profit per member 2013	−0.943[***]
Number of members 2013 × turnover per member 2013	−0.829[**]
Shares per member 2013 × annual profit 2013	−0.771[*]
Between profitability and innovation	
Annual profit per member 2013 × placements per member	0.886[**]
Cash flow per member 2013 × placements per member	0.829[**]
Annual profit 2013 × total placements	0.671[*]
Annual profit 2013 × top sires genomic	0.659[*]
Annual profit 2013 × top cattle	0.623[*]
Between profitability and network	
Annual profit 2013 × cooperation intensity 2013	0.752[**]

Significance levels: ***0.01, **0.05, *0.1
Based on Höhler (2016)

the placement variables as well as the index values for sires and sires genomic. Factor 2 (innovation activity 2) is solely associated with the index value for cattle. For the following analysis, we use factor 1. It contains information on the quantity (number of placements) as well as on the quality (index values) of innovation activity.

On the basis of the considerations and results above, innovation activity 1, annual profit, and cooperation intensity 2013 are chosen for a cluster analysis. Based on the variables and a hierarchical cluster analysis, we identify two clusters out of the eight firms (Table 7). The variables are z-standardized in order to reduce biases. The cluster analysis is based on the average linkage between groups.

The forecasting power of the cluster solution is checked with a discriminant analysis. The discriminant function (see Appendix 1.2) shows significant differences between the groups. The standardized canonical discriminant function coefficients indicate that all variables likewise influence the discriminant values. Innovation activity 1 has the highest influence on the group assignment.

The comparison of the clusters shows that networks have higher values in innovation activity than the other, cooperatively organized firms within the sample. The average annual profit in Cluster 2 also lies above Cluster 1.

An additional cluster analysis of Cluster 1 is intended to provide further insights. We choose annual profit, cooperation intensity and innovation activity, as well as the variable "shares per member." We identify three clusters (Table 8), whereas Cluster 2 contains only one case.

Table 7 Cluster solution by annual profit, cooperation intensity, and innovation activity 1

	Cluster 1	Cluster 2
Cases	Case 3, Case 4, Case 5, Case 6, Case 7, Case 8	Case 1, Case 2
Cooperation intensity	Low to medium	High
Average annual profit	496,272.40 €	1,333,103.27 €
Average innovation activity 1	−0.34	1.01

Based on Höhler (2016)

Table 8 Cluster solution for the cooperatives by annual profit, cooperation intensity, innovation activity 1, and shares per member

	Cluster 1	Cluster 2	Cluster 3
Cases	Case 3, Case 4, Case 5	Case 6	Case 7, Case 8
Cooperation intensity	Medium	Low	No
(Average) annual profit	455,763.77 €	1,172,326.86 €	219,008.10 €
(Average) innovation activity 1	−0.86	0.77	0.04
(Average number of) shares per member	4.3	1.02	17

Based on Höhler (2016)

A discriminant analysis (see Appendix 1.3) reveals that especially innovation activity determines the group assignment. A reverse causality is possible though not testable with this method. Case 6 has a high innovation activity whereas cluster 1 shows a negative coefficient. The firms in Cluster 3 do not belong to a network. Both of them have a high number of shares per member. Their average annual profit is below Cluster 1, but the average innovation activity based on factor 1 is positive. A comparison of the number of members shows that the firms in Cluster 3 have similar values (on average 2272), whereas Cluster 2 has 17,316 members and Cluster 1 ranges from 862 to 25,281 members (see also Höhler 2016).

6 Conclusion and Outlook

The aim of our article was examining the innovation activity of the German cattle breeding and especially the connections between profitability, organization, networking, and innovation. As a result of a literature review, we formulated several propositions.

The first position states a positive relationship between the size and the innovation activity of breeding cooperatives. The correlations between the constructs demonstrate that especially smaller cooperatives achieve more placements per member. However, the factor innovation activity 1 is not correlated to the number of members. Proposition 1 is not supported. The absolute value of innovation is not influenced by the number of members. In contrast to our proposition, small

cooperatives exhibit a higher innovation activity per member. As the correlations between the examined constructs show, the size of the cooperative is also negatively related to various indicators of profitability per member.

The second proposition states that the allocation of property rights within breeding cooperatives positively influences their innovation activity. Differences in the property rights structures become evident in the correlation of the number of members and the number of shares: smaller cooperatives often issue a higher number of shares per member. The number of shares per member is positively correlated with the placements per member. The higher number of shares per member and thus a possibly better allocation of property rights to the members is not reflected in a higher innovation activity 1 compared to other cooperatives. Proposition 2 can nevertheless be confirmed. It can be clarified with regard to the innovation activity per member. A higher number of shares per member has a positive influence on the innovation activity per member. The higher number of shares for breeders with a higher number of breeding animals seems to improve the allocation of property rights and thus contribute to the cooperatives' innovation activity. It may also explain the unexpected results with regard to proposition 1.

In our third proposition, we state a positive influence of cooperation on innovation activity. High cooperation intensity is not directly correlated with high innovation activity. Though, it is related to a high absolute annual profit. The absolute annual profit is in turn related to several innovation variables. Proposition 3 cannot be confirmed with regard to correlations between the variables. A moderating effect of network activity on the relationship between innovation and profit is likely.

Furthermore, we state a positive effect of innovation activity on the breeding cooperatives' success. A high number of total placements is correlated with a high annual profit. Furthermore, the number of top sires genomic and top cattle shows a positive correlation to the annual profit. Proposition 4 is supported. As Geroski (1994) already discovered, a high number of innovations is positively linked to a firm's profitability.

The cluster analysis confirms the positive relationship between network activity and profitability of breeding companies as well as their impact on innovation. The network organizations reveal a high innovation activity. Cluster 1 has a lower innovation activity, which could be due to the property rights problems of cooperatives mentioned in the literature. The establishment of network organizations offers technological advantages by increasing the selection base. It can reduce transaction costs and facilitate a joint value creation in the sense of a team production (Höhler and Kühl 2015). Spillover effects are internalized and incentives for innovation activity are provided. Cooperation may also be viewed as a means to improve the competitive position of the participating cooperatives and to keep their market shares or increase it. From the perspective of strategy research, companies in a network are able to combine advantages of differentiation, size, and focus (Hagedoorn et al. 2000).

The higher number of total placements per member may justify the existence of small cooperatives with a high number of shares per member. If political actions aim at strengthening the competitiveness of German breeding associations,

cooperations, as well as small cooperatives are to be promoted. This would result in an increasing innovation activity and a stimulation of further breeding success. However, there is also the risk of a monopoly with an increase in cooperation (see also Höhler 2016). In contrast, however, the international competition is still increasing.

The members of the breeding cooperatives have, according to Sect. 2, influence on the strategic direction of the organization. Our results imply that network organization should be supported by the members. The insights on small cooperatives reveal a second way that could combine the benefits of networks and small cooperatives. The establishment of networks and a splitting of the network in strategic groups with a size-related distribution of shares per member could provide a strategic advantage for breeding cooperatives. The grouping of breeders may lead to groups which equal the small cooperatives in our sample and to a higher profitability per member. Possible selection criteria are shown by Höhler and Kühl (2015).

Our considerations can be expanded by additional firms in the sample as well as the data from the estimation of breeding values for red-and-white Holstein. Thus, the possible distortion of the results due to the selection of particular firms (selection bias) can be reduced. Moreover, additional years can be added in order to increase the validity and generate prognoses on future developments. In addition, the support of the propositions by expert interviews appears to be a promising supplement (see also Höhler 2016). Besides network structures, the market structure, hierarchies within the networks, and their organizational culture can be considered promising determinants of innovation.

Appendix 1

Data sources	
Companies in the sample	
Landesverband Thüringer Rinderzüchter eG	www.ltr.de
Masterrind GmbH	www.masterrind.com
Rinder Union West eG	www.ruweg.de
Rinderproduktion Berlin-Brandenburg GmbH	www.rinderzucht-bb.de
Rinderzuchtverband Schleswig-Holstein eG	www.rsheg.de
Zucht- und Besamungsunion Hessen eG	www.zbh.de
Osnabrücker Herdbuch eG	www.ohg-genetic.de
Verein Ostfriesischer Stammviehzüchter eG	www.vostov.de
Annual reports	www.unternehmensregister.de
Networks	
Alpengenetik	www.alpengenetik.eu
Nord-Ost-Genetic	www.nog.de
Rinderallianz	www.rinderallianz.de

Additional companies	
Besamungsstation Greifenberg	www.besamungsstation.eu
Besamungsverein Neustadt a.d. Aisch	www.bvn-online.de
Göpelgenetik	www.goepelgenetik.de
Holstein Austria	www.holstein.at
Rinderbesamungsgenossenschaft Memmingen	www.rbgmm.de
Rinderunion Baden-Württemberg e.V.	www.rind-bw.de
Rinderzucht Sachsen-Anhalt eG	www.rsaeg.de
Rinderzuchtverband Franken	www.rzv-franken.de
Vereinigung der Südtiroler Tierzuchtverbände	www.vstz.it
Zuchtverband Schwarzbunt Rotbunt Bayern	www.holstein-bayern.de

1.1 Factor Analysis

KMO- and Bartlett-Test

Degree of sample suitability according to Kaiser-Meyer-Olkin		0.626
Bartlett test for sphericity	Approximate chi-square	25.939
	df	15
	Significance according to Bartlett	0.039

Rotated Component Matrix

	Component	
	1	2
Top cattle	0.712	0.591
Top sires	0.934	−0.038
Index value sires	0.484	−0.024
Index value cattle	−0.070	0.974
Top sires genomic	0.933	0.175
Index sires genomic	0.952	0.048

Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization. The rotation converged in three iterations

1.2 Discriminant Analysis for Cluster Solution 1

Wilks' Lambda

Test of function(s)	Wilks' Lambda	Chi-square	df	Significance
1	0.082	11.255	3	0.010

Standardized Canonical Discriminant Function Coefficients

	Function
	1
Innovation activity 1	1.825
Annual profit	−1.737
Cooperation intensity	1.713

1.3 Discriminant Analysis for Cluster Solution 2

Wilks' Lambda

Test of function(s)	Wilks' Lambda	Chi-square	df	Significance
1–2	0.002	12.312	6	0.055
2	0.069	5.346	2	0.069

Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
Innovation activity 1	1.003	0.988
Annual profit	0.703	−0.593
Cooperation intensity	0.936	0.031

References

Ahuja G (2000) Collaboration networks, structural holes, and innovation: a longitudinal study. Adm Sci Q 45(3):425–455

Barney J (1991) Firm resources and sustained competitive advantage. J Manag 17(1):99–120

Bo N (2005) Breeding in Europe under the competition at the global market. In: The 26th European holstein and red holstein conference, Prague

Braguinsky S, Rose DC (2009) Competition, cooperation, and the neighboring farmer effect. J Econ Behav Organ 72(1):361–376

Chaddad FR, Cook ML (2004) Understanding new cooperative models: an ownership-control rights typology. Appl Econ Perspect Policy 26(3):348–360

Cook ML (1995) The future of U.S. agricultural cooperatives: a neo-institutional approach. Am J Agric Econ 77(5):1153–1159

Cowan R, Jonard N (2003) The dynamics of collective invention. J Econ Behav Organ 52 (4):513–532

D'Aspremont C, Jacquemin A (1988) Cooperative and noncooperative R&D in duopoly with spillovers. Am Econ Rev 78(5):1133–1137

DHV (2014) Estimation of breeding values. Edited by Deutscher Holstein Verband. http://www.holstein-dhv.de/estimation_of_breeding_values.html

Dyer JH, Hatch NW (2006) Relation-specific capabilities and barriers to knowledge transfers: creating advantage through network relationships. Strateg Manag J 27(8):701–719

Eisenhardt KM (1989) Building theories from case study research. Acad Manag Rev 14 (4):532–550

FAO (2015a) Dairy production and products. Edited by Food and Agriculture Organization of the United Nations. http://www.fao.org/agriculture/dairy-gateway/milk-production/dairy-animals/cattle/en/#.VbIHOPkvt7w. Accessed 24 July 2015

FAO (2015b) Value of Agricultural Production. Edited by Food and Agriculture Organization of the United Nations. http://faostat.fao.org/site/613/default.aspx#ancor. Accessed 24 July 2015

Funk DA (2006) Major advances in globalization and consolidation of the artificial insemination industry. J Dairy Sci 89(4):1362–1368

Galizzi G, Venturini L (1996) Product innovation in the food industry: nature, characteristics and determinants. In: Müller WA, Schuster P, Galizzi G, Venturini L (eds) Economics of innovation: the case of food industry. Physica-Verlag HD (Contributions to Economics), Heidelberg, pp 133–153

Geroski PA (1994) Market structure, corporate performance, and innovative activity. Clarendon Press, Oxford

Goyal S (2009) Connections: an introduction to the economics of networks. Princeton University Press, Princeton

Grandke R (2002) Methoden und Modelle zur strategischen Steuerung von neuzeitlichen Zuchtorganisationen. Gießen

Hagedoorn J, Link AN, Vonortas NS (2000) Research partnerships. Res Policy 29(4–5):567–586

Hartwig F, Dearing BE (1979) Exploratory data analysis. Sage University paper series on quantitative applications in the social sciences, 07-016. Sage, Beverly Hills and London

Heller MA, Eisenberg RS (1998) Can patents deter innovation? The anticommons in biomedical research. Science 280(5364):698–701

Herold P, Rößler R, Momm H, Valle Zárate A (2012a) Development of organisation and planning in animal breeding: II. An overview on breeding planning. Arch Tierzucht 55(5):519–531

Herold P, Rößler R, Valle Zárate A, Momm H (2012b) Development of organisation and planning in animal breeding: I. A review on breeding organisation. Arch Tierzucht 55(5):402–414

Höhler J (2016, May) Züchtervereinigungen – Innovationsmotor der deutschen Milchviehzucht? Eine explorative Analyse der Organisationsstrukturen und Veränderungen. Berichte über Landwirtschaft 94 (1) (in German)

Höhler J, Kühl R (2015) Organisation of German livestock production from the bottom up: a new institutional economic analysis of dairy cattle breeding. J Chain Netw Sci 16:7–18

Langinier C, Moschini G (2002) The economics of patents. In: Rothschild MF, Newman S (eds) Intellectual property rights in animal breeding and genetics. CABI, Wallingford, pp 31–50

Ménard C (2004) The economics of hybrid organizations. J Inst Theor Econ 160(3):345–376

Ogden ER, Weigel K (2007) Can you shrinkwrap a cow? Protections available for the intellectual property of the animal breeding industry. Anim Genet 38(6):647–654

Pelhak J (2011) Überblick über die rechtliche Stellung von Züchtervereinigungen nach TierZG. Agrar- und Umweltrecht 10:385–391

Porter PK, Scully GW (1987) Economic efficiency in cooperatives. J Law Econ 30(2):489–512

Rendel JM, Robertson A (1950) Estimation of genetic gain in milk yield by selection in a closed herd of dairy cattle. J Genet 50(1):1–8

Rothschild MF, Newman S (2002) Intellectual property rights in animal breeding and genetics. CABI, Wallingford

Suzumura K (1992) Cooperative and noncooperative R&D in an oligopoly with spillovers. Am Econ Rev 82(5):1307–1320

Teece DJ (1996) Firm organization, industrial structure, and technological innovation. J Econ Behav Organ 31(2):193–224

ten Napel J, Veerkamp RF (2015) The Dutch national breeding programmes have developed to major globally operating companies. J Anim Breed Genet 132(3):205–206

Tvedt MW, Hiemstra SJ, Drucker AG, Louwaars N, Oldenbroek J (2007) Regulatory options for exchange, use and conservation of animal genetic resources: a closer look at property right issues. Anim Genet Resour Inf 41:91–99

Vissak T (2010) Recommendations for using the case study method in international business research. Qual Rep 15(2):370–388

VIT (2014) Vereinigte Informationssysteme Tierhaltung w.V. Relative breeding value (ranked by overall breeding value). Breed: German Holsteins. 12/02/2014. http://www.milchrind.de/dl/5/3/5/2/2/6/German_Holsteins_schwarzbunt_toechterbasiert_aktiv.pdf

VIT (2015) Annual report. http://www.vit.de/fileadmin/user_upload/wirsindvit/jahresberichte/vit-JB2014-gesamt.pdf

Wernerfelt B (1984) A resource-based view of the firm. Strateg Manag J 5(2):171–180

Yin RK (2014) Case study research. Sage, Los Angeles

Uniformity in Collective Entrepreneurship: The Case of Food Retail Cooperatives in France

Fabrice Cassou, Gérard Cliquet, and Rozenn Perrigot

Abstract Entrepreneurship can be either individual, collective, or both. Cooperatives and independent associated networks are groups of retail and service stores that pool their means. Curiously, there has been a lack of research on retail cooperatives. The objective of this research is to show how these organizations, whose cooperators have a dual status (they are both customers and co-owners of the cooperative), can face the uniformity challenge as efficiently as franchised networks do. The findings highlight the existence of various centralized, decentralized, and mixed processes. This research suggests a model for managing uniformity in food retail cooperatives.

1 Introduction

Entrepreneurship is often considered an individual experience and challenge. However, it can be a collective venture, as well. For example, cooperatives are organizations of this kind (Bataille-Chedotel and Huntzinger 2004) with many forms according to the sector they are adapted to: farmers' cooperatives, production cooperatives, bank cooperatives, consumers' cooperatives, and retailers' cooperatives. In production sectors like agriculture, farmers have opened cooperatives so that they can share their technical knowledge or put up a united front when negotiating with the food manufacturers and retailers they sell their products to. Various legal statuses do exist, according to the purpose and the country, but governance is evolving toward more professionalism (Bijman et al. 2013). Still, in

F. Cassou (✉)

CREM UMR CNRS 6211, University of Rennes 1, 11 rue Jean Macé, CS 70803, 35708 Rennes Cedex 7, France

IRGO, University of Bordeaux, 35 Avenue Abadie – Bâtiment C, 33072 Bordeaux Cedex, France
e-mail: fabrice.cassou@u-bordeaux.fr

G. Cliquet • R. Perrigot
IGR-IAE Rennes, CREM UMR CNRS 6211, University of Rennes 1, 11 rue Jean Macé, CS 70803, 35708 Rennes Cedex 7, France
e-mail: gerard.cliquet@univ-rennes1.fr; rozenn.perrigot@univ-rennes1.fr

production sectors, manufacturing or workers' cooperatives bring together workers who either share the same ideal or strive to maintain a firm (Bhowmik and Sarker 2002). Different principles (Jossa 2012) split these cooperatives into worker-managed firms (WMFs) and labor-managed firms (LMFs). When firm survival is debated in production cooperatives, some authors highlight a lack of dynamics and growth (Pryor 1983), whereas others consider these organizations more reliable in the long run than capitalist ones (Monteiro and Stewart 2015). We may question how it works in service sectors.

Bank cooperatives are consumers' cooperatives, as the latter are both bank service users and owners and are very present in Western Europe with about 4000 cooperative banks from a total of 6200 (Les Echos 2013). In agricultural or manufacturing or financial sectors, stakes decision-making is at least in the mid or long run, including cooperatives as well. In retail activities, where most decisions should be made in the short term, especially when margins are low, cooperative survival is a true challenge.

Until recently, food consumer's cooperatives had totally disappeared in countries like France but were still active and very strong in Switzerland. In the past few years, however, new consumers' cooperatives have been emerging in several cities like Paris, Lille, and Toulouse, in France, where consumers are both customers and employees working for 3 h a month for free, as Park Slope Food Coop has been doing for 40 years in New York (Foucaud 2015).

With retailers' cooperatives, we deal with entrepreneurs' cooperatives. A retail cooperative consists of an assembly of retailers who decide together to develop a retail business under the same banner and to organize together their procurement system and many other activities in the course of the growth of the organization. Even though it is difficult for a customer to distinguish between retail cooperative banners and franchise ones, these two systems, franchising and retail cooperatives, are totally different. A franchised system relies on the initial enterprise of a franchisor who attracts franchisees to implement the new concept. In such an arrangement, the franchisor is the owner, even though she/he should be able to convince franchisees to follow chain policies when changes occur. A retail cooperative is an entrepreneurial democratic system owned by an association of members (Hendrikse and Feng 2013), where every decision is made in a democratic way under a basic principle: one person, one vote. The main difference between a retail cooperative and a franchise chain stems in the power-sharing system.

In 2013, wholesale and retail trade accounted for 16% of the number of cooperatives worldwide, in over 42 countries, and generated 605.48 billion US dollars (ICA 2015). These statistics are relatively comparable to those of agricultural cooperatives, which represent 27% of the number of cooperatives in 36 countries and which generate 767.75 billion US$ (ICA 2015). For the French Federation of Retail Cooperatives and Retail Independent Associations (FCA 2016), this kind of retail networks represents 7% of the GDP in France. For example, *E. Leclerc* and *Système U*, studied in this research, represent, respectively, US$62.94 and US $25.47 billion (ICA 2015). There has been a lack of research on retail cooperatives (Hendrikse and Jiang 2011). However, it is important to understand the methods that govern cooperatives, since cooperators are often competing for market shares

within the same network (McClintock Stoel and Sternquist 2004). Our research strives to shed light on this alternative system of retail network, which is less known than the already largely studied company-owned (whether family-owned or publicly owned) and franchised systems.

Long before the modern associations of traders, the ancient Greeks had already experimented with this business model. When an aristocrat wanted to initiate maritime trade, he could either hire men to sell goods in his name (if he had the means) or he could take part in the funding of a ship in association with other noblemen. Together they financed the ship and crew for travel and trade around the Mediterranean Sea (Benedetto 1984). From this early evidence of merchants working together, it is clear that the practice of associating has been a natural stage in business development. Since the nineteenth century, it has become more and more widespread, and one of its more recent evolutions is the retail cooperative.

According to the FCA, cooperatives and independent associated retail networks are groups of retail and service stores that pool their means in terms of purchase, marketing, communication, funding, logistics, and information systems and thus develop common policies (FCA 2016). For the sake of this study and for clarity, we make no distinctions between "cooperative" and "associated" networks; the FCA does not distinguish between those organizations, as they have similar operating systems in spite of their different legal frameworks.

According to the rare published research to be found on this topic, retail cooperatives can be considered to be networks (Zentes and Swoboda 2000) but should be distinguished from company-owned and franchised networks. The cooperative members have an active involvement in decision-making, unlike franchised and company-owned networks (McClintock Stoel and Sternquist 2004). These explanations sum up the retail network organizational systems, but they do not include some organizational features of such networks, as defined by Bradach (1997). According to Bradach (1998), plural form networks with both company-owned and franchised units within the same chain generate synergies that increase their strengths and reduce their weaknesses. For many reasons, most networks are plural form organized (Cliquet 2000). Cooperatives remain mostly single-structured, despite a few temporary situations due to chain international development. However, some current negotiations in France between *Intermarché* (an independent associate network) and *Casino* (a company-owned network) or between *Système U* (a retail cooperative network) and *Auchan* (a company-owned network) could cause substantial changes in this cooperative organizational principle. The fact that retail cooperatives and retail independent associated networks are for the most single-structured could lead us to believe that they lack the ability to create synergies. This research study seeks to demonstrate the contrary.

In such a context, one might question how these retail cooperative networks deal with maintaining uniformity across their units, one of the four main challenges for retail and service chains, as defined by Bradach (1998). He explains that "maintaining the uniformity of units in a chain is what preserves its shared identity. In a business-format chain, uniformity permeates almost every aspect of a unit's operation. What makes this challenge particularly daunting is that key elements of the business format require a variety of local activities to execute" (Bradach 1998, p. 23).

In this paper, we focus on network uniformity. Any network of retail stores should strive for uniformity of units to preserve the brand integrity and values (Caves and Murphy 1976). Maintaining uniformity consists of respecting the core components of the concept (Kaufmann and Eroglu 1998) in order for the consumer to "find a common image, design, and service experience in any store under the same brand; namely, the brand image, which has to be consistent all over the brand's properties whether they are franchised or company owned" (Diaz-Bernardo 2012, p. 169). This has become more complex as franchisors must manage global marketing of the brand, as well as local marketing, by taking into account local sociological and behavioral peculiarities. However, local adjustments mainly affect only the peripheral elements of the concept (Bradach 1998; Kaufmann and Eroglu 1998).

Owing to the limited amount of academic work carried out on retail cooperatives and the complexity of the phenomena therein, the aim of this research is to understand how retail cooperatives, with the double status of their cooperators (Papon-Vidal 2000), i.e., customers and co-owners, can generate synergies as efficiently as in other plural form networks to cope with the challenge of uniformity. This research focuses on the organizational characteristics of cooperatives and suggests ways to better predict the behavior of this network system.

The article is organized as follows. Firstly, we describe the theoretical framework and both vertical (bottom-up or top-down) and horizontal (democratic system of partnerships) influences in retail cooperatives. Secondly, we use a case study to shed light on the processes that enable cooperatives to face the challenge of uniformity. Finally, we discuss the implications of this study, as well as its limitations and suggestions for future research.

2 Theoretical Framework

After a brief discussion of the evolution of cooperatives, we examine potential synergies needed to face the challenge of maintaining uniformity (Bradach 1998) within this organizational form.

2.1 From a Horizontal/Heterarchical Organization to Vertical/Hierarchical Influences

The first modern cooperative movement dates back to 1844 with the creation of the Rochdale Society of Equitable Pioneers in England, after several prior attempts to establish cooperatives in England, in France, and in the USA. The main principles of the cooperative movement were democratic control (one person, one vote), open membership, limited interest on capital, etc. (Krishnaswami 1968), and they remain unchanged. In France, retail cooperatives were then created, which competed with retailers and caused them to regroup and label themselves as "cooperatives

purchasing in common." Holler (1997, p. 89) explains that "this is due more to a reaction and for the sake of business efficiency than any adhesion to a belief system they did not share, [it was] created by retailers determined to better fight against their competitors, by adopting their own weapons: the cooperative status." The decisional system of these organizations then became horizontal, i.e., heterarchical. According to Sacchetti and Tortia (2016, p. 103), "Across the heterarchical network, cooperatives keep their autonomy whilst identifying common activities around which labor is coordinated by means of shared common rules."

According to agency theory, an agent connected with an organization performs better than an isolated one, but as he seeks to generate the highest possible profits, he may perhaps become a "free rider" (Alchian and Demsetz 1972). To fight against opportunistic behavior (Williamson 1975) and stay protected from competitors who could have bought out the so-called independent stores, cooperatives have decided to strengthen their legal ties with "sets of contracts" (Baron 2007, p. 300). It is necessary to coordinate the relationships that bind a principal (member) to an agent (the cooperative) who has a delegated authority of decision-making (Jensen and Meckling 1976). Facing increasing competition with the emergence of purely company-owned chains, such as the French retailers Carrefour or Casino, retail cooperative networks have adopted management behaviors similar to their rivals. Thus, retail cooperative networks have strengthened their interdependency (McClintock Stoel and Sternquist 2004) through the formalization of shared procedures for the monitoring, control, and harmonization of their business practices (Meier 2006). A result of this is that it is becoming difficult to distinguish cooperatives from private enterprises, i.e., hierarchical organizations (Sacchetti and Tortia 2016).

2.2 The Dual Nature of Retail Cooperative Members

Williamson (1985) states that there is an intermediary situation between the market and the firm, called the "hybrid" form, which seems to apply to cooperatives (Hendrikse and Veerman 2001). Initially created with a horizontal structure, retail cooperatives have gradually evolved toward a more vertical one. According to Abrard and Paché (2009, p. 203), "Although horizontal cooperation is the origin of the common structures [purchasing, marketing, communication, funding, logistics, etc.] of retail cooperatives, coordination between these common structures and each retail store actually stems from a vertical form of cooperation. This clearly argues for a dual approach, horizontal and vertical, to cooperation in retail cooperatives."

Cooperative members are the owners of their store(s) and at the same time customers of the cooperative (Papon-Vidal 2000). According to Sélinsky (2008, p. 54), The cooperative creates a double link between cooperative members: a first statutory link between the cooperative and each member, added to a second commercial link dealing with purchases and sales between the cooperative, through a central purchasing unit, and each member considered also as a seller-buyer." There is a permanent duality between these roles, which can either complement or oppose each other (McClintock Stoel and Sternquist 2004).

This horizontal and vertical cooperation and the duality of the roles played by each member could appear to be incompatible with the notion of synergies needed if retail networks want to avoid their natural tendency to ossify over time (Bradach 1997).

2.3 Need for Synergies

For Alchian and Demsetz (1972), team production is greater than the sum of individual contributions due to the synergetic effect. A chain is the juxtaposition of stores, while a network incorporates the concept of linkages and synergies stemming from retail stores (Cliquet 2000). In studying plural form organized franchised networks, where franchised and company-owned units coexist within the same chain, Bradach (1998) defines four challenges a network should take up in order to grow and survive: adding new units, maintaining uniformity across units, local responsiveness, and system-wide adaptation. Various processes arise through synergies created by a network benefiting from the two different organizational systems: on the one hand, company-owned units, symbols of centralization, and on the other hand, franchised units, more decentralization oriented. These can create synergies that are more difficult to attain for networks with a strict unique organizational system.

According to the FCA, cooperative networks do not coexist, or only exceptionally, with other organizational systems. They do not benefit from the synergies found in the plural form networks (Bradach 1998). In reality, the retail cooperative networks understood very early the benefits of collaborative practices to improve their performances (Abrard and Paché 2009). Turnover or order volumes could be added together, while the development of strategies, marketing policies, shared logistics, new concepts, etc. is the result of synergies within the same network. Interdependency reinforces relationships between members of a network and increases their confidence and their commitment, while reducing conflicts (Kumar et al. 1995). According to Chassagnon (2012), when the key resources of a network stem from the multiple members, they create an interdependency and then synergies can emerge.

The different forms of interdependency within retail cooperatives, generally with hundreds of cooperative members, can thus be seen as factors of different synergies. In fact, Bradach (1998) believes that non-plural form networks cannot generate synergies that will allow them to grow and survive. The following case study challenges Bradach's theory in the context of retail cooperatives regarding uniformity.

3 Methodology and Data

Owing to the limited amount of academic work carried out on retail cooperatives and the complexity of the phenomena therein, a case study has been conducted following the methodology developed by Eisenhardt (1989). The empirical study

examines four networks in the French food retail market. The chosen cooperatives are E. Leclerc and Système U, respectively, the first and sixth largest cooperatives in the wholesale and retail trade sector according to turnover in 2013 (ICA 2015), and Intermarché and Biocoop. For reasons of confidentiality, these networks will be renamed Network A, Network B, Network C, and Network D. The chosen organizations are cooperatives or with an operating system similar to cooperatives by FCA criteria. These cooperatives were selected as examples for several reasons: aside from Network A, they have reached maturity in their life cycle, they all have a substantial turnover (minimum 700 million US$), and each works within a very competitive business sector.

Data collection was carried out in two stages through semi-structured interviews with cooperators or managers from each network. The first phase consisted of conducting twelve semi-structured interviews in order to examine the implementation of Bradach's four challenges (1998). These findings enabled the writing up of the interview guide for the following phase, which dealt with the challenge of uniformity. Using the principle of theoretical saturation, the second stage corresponded to a series of sixteen semi-structured interviews. Three chairmen from Network A, Network C, and Network D agreed to be interviewed for this phase. The profiles of the interviewed cooperators are in Appendix. Additional sources were used to establish a "chain of evidence" (Yin 2009): books written by retail network chairmen and journalists, the legal status of these four networks, their websites and social network pages, video recordings made during interviews or conferences, various press articles, observational studies within stores, and access to internal documents. Notes were taken during each interview in order to summarize the main ideas and elaborate on new assumptions. Data analysis was carried out first separately and then in view of an overall model. The encoding of the interviews took place with the support of Nvivo 10 software. The comparison between the emerging theory and the existing literature was conducted during the analysis following each data collection (Eisenhardt 1989). In order to strengthen the internal validity of this study, improve its generalizability, and achieve a higher conceptual level, literature from marketing and sociology and many references from franchise and agricultural cooperatives were consulted. Verbatim extracts were consistently used to anchor the research findings (Stake 2005).

4 Findings

To homogenize behaviors within retail cooperatives, formal procedures and practices must be established. The first three processes to be analyzed, contracts, incentives, and persuasion, are directly inspired by those that emerged in the study on franchised networks by Bradach (1997, 1998). These formal processes, which have to be initiated by the cooperative itself, are therefore considered as centralized processes, of the top-down approach.

Complex organizations, whose contracts could be considered "incomplete," also need to develop informal actions to strengthen coordination in order to be more efficient (Ring and Van de Ven 1994). The three following processes, trust, organizational commitment, and informal control, are of the decentralized type and emerged in the two qualitative data collection phases. They are of the bottom-up approach (from the partners to the top of the network) or of the horizontal type (between cooperators).

Finally, the last three processes, solidarity, mimesis, and enculturation, also emerged during the qualitative data collection phases. These are of a plural nature, meaning they mix both centralized and decentralized influences.

4.1   The Contracts Process

The notion of formalization refers to the development of explicit rules and procedures to supervise and control the behavior of members in the cooperative. This is to strengthen the organization's consistency without necessarily supervising all the practices and behaviors of its members. The contracts enable a formal framework to organize relations between network members. A hybrid organization may also appear based on incomplete contracts and the will to establish coordination mechanisms (Chomel et al. 2013). Every organization has a wide range of legal documents governing the rights and responsibilities of network members. According to cooperator D7, "There are commitments, statutes, rules of procedure." For the Chairman of Network A, "The only thing that unifies the stores of A is the set of specifications, [. . .] a labor agreement and an environmental agreement to regulate a certain number of ecological aspects." One of the most regulated domains within these contracts is marketing. It directly affects the network's brand image and is delegated by agreement with each cooperative. Advertising is very effective to better control stores and their consistency, as demonstrated in the franchise context (El Akremi et al. 2011). The legal framework can also strengthen the contractual framework. According to the Chairman of Network D, the presence of certain products is "mandatory because the prospectus is widely distributed" and "if you make a prospectus and you do not have the product, it's illegal. . ." He adds that this is a choice that has been made, and thus it is imposed on all the stores. When you put a commercial on TV, you start with a product and a price. These have to be imposed on all the stores. This means that it forces the stores to have all the products available. In such a way, the prospectus is more than a mere promoting tool."

4.2   The Incentive Process

Similarly to agricultural cooperatives, some networks of cooperators and associate retailers have shifted from the principle of an egalitarian solidarity to solidarity based and built on individual behavior (Chomel et al. 2013). Network B has implemented a

system of discounts based on "the store's visuals, the price policy, the availability of the range of food, non-food, and fresh produce, the employee training program, etc." according to B2, an associate partner of Network B. He adds that this may represent up to 300,000 US dollars per year for a store of 2400 m^2. As explained by associate partner B1, "To obtain a bonus at the end of the year, we must respect the uniformity concept. So indirectly it strongly encourages us to stick to the concept. And that's why now it goes a little faster. It is a blessing in disguise, but it is the best way that the system has found, because otherwise the process is too long."

4.3 The Persuasion Process

The organization relies on coercive and persuasive methods upstream and downstream.

The Upstream Use of Control and Persuasion Among the Cooperators Bradach (1997, 1998) refers to the need for any network of stores to grow. Projects must be supervised and monitored to ensure their viability and performance. According to D7, Chairman of Network D, the regional head offices are in charge of "developing the network, as well as expanding, handing over of existing stores and creating of new stores." Project applications are closely monitored. According to cooperator A4, employees of the cooperative follow all projects through "phone and physical visits to keep an eye on progress."

The Downstream Use of Persuasion Among the Cooperators Any store under contract is monitored by field audits, mystery shoppers, and automated management information systems. The aim is to identify any deviation from the concept. However, members of the group can benefit from some form of tolerance toward these deviations (Bradach 1998). According to cooperator A1, "The product advisor [. . .] will help pinpoint a potential improvement in a given department, some form of deviation [from standards] or maybe something else. If the deviation is too important, he must refer it to his supervisor who will arrange an inspection later on." If necessary, persuasive actions are implemented to motivate the store in question to match the standards again or risk exclusion measures. According to cooperator A6, "A cooperator who does not respect the concept will discredit an entire network of stores. The others are all working well for just one who is working badly. He then needs to go; it is obvious."

4.4 The Trust Process

According to Robbins et al. (2014, p. 428), "Trust strengthens cohesion. Trust cements the union of individuals. It means that anyone can rely on others. [. . .] In

the face of adversity, the members of a group will unite to work hand in hand and will strive to achieve their goals."

Interorganizational trust is the trust in the cooperative itself by its own members (Zucker 1986). Any member of a cooperative puts himself in a position of vulnerability by becoming dependent on it either for its purchases, communication, or brand. As expressed by associate partner B2, "I trust the system." For associate partner B2, "The lack of time and the costs of adaptation need us to trust the system in general, although, of course, a few adaptations to the communication strategy, the available products and the organizational system are often necessary."

Interpersonal trust is the trust placed by individuals upon other individuals (Zucker 1986) and more specifically between peers in retail cooperatives. As store manager C4 explains, "The genesis of all this is a strong relationship of trust between people." For associate partner B4, "We talk of large retailers, almost like an industry, but at some point we have a relationship of trust."

4.5   The Organizational Commitment Process

The organizational commitment is a multidimensional approach explaining the relationship between a member of an organization and the organization itself (Meyer and Allen 1991).

Affective commitment is the emotional commitment to and identification with the organization. Cooperators remain within the network because they want to. For cooperator C2, "We love this network, because we like to meet each other, because we love what we do, we are proud of what we do, and it is an extraordinary human adventure." For the Chairman of Network A, "The identification and emotional aspects are, I think, the strongest points. People really choose A." The members of a cooperative have a high propensity to identify with their organization (McClintock Stoel and Sternquist 2004).

Continuance commitment refers to the costs that a departure from the organization could create for the individual, based on the investments he made. Sometimes, the cooperators remain within the network, because they feel they would lose too much if they left it. Associate partner B4 comments, "I have spoken to [another network] and there are benefits and drawbacks on both sides. The grass is not greener on the other side."

Normative commitment uses the notion of loyalty or moral obligation to remain a member of the network. In this case, the cooperators believe that staying within the network is a duty. According to cooperator D5, "We are nothing without D and D is nothing without us. So if we do not think alike, at some point the cooperative may no longer exist."

4.6 The Informal Control Process

Informal control differs from formal control. It consists of relational governance, as in the franchise context with consensus and actions of social control (El Akremi et al. 2011).

Decision-making within cooperatives requires the consensus of its members under the principle "one man, one vote." The Chairman of Network C describes two competing projects: "They both have technical and policy reasons worth fighting for and my role is to put their arguments on the table so that all cooperators can judge." For the Chairman of Network D, "This is simultaneously intensive pedagogy and energy. [. . .] We [cooperators] must make people adhere to the decision. We have to sell it to them and share it."

For Festinger et al. (1950), the organization aims for homogenization and exerts "pressure uniformly" to reduce the differences between members and to reach consensus. According to cooperator D5, "It is still a world of entrepreneurs and business, so people do not necessarily spare each other." The pressure depends on the level of disagreement and the importance of the subject but also on the cohesion among members. According to associate partner B1, "I was told 'when we are presented with the concept, we have to implement it'. I asked why he said that. 'Look,' he replied, 'you have to do this, whether you like it or not. It's the same, it must be done.'"

4.7 The Solidarity Process

The term "solidarity" is currently misused in many contexts with a move toward the meaning of the "rights to." It removes the meaning of duties and mutual responsibility from the concept of solidarity. Comte-Sponville (2013, p. 937) writes, "To show solidarity is to act in favor of someone with shared interests: by defending his own as you defend yours; defending your own as you defend his," adding that "being generous is to give up, at least in part, your own interests. Solidarity means defending these interests with others." To illustrate this, several cooperators use collective sports metaphors. For cooperator C5, we have to "work as a team with our differences. Some players are big, some are small, some are medium, some are beefy, some are powerful, some have very, very large stores, some have small shops and, for us, there is no difference." For associate partner B4, "We are part of a group of entrepreneurs and we are interrelated" so "we must show solidarity." For cooperator C5, "We can't just take what is good and throw out what doesn't suit us."

According to the Chairman of Network C, "For it to work, I must fill my store using the best possible purchasing conditions and ranges of products that will continue to be innovative and up to date in the long term. To do that, I will work in a cooperative with the undertaking that I am not there simply to take but also to give." Associate partner B5 says, "We have to have 35,000 items and it is

impossible to be professional on 35,000 items. So we have to use the network concept system. These concepts have been thought up by professionals who work for our group and by cooperators who supervise them. It is the same for the merchandizing. We receive advice on the products." Store manager D6 adds, "In every department you have a key concept" that has been validated by the cooperators.

Each cooperator has to spend approximately a third of his time working for the cooperative in technical committees, such as merchandising, purchasing, marketing, logistic, information systems, etc. This is an act of solidarity which has positive repercussions as it reminds each member that he belongs to a network and that he needs to give some of his time to the functioning of his network.

4.8 The Mimetic Process

Mimetic processes (DiMaggio and Powell 1983) correspond to the "herd behavior" shown by organizations that imitate each other. This practice of benchmarking can also be a tool to standardize the practices of stores in the same network. It is done in different ways.

Computer software allows retail stores to perform a benchmarking analysis between the different stores of the network and thus generate a strong emulation. According to cooperator C3, "If we are successful, or if we are underperforming, it allows us to work on the product families which are perhaps less efficient." The Chairman of Network D adds, "There is quite a lot of emulation in our group." The cooperative's salaried staff reinforces this emulation by disseminating information on good practices to the different stores.

Cooperators can learn, during occasional moments of social interactions, what other members of the group are experiencing or have experienced in the past. They can then use these experiences as part of their own learning process. This is called vicarious learning: cooperators identify and compare with each other (Rousseau et al. 2014). According to cooperator C1, within his Network C, "there are no particular architectural rules to follow. If some stores are similar, this is due to regular meetings and informal sharing of information between cooperators [such as who are the best architects to contact, etc.]."

4.9 The Enculturation Process

According to Herskovits (1948, p. 43), "The concept of enculturation affords us a tool to bridge the gap between culture as a thing that exists by and of itself, and culture as the total behavior of the individuals through whom it is manifest. We have seen that, in the process of enculturation, an individual learns the forms of conduct acceptable to his group. He does this so well that his thoughts, his values,

his acts rarely conflict with those of the fellow-members of his society." For Weinreich (2009), enculturation is the continuous integration of the significant elements of a culture, whether it is the dominant, primary, or other culture of the individual, as long as it is significant. This leads us to favor the notion of enculturation to that of acculturation, which involves penetration of one culture by another.

All governance systems, including those that give considerable autonomy to stores, such as cooperative systems, need to find the "right" people. Recruiters look for profiles that are "compatible" with the organizational culture or "adaptable" to its culture. When a network staff member wants to become a cooperator, a socialization process is put into place (Bradach 1997, 1998). As stated by associate partner B3, "Network B tries to keep its store managers [by helping them to become cooperators themselves]." In each network, there are also the family members of cooperators, particularly children, who themselves become cooperators.

Values set standards that will guide the behavior of members (Schein 1994), and they must be consistent with the network's goals in order to help meet the challenges it faces. They improve loyalty as evidenced by cooperator A5 who says, "What makes me stay are the values." Cooperator D5 adds, "If we joined this network specifically, if we are in this network, it is to transmit its values." These cooperative standards, which are not necessarily formalized, enhance the ability of a network to meet the challenge of uniformity in a beneficial way.

5   Discussion

The overall dynamics of cooperative and independent associated retail networks are based on their network nature (Zentes and Swoboda 2000). This system creates synergies through the nine processes that we have seen in this research study, which are unreachable in a chain system. The theory of a chain is that one weak link, or, in our case, one weak store, may create difficulties for the entire system (Cliquet 2002). According to the Chairman of Network A, "It is a solidarity chain, a chain made of positive interdependence. [...] All the links must be active and healthy for the chain to work and the network to function." Cooperator C7 continues, "Sometimes we have to tell a member 'listen, you must give back the keys because we cannot keep paying for you. This is the only limit to the independence that we have'." Retail cooperatives are therefore a combination of the strengths of a network system (synergies and processes) and certain weaknesses of the chain system mentioned above.

Individual commitment depends on the member's vision of the group (Karau and Williams 1993). If it is positive, individuals will be more effective and invest more of themselves in the life of the group. If cooperators give up their responsibilities, cooperative staff members will make decisions for the network even if they do have to validate their decisions in general meetings. In this case, it can be difficult for synergies and other processes to emerge. To avoid this, a number of contractual obligations may be put into place. For the Chairman of Network A, "People are

forced to go to meetings because it is written into our statutes, because we know that in the cooperative business system that have not [made it a rule], such as agriculture, banking, forestry, maritime, [. . .] cooperators do not attend meetings because they feel cut off from everything. [. . .] They can see no difference between the cooperative tools that belong to them and the rest." The Chairman of Network D adds, "When the members aren't involved, the cooperative dies." This is reinforced by the fact that participation in technical and policy decisions at a national level is not available to all cooperators. According to cooperator D1, "These committees at the top that decide on new concepts are run by [people] who can just change their schedules because they have [. . .] a profitable store with good results and with the means [. . .] to run smoothly in their absence." This tends to influence the decisions made for the network, as explained by associate partner B1: "If the cooperators making the decisions are ten bosses of hypermarkets, then automatically the decision-making will sub-consciously go in their direction." This automatically affects the truly representative nature of the cooperative system.

Recruiting cooperators compatible with the network's culture is seen as being beneficial to overall performance. However, this leads to a much slower expansion of the network compared to other networks with a more rigid system where the manager is similar to a salaried employee (Streed and Cliquet 2013). As explained by cooperator A4, "The network has refused a lot of applicants and some of them have sometimes gone across to our competitors that is sure. Now the network has downgraded its requirements. The process is too long; one must be quick to expand in a territory. Some people were refused, and today they are the top stores in their city and they could have been with network A." This system of selection may well undermine the challenge of unit growth, i.e., networks expanding and opening up new units (Bradach 1998). Focusing too much on the importance of a network's culture to fulfill the uniformity challenge might undermine another challenge, such as the expansion of the network. Bradach (1998) developed a theory that every network faces four challenges in order to grow and survive (addition of new stores, maintaining uniformity, local responsiveness, and system-wide adaptation). Undoubtedly, all these aspects are necessary for the development and survival of a network of stores, and one challenge should not threaten the emergence of another.

6 Summary of Findings

Nine processes have emerged within cooperative and independent associated retail networks to meet the challenge of uniformity as defined by Bradach (1997, 1998). The first three processes of our model (contracts, incentives, and persuasion) were identified by Bradach (1997, 1998) as processes related to franchises when they coexist with company units in plural form networks. The author does not determine if these are plural, centralized, decentralized, or local processes, as he has done with the processes of the three other challenges. As part of our research, these three processes (contracts, incentives, and persuasion) are considered as centralized

Table 1 The model of management for the concept of uniformity within cooperatives and independent associated food retail networks

Centralized processes	Plural processes	Decentralized processes
Contracts	Solidarity	Trust
Incentives	Mimesis	Organizational commitment
Persuasion	Enculturation	Informal control

processes within the networks studied. This work on retail cooperative networks revealed six other processes: three decentralized processes (trust, organizational commitment, and unformal control) and three plural processes (solidarity, mimetic, and enculturation) that show, by their plural character, significant synergies within this organizational system (Table 1).

7 Theoretical Implications

This research sheds light on the functioning of the retail cooperative and independent associated networks. The difficulty in networks often lies in the reconciliation of dual interests, centralized and decentralized. This can generate conflicting objectives: for the network's central office, the priority is developing the brand image, but for the cooperator, it is making a profit. The retail cooperative model seems to offer a form of reconciliation in these individual and collective interests. While Bradach (1997, 1998) values the dynamics of plural form networks, which take advantage of their dual nature, cooperative networks seem to benefit from the duality of the cooperators' status to generate synergies.

In retail cooperatives, the dual status of the cooperator justified a heterarchical (Sacchetti and Tortia 2016) or "horizontal" and bottom-up approach to complement the traditional hierarchical or top-down approach. This kind of perspective highlights the complexity of this system. It also highlights the necessary cohesion between cooperators to cope with the challenge of maintaining uniformity. The different centralized, decentralized, or "plural" processes generate synergies which reinforce consistency across the network. This research suggests a model of management for uniformity, which is at the heart of all retail cooperatives. This study also helps to identify original processes, such as solidarity, mimetic processes, and the enculturation concept, that have never been studied in research on retail networks before.

8 Practical Implications

The challenge of uniformity in cooperatives is of great interest to networks. Our research contributes to supporting academic works on other network systems. The strengthening of uniformity can help to reinforce the networks' image as an

indicator and guarantee for consumers and cooperative applicants (Streed and Cliquet 2013), to differentiate the cooperators of a network from their competitors (Abrard and Paché 2009), to contribute to improving better conditions of purchasing (Meier 2006), and to achieve sizeable savings (Kaufmann and Eroglu 1998).

There has been a lack of academic studies that look at how cooperative systems are distinguished from different retail networks. This case study allows us to differentiate the cooperative system from the franchised system. Cooperators own their stores, but they also share the cooperative's tools and especially the network's label. They participate in the governance of their network, thus limiting a sense of subordination. They participate in the technical life of the cooperative on the principle of shared time. From a financial point of view, the sponsorship system allows a cooperator to become owner of a retail store without initial capital. Recently in France, the Macron bill, intended to restrict the contractual commitments to 9 years by assimilating cooperators to franchisees, was enacted. This duration may be appropriate for some organizations but could be a real threat to cooperatives with collective investments of millions of euros. According to the Chairman of Network C, "The cooperative has no capital, has no permanent structure other than the one brought by its members [...]. In addition, it is not a profit center so it cannot have a capitalistic nature; if you remove members, you remove its ability to guarantee and its ability to engage in investment." A better understanding of the cooperative model by the legislator, researchers, professionals, and particularly future applicants seems desirable.

9 Limitations and Future Research

This study has some limitations. It was conducted on only four cooperative and independent associated retail networks, from only one sector within the same country. Additionally, regarding the choice of networks, they each have more than 300 cooperators, and the turnovers are between 700 million and more than 60 billion US$. It is not representative of all cooperatives that have fewer stores and a lower turnover. In terms of data collection, very few employees and only one former advisor from a cooperative were interviewed. Moreover, the majority of interviews were conducted with cooperators coming from only one or two commercial regions of their networks. Network A can be considered in its growth phase, while the three other networks have reached a mature stage in their life cycle. Goullet and Meyssonnier (2011) refer to control mechanisms whose influence varies depending on which phase of its life cycle a franchise is in. This means that it might be interesting to focus on other networks during their developing or declining phases to examine processes that might emerge in these phases.

This model of management of uniformity has been established for cooperative and independent associated retail networks using a qualitative methodology.

According to the exploratory sequential theory, it is appropriate to follow the qualitative phase with a quantitative phase to test the established model. To generalize results, we suggest extending this study to the networks of a larger number of sectors. It would also be particularly interesting to study the possible external factors that could contribute to the concept of uniformity. This would imply analyzing networks within the same industry or with the same legal status, using, for example, the theory of institutional isomorphism (DiMaggio and Powell 1983).

Appendix: Interviewers' Details

Network	Phase	Tag	Status	Responsibilities
A	1 and 2	A1	Cooperator	Local supervisor
	1	A2	Cooperator	
	1	A3	Cooperator	
	2	A4	Cooperator	
	2	A5	Cooperator	Local supervisor
	2	A6	Cooperator	Chairman of network
B	1 and 2	B1	Associate partner	
	1	B2	Associate partner	
	1	B3	Associate partner	
	2	B4	Associate partner	
	2	B5	Associate partner	National supervisor
C	1	C1	Cooperator	
	1	C2	Cooperator	
	1	C3	Cooperator	Regional and national supervisor
	2	C4	Employee–Manager	
	2	C5	Cooperator	Former chairman of the directory
	2	C6	Cooperative's employee	Chairman of network
	2	C7	Cooperator	Regional and national supervisor
D	1 and 2	D1	Cooperator	Local supervisor
	1	D2	Cooperator	
	1	D3	Cooperator	
	2	D4	Cooperator	
	2	D5	Cooperator	
	2	D6	Employee–Manager	
	2	D7	Cooperator	Chairman of network

References

Abrard P, Paché G (2009) La gouvernance des formes hybrides, un métissage de contrat et de confiance ? Le cas de la grande distribution alimentaire. In: Baudry B, Dubrion B (eds) Analyses et transformations de la firme. La Découverte, Paris, pp 193–213

Alchian AA, Demsetz H (1972) Production, information costs, and economic organization. Am Econ Rev 62:777–795

Baron M-L (2007) Defining the frontiers of the firm through property rights allocation: the case of the French retailer cooperative Leclerc. Rev Soc Econ 65:293–317

Bataille-Chedotel F, Huntzinger F (2004) Faces of governance of production cooperatives: an exploratory study of ten French cooperatives. Ann Public Coop Econ 75:89–111

Benedetto B (1984) Commerce et noblesse en Grèce archaïque, À propos d'un livre d'Alfonso Mele. Dialogues D'histoire Ancienne 10:99–160

Bhowmik SK, Sarker K (2002) Worker cooperatives as alternative production systems: a study in Kolkata, India. Work Occup 29:460–482

Bijman J, Hendrikse GWJ, Van Oijen AAC (2013) Accommodating two worlds in one organisation: changing board models in agricultural cooperatives. Manag Decis Econ 34:204–217

Bradach JL (1997) Using the plural form in the management of retail chains. Adm Sci Q 42:276–303

Bradach JL (1998) Franchise organizations. Harvard Business School Press, Boston

Caves RE, Murphy WF II (1976) Franchising: firms, markets, and intangible assets. South Econ J 42:572–586

Chassagnon V (2012) Pouvoir et coopération dans la firme et entre les firmes. Socioéconomie du travail. Série AB d'Economies et Sociétés 34:1183–1210

Chomel C, Declerck F, Filippi M, Frey O, Mauget R (2013) Les coopératives agricoles. Identité, gouvernance et strategies. Larcier, Bruxelles

Cliquet G (2000) Plural forms in store networks: a proposition of a model for store network evolution. Int Rev Retail Distrib Consum Res 10:369–387

Cliquet G (2002) Les réseaux mixtes franchise/succursalisme: apports de la littérature et implications pour le marketing des réseaux de points de ventes. Rech Appl Mark 17:57–73

Comte-Sponville A (2013) Dictionnaire philosophique, 4th edn. Presses Universitaires de France, Paris

Diaz-Bernardo R (2012) An analysis of three confronting theories to explain franchising supply. J Bus Econ Res 10:167–170

DiMaggio P, Powell W (1983) The iron-cage revisited: institutional isomorphism and collective rationality in organizational field. Am Soc Rev 48:147–160

Eisenhardt KM (1989) Building theories from case study research. Acad Manag Rev 14:532–550

El Akremi A, Mignonac K, Perrigot R (2011) Opportunistic behaviors in franchise chains: the role of cohesion among franchisees. Strateg Manag J 32:930–948

FCA (2016) Définition du commerce associé. http://www.commerce-associe.fr/dossier/panorama?theme=public. Retrieved 12 Jun 2016

Festinger L, Schachter S, Back K (1971) [1950] The spatial ecology of group formation. In: Festinger L, Schachter S, Back K (eds) Social pressure in informal groups. Stanford University Press, Stanford, pp 33–60

Foucaud (de) I (2015) La Louve, le supermarché parisien qui fera travailler ses clients, ouvrira début 2016. Le Figaro, March 10

Goullet C, Meyssonnier F (2011) Le contrôle des Réseaux de Franchise. Revue Comptabilité Contrôle Audit 17:99–121

Hendrikse GWJ, Feng L (2013) Interfirm cooperatives. In: Grandori A (ed) Handbook of economic organization: integrating economic and organization theory. Edward Elgar, Cheltenham, pp 501–521

Hendrikse GWJ, Jiang T (2011) An incomplete contracting model of dual distribution in franchising. J Retail 87:332–344

Hendrikse GWJ, Veerman CP (2001) Marketing cooperatives and financial structure: a transaction costs economics analysis. Agric Econ 26:205–216

Herskovits MJ (1948) Man and his works: the science of cultural anthropology. Alfred A Knopf, New York

Holler J (1997) Coopératives de commerçants: La genèse. Revue des Études Coopératives, Mutualistes et Associatives 263:80–89

ICA (2015) World co-operative monitor 2015, pp 19–23. http://monitor.coop/sites/default/files/WCM_2015%20WEB.pdf. Retrieved 8 Feb 2016

Jensen MC, Meckling WH (1976) Theory of the firm: managerial behavior, agency costs and ownership structure. J Financ Econ 3:305–360

Jossa B (2012) Cooperative firms as a new mode of production. Rev Pol Econ 24:399–416

Karau R, Williams NC (1993) Social loafing: a meta-analytic review and theoretical integral. J Pers Soc Pers 65:681–706

Kaufmann PJ, Eroglu S (1998) Standardization and adaptation in business format franchising. J Bus Ventur 14:69–85

Krishnaswami O (1968) The principles of co-operation – a historical survey and a review. Ann Public Coop Econ 39:587–605

Kumar N, Scheer LK, Steenkamp J-B (1995) The effects of perceived interdependence on dealer attitudes. J Mark Res 32:348–356

Les Echos (2013) Un modèle très européen, August 9

McClintock Stoel L, Sternquist B (2004) Group identification: the influence of group membership on retail hardware cooperative members' perceptions. J Small Bus Manag 42:155–173

Meier O (2006) Comment les groupements de distributeurs indépendants s'adaptent à la globalisation : Une lecture du mouvement E. Leclerc. Décis Mark 43–44:175–190

Meyer J, Allen N (1991) A tree-component conceptualization of organizational commitment. Hum Resour Manag Rev 1:61–89

Monteiro NP, Stewart G (2015) Scale, scope and survival: a comparison of cooperative and capitalist modes of production. Rev Ind Organ 47:91–118

Papon-Vidal P (2000) Le statut de l'associé-coopérateur. RECMA – Revue Internationale de L'économie Sociale 278:58–66

Pryor FL (1983) The economics of production cooperatives: a reader's guide. Ann Public Coop Econ 54:133–172

Ring PS, Van de Ven AH (1994) Developmental processes of cooperative interorganizational relationships. Acad Manag Rev 19:90–118

Robbins S, Judge T, Tran V (2014) Comportements organisationnels, 16th edn. Pearson, Montreuil

Rousseau DM, De Rozario P, Jardat R, Pesqueux Y (2014) Contrat psychologique et organisations: Comprendre les accords écrits et non-écrits. Pearson, Montreuil

Sacchetti S, Tortia E (2016) The extended governance of cooperative firms: inter-firm coordination and consistency of values. Ann Public Coop Econ 87:93–116

Schein F (1994) Organizational culture and leadership, 3rd edn. Jossey Bass, San Francisco

Sélinsky V (2008) Les sociétés coopératives et le droit de la concurrence. Journal des Sociétés 55:52–57

Stake R (2005) Multiple case study analysis. The Guilford Press, New York

Streed OJ, Cliquet G (2013) Maintaining brand uniformity in retail networks: the case of franchised quick-service-restaurant chains. J Mark Trends 2:17–24

Weinreich P (2009) 'Enculturation', not 'acculturation': conceptualising and assessing identity processes in migrant communities. Int J Intercult Relat 33:124–139

Williamson OE (1975) Markets and hierarchies: analysis and anti-trust implications. A study in the economics of internal organization. Free Press, New York

Williamson OE (1985) The economic institutions of capitalism. Free Press, New York

Yin RK (2009) Case study research: design and methods, 4th edn. Sage, Thousand Oaks

Zentes J, Swoboda B (2000) Allied groups on the road to complex networks. Technol Soc 22:133–150

Zucker LG (1986) Production of trust: institutional sources of economic structure, 1840–1920. In: Staw M, Cummings LL (eds) Organizational behavior. JAI Press, Greenwich, pp 53–111

Characterizing Cooperatives in China

Yining Xu, George W.J. Hendrikse, Hongdong Guo, and Qiao Liang

Abstract Scholars question whether Chinese cooperatives are different from Western cooperatives. Five cooperatives in Zhejiang province are described, and they are evaluated from various perspectives. Next we address various differences between cooperatives in China and the Western world. We highlight aspects of the political and the economic environment, such as the farmland system, the cooperative law, the financial support and intervention from the government, the limited education of most farmers, and the substantial capital requirements in order to have a successful cooperative.

1 Introduction

China is in many ways a fascinating country. It is a huge country with a large population, has grown economically fast during the last decades, has unique political and economic policies, and drastic changes are going on in many areas. One of the drastic changes is the organization of the agricultural sector. During a decade the number of cooperatives has risen from virtually no cooperatives to more than 1.5 million cooperatives. This number is startling, but the actual organization of the cooperatives behind this number deserves attention due to various unusual features, such as the concentration of ownership and the connectedness with other stakeholders (Liang et al. 2015).

There are various views about the characterization of an agricultural cooperative. One view is that a cooperative has to satisfy certain principles in order to qualify as a cooperative. A prominent example is the list of seven cooperative principles formulated by the International Cooperative Alliance (ICA, 1995):

Y. Xu • H. Guo • Q. Liang (✉)
China Academy for Rural Development, Zhejiang University, Yuhangtang 866, Hangzhou 310058, China
e-mail: meggiexyn@163.com; guohongdong@zju.edu.cn; liangqiao2323@126.com

G.W.J. Hendrikse (✉)
Rotterdam School of Management, Erasmus University, Postbus 1738, Room T10–56, 3000 Rotterdam, The Netherlands
e-mail: ghendrikse@rsm.nl

voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training, and information; cooperation among cooperatives; and concern for community. Another view is that a cooperative is a specific governance structure, where a governance structure is defined in terms of ownership rights, decision rights, and income rights. Dunn (1988, p. 85) defines a cooperative as "a user-owned and controlled business form which benefits are derived and distributed on the basis of use."

Section 2 presents some statistics and five cases regarding cooperatives in China. Section 3 evaluates the cases from the two viewpoints. Various aspects of the Chinese political and economic environment are identified in Sect. 4 to understand some aspects of the organization of cooperatives. Section 5 concludes.

2 Some Statistics and Five Cases Regarding Cooperatives in China

This section starts with some statistics regarding the development of cooperatives in China. Next we describe six cooperatives to highlight the unusual governance structure of cooperatives in China and to illustrate the variety of governance structures.

China is experiencing a revolution in the governance of agriculture. Figure 1 shows the development of cooperatives in China during the last decade. The number of registered cooperatives was 26,400 when the Chinese Cooperative Law was promulgated on July 1st, 2007. This number has increased to 1,685,900 by the end of March 2016.

Table 1 provides additional information on the development of cooperatives. 100,900,000 households[1] participate in cooperatives. The average membership of cooperatives is increasing, but it is still small compared to cooperatives in the West. The total registered capital has reached 3.32 trillion yuan in 2015. The average registered capital of cooperatives is increasing in the course of time.

There are a number of positive effects of cooperatives. Cooperatives have a significant positive effect on members' income (Deng et al. 2010; Ito et al. 2012), market access (Deng et al. 2010; Jia et al. 2012), and decreasing growing cost and realizing economies of scale (Huang 2013; Yang et al. 2013). The emergence of cooperatives in China also decreases consumers' food security risk (Jia and Huang, 2011). Nowadays cooperatives have therefore a significant role in the agriculture sector and rural China.

It turns out that many different organizations are hidden behind these numbers. They are all referred to as cooperatives, but their actual governance structures differ substantially. We illustrate this variety by presenting various governance structure features of five cooperatives in Zhejiang province in the remainder of this section.[2]

---

[1]Farmers may participate in more than one cooperative.

[2]Zhejiang is one of the earliest provinces where cooperatives emerged and the number of cooperatives ranks second in China.
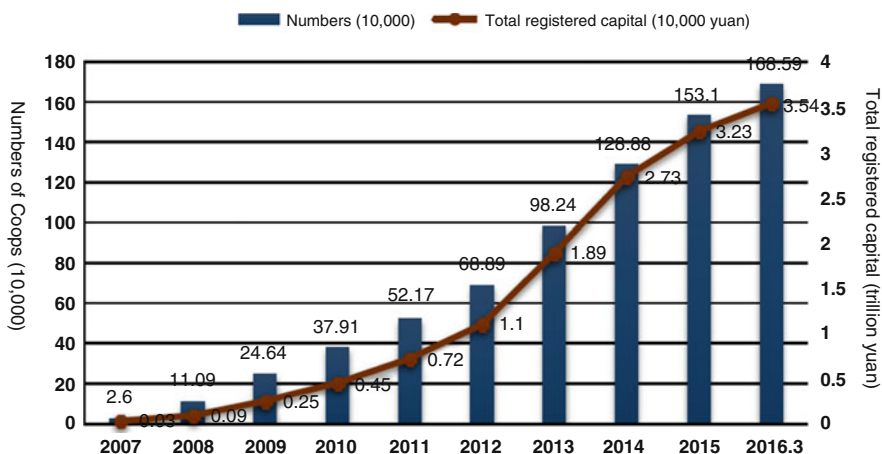
Fig. 1 Number and total registered capital of cooperative in China (2007–2016)

Table 1 The development of cooperatives in China (2007–2016)

	Numbers (10,000)	Registered capital (trillion yuan)	Average registered capital (10,000 yuan)	Total membership (10,000 households)	Average membership (households)
2007	2.64	0.03	115	35	13
2008	11.09	0.09	81	142	13
2009	24.64	0.25	101	392	16
2010	37.91	0.45	119	716	19
2011	52.17	0.72	138	1196	23
2012	68.89	1.1	160	2373	34
2013	98.24	1.89	192	2951	30
2014	128.88	2.73	212	9227	72
2015	153.1	3.23	211	10,090	66
2016 (by March, 2016)	168.59	3.54	210	/	/

Date sources: China's State Administration for Industry and Commerce and China's Ministry of Agriculture 2015

Case 1: Datong Silk Cooperative

The Datong silk cooperative was set up in 2001 in Deqing, Zhejiang Province. It is the first registered farmer cooperative in China. This cooperative started its business with purchasing members' cocoons and mulberry leaves and selling them to silk filatures or food-processing factories. Middlemen have been excluded by the cooperative. Nowadays Datong's main source of revenue is processing cocoons and mulberry leaves to make silk and mulberry tea. It has expanded its business downstream by producing raw silk since 2003. It produces also quilts. In 2009 it

became a provincial-level demonstration cooperative. In 2013, Datong collaborated with a medicine company from Taiwan and introduced new equipment to produce diet tea and medicine by processing mulberry leaves.

Benefits of the cooperative for the members consist of payment for deliveries, technical support, access, and providing credit to the members. Members receive a higher price than the market price. Payments to members are differentiated based on the quality of the deliveries. Common members obtain their benefits by selling cocoons and mulberry leaves to Datong. The allocation of residual income stays within the limits delineated by the cooperative law. The members receive 60% of the residual income. The remaining 40% is kept as retained earnings and is entirely invested in high value-added downstream investment projects. The revenue of Datong was 5.33 million yuan in 2015. Members can choose to invest in the cooperative. They are paid according to share. In order to ensure the quantity and quality of the production of raw silk, Datong cooperative provides technical training in growing mulberries (whose leaf is the food of silkworms) and feeding silkworms (who produce cocoon used to wave silk). Plant growth is supported by the cooperative, but not insect health. Over 1000 silk farmers benefit from it.

During the visit on June 8, 2016, the chairman of the cooperative made the membership list available, which is presented in Table 2. The table indicates that the cooperative has 8 core members and 613 common members. The cooperative is not an open membership cooperative anymore. It is now closed and tries to reduce the membership. The financial manager and the marketing manager of the cooperative are nonmembers. Recently, the cooperative has hired four young, nonmember employees specialized in marketing.

Each core member has contributed a substantial amount of capital. Common members nominally invest 200 yuan and own one share of the cooperative, while they actually put no money into the cooperative. The reason they invest nominally is that the precondition of establishing cooperative in the law requires that each member must invest in the cooperative. Furthermore, only scaled cooperatives whose membership exceeds 100 receive additional support from the local and the central government. Common members are not willing to invest and bear the risk of the business of a cooperative. Therefore, core members receive the residual income as the payoff for their investment based on their capital share.

Equipment used for processing, and other investments, are financed almost completely by the core members. (The cooperative does not want support from the government due to too many restrictions.) They jointly own a downstream processor. Investments consist of buying equipment and maintaining the cooperative's operation when it needs revolving capital in the harvest season. A recent

Table 2 Membership of Datong silk cooperative in 2015

Number of members	Capital share (%)	Capital investment (CHN)
1	8.2	55,000
7	4.9	33,000
92	0.45	3000
503	0.03	200

investment project was financed by retained earnings of 1,500,000 yuan and a loan of 2,000,000 yuan.

Since core members actually own the cooperative, they control this cooperative. The decision rights are allocated based on the share in the cooperative. Major issues, such as accepting new members and investing in a new production line, are decided by core members and communicated with common members in the annual general meeting. The board of Datong consists of the core members. In the board meeting, the decision rights are allocated according to core members' capital investment in the cooperative. Datong's president is the core member who has the largest capital share and can decide all daily affairs.

Case 2: Beizhijiang Vegetable Cooperative

Beizhijiang vegetable cooperative was established in 2009 in Fuyang, Zhejiang. The main business for the cooperative is to purchase members' vegetables and send all of them to its biggest client, the Pangu Eco-agriculture Firm. The purchasing price of Beizhijiang is flexible and follows the fluctuation of the local market price. Members receive the same revenues as in the market. Besides the purchasing of the vegetables, Beizhijiang also pays attention to technological training and high-quality growing so as to make the quality of their members' products reach the high product standard of the Pangu. This cooperative also requires their members to use fertilizers and pesticides, which the vegetable firm specified, so as to ensure the vegetable safety. In 2014 it has been selected as a city-level demonstrated cooperative and then selected as a demonstration cooperative at the provincial level in 2015. The turnover of Beizhijiang has increased 300% to 20 million yuan, compared with the turnover when it was established.

Beizhijiang has 117 members in the latest survey, and 6 of them are core members. One of the core members is the Zhejiang Baihe Group and holds 20% share. Other core members are the president and his family. The president of Beizhijiang is also the leader of Pangu Eco-agriculture Firm. He and his family are the largest shareholder of both Pangu and Beizhijiang, and 90% of the registered capital shares of Beizhijiang are contributed by them. Other members nominally hold a share of the cooperative of around 5%, while they actually did not invest money. Their payment is very limited. The decision right of Beizhijiang is controlled by the president and his family. The cooperative hardly ever holds a general meeting, as the president has absolute power regarding important affairs, like increasing or decreasing the membership. Routine business, like the species and quantity of vegetables the cooperative buys from members, are also decided by the president.

Beizhijiang vegetable cooperative is a wholesaler. It is like an upstream department of Pangu Vegetable Corporation, because both of them are controlled by the president and his family. Members have no decision rights nor income rights beyond the benefits in the exchange with the cooperative. Vegetable growers (members) are actually independent from Beizhijiang. They have no capital share and no decision power/rights regarding the cooperative. The organization has long-term but flexible contracts with vegetable growers.

Case 3: Liwen Bamboo Cooperative

Liwen bamboo cooperative was founded by 15 members in 2007. Bamboo can be used as food (vegetable or fruit), or as a material, such as chopsticks, and so on. The major product of Liwen bamboo cooperative is bamboo shoots. Bamboo shoots grow on bamboo trees, which are old at the age of 3–4 years. They grow in their natural environment in Zhejiang province and 4–5 neighboring provinces. Fresh bamboo shoots stay fresh for only 3 days and grow in the natural environment during March and April. Bamboo shoots differ in quality in terms of the outside shape, color, and size. Four classes of bamboo shoots are distinguished. Members are paid and selected by the director to do the measurements. The growers are paid immediately for their deliveries. Liwen cooperative was awarded by a government the prize for the best bamboo in 2012.

The founding members raised CHN 100,000 registration capital. The director and his agricultural development company contributed 40% to the initial capital. Two relatives contributed each 20% as a member, and the final 20% was contributed by the other 12 founding members. The director of the cooperative told in the interview on September 9, 2014, that the cooperative has currently 161 members. Table 3 presents the ownership shares in the cooperative in 2014. Each of the four core members owns 20% of the shares of the cooperative: the director owns 20% of the shares, his parents are a member farmer and own 20%, one uncle is a member farmer and owns 20%, and another uncle is a member farmer and owns 20% of the shares. The other 157 member farm households own the remaining 20% of the shares.

The membership has around 600 ha available for growing bamboo. Table 4 presents the distribution of land of the membership. The director has 200 ha available for growing bamboo. He has leased the land from the village for 30 years. During the harvest season, he employs around 100 additional persons temporarily. His 200 ha is governed by a separate legal entity, called agricultural development company. The director said that if there was not a separate legal entity, then there may be problems with the cooperative regarding the ownership of the land. This creates transparency. His parents grow bamboo on 5 ha and have one permanent employee. Each uncle grows bamboo part-time on 2 ha.

The focus of the cooperative is on general production skills to guarantee quality, the production calendar, and the highest segment in the market. The cooperative owns three trucks for transportation, which are driven either by members or by outsiders. The cooperative has invested in roads for transportation. A building is leased. The cooperative employs five persons: the director, one accountant, one

Table 3 Ownership shares in Liwen bamboo cooperative in 2014

Member	Ownership share (in %)
Director	20
Parents	20
Uncle 1	20
Uncle 2	20
5–161	20

Table 4 Land available to members in Liwen bamboo cooperative in 2014

Number of members	Number of hectares
10	0–1
10	1–2
90	2–3
32	3–4
15	4–5
3	5–6
1	200

sales person, and two other employees. The director has many tasks: funding, procurement, developing the market, sales, selecting new members, formulating investment proposals and obtaining approval from the members, and communication with the village and the government. The director selects new members based on individual judgment. An important consideration is to prevent trouble and management costs.

Decision making in the cooperative is based on the one-member-one-vote principle. There is never a general assembly meeting with all members. However, a representative board meets 1–2 times each year. Board membership is based on location, and each board member represents 15 votes. The board in the cooperative consists therefore of 10–11 members. The director has also one vote and is one of the board members representing 15 other members. The main topics in the board meetings are the bamboo price, a review of the activities, and an evaluation of the plan for the next period. There is also a supervisory board consisting of 3–4 members. It meets 1–2 times each year.

Members decide how many bamboo shoots to deliver to the cooperative. They deliver about 10% of their bamboo to the cooperative. Members want to sell more via the cooperative because the cooperative pays a better price than the market or intermediaries. However, the cooperative does not have the selling and service capacity to sell more. Bamboo shoots of growers are sold via diverse marketing channels: local markets, local intermediaries, and cooperatives (to Liwen and others). Liwen bamboo cooperative has some internet sales, but most bamboo shoot is exchanged via direct sales due to the 2–3 days freshness feature. The director negotiates and establishes oral agreements with restaurants and grocery stores. Orders are finalized usually less than 1 week in advance due to the price fluctuations.

All members have activities beyond growing bamboo because the harvest period is during a limited time of the year. Two types of members can be distinguished. The factory-based farmers are full-time employed in a factory and grow bamboo part-time. 40% of their income comes from wages paid by a factory and 60% comes from bamboo. The factory-based employees ask somebody to sell their bamboo shoots. This is either the cooperative or somebody else. The income of farm-based members is based on bamboo (60%), animals such as chickens and ducks (20%), and vegetables (20%). They are more knowledgeable about the market fluctuations

than the factory-based members and sell less via the cooperative than the other members.

The cooperative owns also a bamboo research institute. It is a nonprofit organization and is a separate legal entity. Members of the cooperative have the exclusive access to a fertilizer developed by the research institute. The research institute provides also production training to members and nonmembers and develops technical skills. The six founders of the bamboo research institute are researchers and field experts regarding bamboo planting. Each founder covered a share of the initial capital. There are no government subsidies. Profits stay in the bamboo research institute, while losses are covered by Liwen bamboo cooperative and agricultural development company. The director of Liwen is the manager of the bamboo research institute and takes the daily decisions, while the other five founders do sometimes research. The director has 80% of the votes, but tries to achieve consensus in decision making. Research is carried out for various parties.

The short harvest season makes it attractive for the cooperative to invest in activities which extend the harvest and delivery season. First, bamboo shoots with a special treatment grow at least 1 month earlier and receive a much higher price. Second, bamboo shoots can be cooked and subsequently dried during 1 week. Not much technical skill is needed to do this. The cooperative considers to invest in a machine which dries the bamboo shoots. The dried bamboo shoots are marketed as a specialty product with a brand name. Finally, a storage house with cooling equipment extends the freshness of bamboo shoots from 3 days to 1 month. Storage is considered more desirable than drying the bamboo shoots.

Bamboo trees turn out to have a high early mortality rate. The investment by the bamboo cooperative in irrigation machines and a drainage system has reduced the early mortality rate from 50% to 10%. The technical skills and health-care program regarding the bamboo trees have increased profits by 10–20 times. The cooperative provides also other inputs to the members, such as fertilizers and biopesticides. Liwen has a contract with a fertilizer company from Singapore, which has resulted in a fertilizer price which is 30% lower per ton (CHN 600) than the market price. Additionally, the fertilizer is tailored to the local soil ingredients and reduces waste. Members as well as nonmembers face the same price.

The cooperative spends usually 60–70% of the annual profit in investments and services. The irrigation/drainage system was paid for 50–70% out of the retained earnings, while the trucks were paid entirely by the cooperative. The cooperative provides no price adjustments at the end of the year. The director likes to invest in a new production line for the processing of the bamboo shoots. He expects four sources of finance: borrow from friends/relatives, a limited loan from a bank, a new investment partner, and a government subsidy to pay for the interest on the loan. (The government does not provide loans.) Members are most likely not willing to invest according to the director because they have hardly assets and hardly an education and are short-sighted. Only large members may invest.

The director formulates also investment proposals. Approval has to be asked from the board, but they are always accepted. Members are not much involved in the decision making because they sell only 10% of the bamboo to the cooperative.

The director determines the size of the residual income based on the plan of the cooperative. He indicates that it is hard to guarantee and to convince the membership that nothing is stolen and that the members have a strong focus on returns. It is hard to explain to all the members that some of the residual income is paid to the capital-providing members as a reward for the capital invested in the cooperative. The price of bamboo shoots fluctuates every day. These fluctuations are hard to handle for the cooperative due to the low tolerance for risk of the members.

The director's opinion is that cooperatives are not good partners for banks. Cooperatives in China are too loosely defined in terms of ownership to get outside finance. Getting outside finance is difficult for smallholder farmers due to their lack of assets and the production field belonging to the county. Additionally, there are many shifts in the membership. A corporation is more transparent for banks in terms of ownership and receives therefore more loans. Most cooperatives are started by investors according to the director. Corporations are able to provide collateral by assets such as a company car, equipment in the company, and buildings. Farmers don't incorporate their farm because they will face more restriction on the farm, the land, and the buildings in rural China than in cities. Farmers spend most of their savings on renovating their farmhouse.

Case 4: Shuangjing Bamboo Shoots Cooperative

Shuangjing bamboo cooperative is established in 1986 when the rural reform of China was accomplished. It registered formally in 2008 after the Chinese Cooperative Law was promulgated. The aim of Shuangjing is to help bamboo farmers to sell their bamboo shoots and to add value. It sells members' bamboo shoots to supermarkets and wholesale markets in the harvest season. Compared with selling to wholesales, members have higher incomes and a stable sales channel when they become a member of the cooperative. After years of capital accumulation, Shuangjing used it to buy equipment to gradually change its essential business to bamboo shoots processing (including slicing, drying, and packaging), which is less influenced by the season and could help the cooperative to add more value. In 2015, Shuangjing's turnover passed the 100 million yuan, and the number of employees increased to around 1000.

Shuangjing, unlike other big cooperatives, has only fifteen members. These members are big bamboo shoots farmers. They jointly own the processing facilities and capital of the cooperative. Shuangjing cooperative is led by five big bamboo farmers. These core members own most of the processing facilities and own more than 60% of the capital of the cooperative. Over 100 small farmers have been attracted by its outstanding performance and established a stable business relationship with it. They participated in it by investing 1000–5000 yuan per person and belong to the producer association part and the downstream part of this cooperative. Members are patrons and obtain benefits when trading with Shuangjing. They are different in terms of the amount land used to grow bamboo and the investments in the cooperative. Members have also an investor role because the residual income of Shuangjing is allocated according to their investment share.

Control rights are allocated in the same way. When members make decisions, the "one-share-one-vote" voting rule is adopted in the general meeting and board meeting. Core members are more influential than common members in the decision-making process. Routine business is decided by the president, who is also the largest shareholder.

Thirty percent of the profits are retained earnings for this cooperative, which are used to purchase or upgrade the bamboo shoots processing equipment in order to expand business scale. Members receive two financial benefits. First, they are paid according to their patronage. They receive a purchasing price which is 10% higher than the market price. Second, the remainder of the residual earnings are allocated to members at the end of the year according to their capital share in the cooperative in the form of an annual bonus.

Case 5: Yangshanfan Peach Cooperative

Yangshanfan is a cooperative specializing in peach. It was established in 2005 and located in Tonglu, Zhejiang Province. It is the only peach cooperative in the village. Yangshanfan Peach Cooperative is an organization which is jointly owned by 180 peach growers. Due to the small peach-growing scale in the Yangshanfan village, the primary aim of Yangshanfan Peach Cooperative is to improve the competitiveness of farmers' peach and to introduce and link local farmers to the big market. When members grow peaches, it suggests members to use fine peach breeds. It provides these fine peach breeds and requires members to use low-toxicity pesticides. Moreover, Yangshanfan invites peach-growing experts to give agricultural technology trainings, which is free to members. The president also puts effort into searching good sales channels. In the harvest season, the cooperative sells members' peaches to their linked supermarkets and fruit chains. Members get a more stable price than when they sell to small wholesalers.

Core members have most of the decision rights regarding routine business, such as choosing pesticides suppliers, choosing tied supermarkets, and settling the peach-buying price in the harvest season. Several core members, including the president, have a larger capital share than common members. They trade more with the cooperative than the common members. Table 5 presents the number of members, the scale of production, the capital invested by each member, and the voting percentages at Yangshanfan peach cooperative in September 2014. The table shows that 86% of the voting shares are held by less than 6% of the members.

Unlike other cooperatives, Yangshanfan allocates more than 90% of the residual income to members according to the volume of peaches members sell to the cooperatives. Major issues are decided in the general meeting based on the "one-person-one-vote" rule. This decision-making rule results in limited retained earnings in the cooperative, because members, especially small farmers, tend to go for short-term benefits. Yangshanfan is therefore unable to expand its business of selling peach to downstream stages of production, such as packaging, branding, processing, and wholesaling, in order to improve its competitiveness in the market. It does not have a formal connection with a downstream party, though it keeps a long-term close relationship with several wholesalers.

Table 5 The membership composition at Yangshanfan cooperative in 2014

Number of members	Production scale (Mu)	Capital investment (CHN)	Voting percentage
1	105.3	67,600	15
1	43.2	50,000	11
6	40.4–70.6	45,000	10
9	6.5–31.9	1000	0.20
1	8.4	600	0.14
8	5.5–27.4	400	0.10
148	2.3–36.1	200	0.05
6	8–55	0	0

The turnover of Yangshanfan Peach Cooperative in 2015 is 1.85 million yuan, which decreased sharply compared with 10.12 million yuan in 2014. Besides, the profit has decreased from 580 thousand yuan to 138 thousand yuan, though subsidies continue to stay at 650 thousand each year. The president attributes the reason to the development of village tourism. As the local government has been promoting the village tourism since 2012, Yangshanfan Village becomes famous. Urban visitors drive to the village and purchase peaches directly from local farmers at the retail price. Consequently, less members sell their peaches to the cooperative, and therefore the performance of Yangshanfan Cooperative has decreased.

3 Evaluation

The five cases of cooperatives show substantial variety in their organization. It is therefore not surprising that questions are raised about whether Chinese cooperatives are cooperatives or not. This section will address this question from two perspectives.

3.1 ICA Principles

The introduction section has formulated the seven principles of ICA by which cooperatives are sometimes evaluated. The practice of cooperatives in China differs from these principles in three aspects. First, unlike the democratic member control principle and the requirements in Chinese Farmer Cooperative Law, the decision rights and income rights in most of the Chinese cooperatives are held by core members who have more capital, marketing capabilities, and social networks. The common members are not involved (Liang et al. 2015; Xu 2005). Additionally, most of the profits are allocated to core members (Huang and Xu 2008). Secondly, it is not easy for cooperatives in China to keep their autonomy and independence. The central and local government plays an important role in the development of Chinese

Table 6 ICA principles and Chinese cooperatives

ICA principles	Chinese cooperatives
Voluntary and open membership	Barriers for joining the membership, such as capital size, land size, or geographic locations (Lou and Kong, 2014; Yu and Han, 2013; Zhang, 2014)
Democratic member control	Many Chinese cooperatives are actually dominated by core members (Huang and Xu, 2008; Shao and Xu, 2008)
Member economic participation	Mentioned in law but limited in practice (Zhang, 2011)
Autonomy and independence	Often affected by central and/or local government (Cui, 2014; Cui and Liu 2013)
Education, training, and information	Provide agricultural technical training and market information (Han and An, 2010; Wu et al., 2016)
Cooperation among cooperatives	Government encourage this kind of cooperation (Yuan, 2008; Zhang, 2012)
Concern for community	Mentioned in law but limited in practice (Li, 2016; Yan, 2011)

cooperatives. A series of policies have been implemented since the Farmer Cooperative Law of 2007. Subsidies, tax relief, and product promotions are provided by the various governments to support cooperatives. They intend to make cooperatives competitive in the market. It is helpful for cooperatives in establishing sufficient capital, to relieve the tax burden, and to enhance products' reputation. Thereby, cooperatives are heavily influenced by the government. Thirdly, different from voluntary and open membership, there are barriers for joining the membership in Chinese cooperatives. Capital size, land size, and geographic location are factors in selecting members. These deviations from the ICA principles make scholars doubt seriously whether Chinese cooperatives can be characterized as cooperatives (Table 6).

3.2 Member-Owned, Member-Controlled, and Member-Benefitted

A governance structure can be characterized by its ownership, decision, and income rights. Dunn (1988) views a cooperative as a specific governance structure, which is characterized as a member-owned, member-controlled, and member-benefitted organization. The owners/members of a cooperative have a dual relationship with it, i.e., a transaction relationship as well as an ownership relationship. Hansmann (1996) characterizes a cooperative therefore as an organization collectively owned by its patrons who transact with it, whether as sellers or as purchasers. This distinguishes a cooperative from an investor-owned firm (IOF), where the investors have only an ownership relationship with the firm.

A distinction is often made between a cooperative firm and a cooperative association. If a cooperative is characterized as a firm owned by a society of members, then the object of study is the firm and the relationship with the (upstream

or downstream society of) members. A cooperative may also be defined as an association of farmers. The association does not have a formal connection with an adjacent stage of production. The object of study is the association. One of the functions of a cooperative association is to bargain or negotiate with parties in an adjacent stage of production for better terms of trade.

A cooperative firm and cooperative association are considered cooperatives because both are owned by a society of members. This characterization of a cooperative is already useful for the evaluation of one of the five cases. Beizhijiang vegetable cooperative is owned by parties not growing vegetables. It is therefore not a patron-owned cooperative. It is better characterized as either contract farming with the downstream party dictating the terms of trade or backward integration. Vegetable firms in China prefer to purchase products directly from farmers, because buying them from a new organization (the cooperative) may increase the organizing costs of the firm. The value of the cooperative's existence is therefore doubtful. Nevertheless, for the vegetable firm, this cooperative plays an important role in attracting stakeholders' resources. With the cooperative title, Pangu collects farmlands in the form of inviting the local small farmers to participate in the cooperative and grow vegetables which Pangu needs to exploit economies of scale. Moreover, after the cooperative was established, the leader of Pangu and Beizhijiang could obtain various subsidies specified for cooperatives and use these funds to scale-up their business. The cooperative is therefore to some extent a tool for the vegetable firm to seize abundant subsidies dedicated for cooperatives (Huang 2013).

A cooperative is often associated with an equal and fair treatment of members. A well-known, but definitely not universal, feature of cooperatives is the one-member-one-vote rule, whereas IOFs are characterized by one-share-one-vote. Bijman et al. (2012) document that various countries in Europe have a cooperative law stating explicitly the one-member-one-vote principle in their cooperative law, but there are also a substantial number of countries not stating this requirement. These latter countries highlight in their cooperative law that the crucial feature of a cooperative is to serve its membership, which may be done with, or without, the one-member-one-vote rule. An advantage of a law without this provision is that it provides the cooperative with more flexibility to accommodate a heterogeneous membership. Several cooperatives in these countries have adopted therefore proportional voting (to a limited extent). China specifies in the cooperative law a ceiling regarding the percentage of votes that can be owned by one member of a cooperative.

These observations make it less obvious to characterize the other four cases: Datong silk cooperative, Liwen bamboo cooperative, Shuangjing bamboo shoots cooperative, and Yangshanfan peach cooperative. The four cases have all concentrated ownership of the cooperative by the core members. Most of these cooperatives have the one-member-one-vote principle, but these formal decision rights seem to apply to a limited number of issues. Most of the actual decision rights seem to be delegated to one of the core members. Additionally, the cooperative's profit and decision rights are allocated to the patron-owners based on the amount of the products they trade with the firm. It entails that a large share of the revenues of these

cooperatives are allocated to core members due to the size of their resources compared to common members. These features are in line with the pattern described by Liang et al. (2015, p. 198) that "... the distribution of ownership rights, decision rights, and income rights in a farmer cooperative is quite skewed towards a small proportion of members."

One position stresses the equal control by the members of the cooperative. Fulton and Jun (2009, p. 12) state that "... the C + C + H &amp;lt;Company + Co-operative + Household&amp;gt; model involves no investment by small farmers; as a consequence they have virtually no control over the decisions made in this enterprise, even when they account for more than 95% of the members." Their conclusion is that "... the C+C+H model is not a co-operative (at least in the way co-operatives have been understood historically" (2009, p. 1).

We take a different position by highlighting the feature of ownership by patrons. Crucial in our view is that the membership is served, where the membership may be very heterogeneous. The Dutch flower cooperative Royal FloraHolland has around 4500 members and proportional voting (1–6 votes). The annual turnover in 2015 of the smallest member is E10,000, while the turnover of the largest member is E80,000,000. It involves substantial challenges to deal with this heterogeneity, but there is no doubt that the membership owns the cooperative enterprise and its infrastructure. The bylaws of the cooperative allow the membership to vote for a demutualization of the cooperative.

Chinese cooperatives are similar to cooperatives in the Western world in the sense that they are owned by a society of members. Ownership rights are held by members, where a member has an ownership and transaction relationship with the firm. This is where cooperatives in Zhejiang province are similar to cooperatives in the Western world. However, the distribution of the ownership rights, decision rights, and income rights among the members is much more skewed than in the Western world. One of the reasons is that cooperatives in China are much more recent than in the Western world. They emerge often top-down in a setting of agricultural industrialization (Fulton and Jun 2009; Liang and Hendrikse 2013), while a substantial number of cooperatives have emerged bottom-up in the West (Petruchenya and Hendrikse 2016). The initiators of the cooperatives have usually much needed resources and capabilities to organize a cooperative enterprise, and they govern their investments on the one hand by legal constructions regarding their member enterprise and on the other hand by the design of the governance structure of the cooperative enterprise. A more equal involvement of the entire membership is a huge challenge for the core members, as it is for boards of agricultural cooperatives in the West. This is most likely not only more difficult than in the West due to their recent emergence but also due to important differences in the political and economic environment.

4 Aspects of the Political and Economic Environment Facing Cooperatives

This section highlights a few aspects of the political and economic environment facing cooperatives in China. We address the farmland system, the cooperative law, the local and central government, the educational level of farmers, and the need for capital.

4.1 Farmland System

China's agricultural sector has a special system regarding the ownership of land. One feature is that the land is not owned by individual farmers, but by the village collective. The village committee, after the Chinese economic reform, granted usufruct and management rights regarding the collective lands to farmers according to the number of family members, whereas the ownership is still held by the village collective. Individual farmers can only use the land to make profit (by growing crops or renting it to other farmers), but selling the land is forbidden. Another feature is that the farmlands of household are small and fragmented. When the village collective allocates the farmland, farmlands are ranked in three or four levels according to the soil quality. Each family chooses 1–2 plots from each level and therefore has 3–6 farm plots which sum up to around 0.15 ha.

The system of land ownership has a number of effects. First, small and fragmented farmlands make it difficult to reach economies of scale, and therefore smallholders lack competitiveness in the big market. It is necessary for farmers to take collective activities to use farmland as a whole in order to achieve efficiency and access the market with low transaction cost. Second, as the collective-owned farmland is non-tradable, farms cannot be regarded as capital or investments when farmers participate in a cooperative. The result is that common members without other kind of investment are unable to have income rights and decision rights like core members. Finally, the literature regarding cooperatives has formulated the horizon problem, i.e., a member of a cooperative has an incentive to underinvest in long-term collective activities when the farmer is close to retirement. A second horizon problem seems to be present due to the land being leased from the village for a fixed period of time, often 20–30 years. Investment problems arise when the expiration of the land lease contract comes close. Investors realize that their investments belong to the village collective once the contracts expire. This results in anticipating holdup by the village collective and therefore a holdup problem in terms of underinvestment in value-creating investments. Additionally, cost is involved in renewing the land lease with the village collective.

4.2   Cooperative Law

The Chinese Cooperative Law of 2007 has defined cooperatives as democratic institutions collectively owned and controlled by members. One member, one vote is the building block of Chinese cooperatives, while proportional voting is also allowed with the ceiling of 20% of the total votes for each member. The law specifies also that at least 60% of distributable profit should be allocated based on patronage and at most 40% can be allocated based on equity capital. A survey of fruit and vegetable cooperatives in the Zhejiang province by Liang et al. (2015) reveals that the distribution of ownership rights, decision rights, and income rights in farmer cooperatives is quite skewed toward a small proportion of members. They conclude that several governance practices by cooperatives are not in line with the requirements specified by the law.

Democratic institutions develop often oligarchic tendencies. The iron law of oligarchy (Michels 1911) seems quite relevant for cooperatives in China. It states that the operation of enterprises requires the rule of an elite, i.e., core members. They are able to control who has access to information and often centralize their power successfully due to the nonparticipation and indifference of many members. This may have a strong influence on the outcome of any decisions made "democratically" by members. The development and enforcement of effective checks and balances is problematic in the top-down cooperatives in China.

4.3   Local and Central Governments

The local government is important because they own and allocate the land, which has been addressed above. The central government plays also an important role in driving and supporting the development of cooperatives. There are at least three aspects of the relationship between cooperatives and the government. First, the government regards cooperatives as an important tool for the purpose of rural economic development and village political stability (Liang and Hendrikse 2013; Xu 2014). Second, the government supports cooperatives via subsidies, tax relief, and various certifications. Subsidies are an essential capital source for cooperatives in the start-up age (Jia et al. 2012). Certifications and permissions establish products' reputation and increase cooperatives' competitiveness in the market. Third, the government tries to influence agricultural land integration, though it does not own the land. The government often persuades farmers with adjacent land to participate in the same cooperative so as to help them realize economies of scale after integrating the land.

4.4   Educational Level of Farmers

Farmers in China have usually a low educational level. According to a survey of 37 cooperatives in Zhejiang which is one of the most developed areas in China, 75.7% of the member chairpersons had middle school education and 21.6% had high school education (Liang and Hendrikse 2013). The relatively low educational level of chairpersons may make it hard to establish cooperative principles. In addition to the low educational level of CEOs in cooperatives, members are even more poorly educated. Based on the data of population census in 2010, around 40.3% of rural residents in China have primary school education or less, 48.1% of farmers in China have middle school education, and 11.6% have high school education. Hence, farmers are hardly aware of their rights of being a cooperative member, such as collective decision rights (Liang et al. 2015).

A cooperative may increase the quality level of farming for a number of reasons. Members join a cooperative primarily for economic reasons, like prices, other business terms, and transaction costs. The profitability of their individual farm household may increase due to several services provided by the cooperative, such as field services, technical services, risk management services, farm business consulting services, operating capital and facility capital financing, insurance programs, a unified brand, joint sales, and lobbying. Members pursue also noneconomic objectives, like deriving value from being a member of an association, a broader business education, leadership training, legislative influence, personal stature in the community, and a greater sense of achievement. Bringing these services to value requires the exchange of information between the members and the cooperative enterprise. This exchange is more likely to happen in cooperatives than IOFs because members own the cooperative enterprise, while they do not own the enterprise when it is an IOF (Hendrikse and Feng 2013). A cooperative may therefore take on auxiliary activities that an IOF would inefficiently forego (Feng and Hendrikse 2012).

4.5   Need for Capital

Cooperatives in China are featured by the lack of capital, which exerts a constraint on their development. This is due to a couple of reasons. First, cooperatives in China naturally lack financial capital due to farmers' shortage of financial capital. Members hardly pay, or pay a small amount of capital for obtaining the membership, except for a few core members (Liang et al. 2015). Hence, the asset capital of cooperatives is contributed mainly by a limited number of core members, which results in the lack of capital. Second, unlike most cooperatives in the Western world, cooperatives in China have difficulty in making profits. Both the limited history and the lack of professional management may make it hard for cooperatives to make profits (Xu et al. 2013). Many cooperatives therefore are dependent on

external assistance to survive, such as governmental support and investment from legal/company shareholders.

5   Conclusion

Descriptions of six cooperatives are presented to address the question whether Chinese cooperatives are different from Western cooperatives. The cases revealed that cooperatives differ drastically from cooperatives in the West. Some organizations with the label cooperative are not a cooperative according to the patron-owned definition of a cooperative. The distribution of ownership, decision, and income rights of cooperatives in China is much more skewed. This may be a response of cooperatives to the specific economic and political environment faced by them, such as the farmland system in China, the cooperative law, the financial support and intervention from the government, the low level of education of many farmers, and the need for capital.

References

Bijman J, Iliopoulos C, Poppe KJ, Gijselinckx C, Hagendorn K, Hanisch M, Hendrikse GWJ, Kühl R, Ollila P, Pyykkonen P, van der Sangen G (2012) Support for farmers' cooperatives, final report. Wageningen, Wageningen UR

Cui B (2014) Government regulation, government capture and cooperative development. J Nanjing Agric Univ (Soc Sci Ed) 5:26–33

Cui B, Liu F (2013) The improvement of government regulation under the strategy of cooperative rapid growth. Issues Agric Econ 2:49–55

Deng H, Huang J, Xu Z, Rozelle S (2010) Policy support and emerging farmer professional cooperatives in rural China. China Econ Rev 21(4):495–507

Dunn JR (1988) Basic cooperative principles and their relationship to selected practices. J Agric Coop 3:83–93

Feng L, Hendrikse GWJ (2012) Chain interdependencies, measurement problems, and efficient governance structure: cooperatives versus publicly listed firms. Eur Rev Agric Econ 39 (2):241–255

Fulton M, Jun Z (2009, March) Agricultural industrialization, new generation co-operatives and farmer co-operatives in China, University of Saskatchewan

Han G, An Y (2010) Cooperatives and agricultural technology extension in poverty areas: a view of the agricultural innovation and technology diffusion. Res Dev 2:34–40

Hansmann HB (1996) The ownership of enterprise. The Belknap Press of Harvard University Press, Cambridge

Hendrikse GWJ, Feng L (2013) Interfirm cooperatives. Chapters

Huang S, Xu X (2008) Membership heterogeneity and organizational structure of farmer specialized cooperatives. J Nanjing Agric Univ (Soc Sci Ed) 8(3):1–7

Huang Z (2013) Farmer cooperatives in China: development and diversification. Presented at EMNET, Agadir, Morocco. International cooperative alliance, 11 Dec 2016. http://ica.coop/en/whats-co-op/co-operative-identity-values-principles

ICA News (1995) Statement on the co-operative identity. No 5/6. http://www.coop.org/ica/info/enprinciples.html

Ito J, Bao Z, Su Q (2012) Distributional effects of agricultural cooperatives in China: exclusion of smallholders and potential gains of participation. Food Policy 37(6):700–709

Jia X, Huang J (2011) Contractual arrangements between farmer cooperatives and buyers in China. Food Policy 36(5):656–666

Jia X, Huang J, Zhigang X (2012) Marketing of farmer professional cooperatives in the wave of transformed agrofood markets in China. China Econ Rev 23(3):665–674

Li D (2013) Research on the factors of farmer cooperatives' participation in community building: based on planting industry cooperatives in Shaanxi Province. Master Thesis, Northwest A&F University

Liang Q, Hendrikse GWJ (2013) Core and common members in the genesis of farmer cooperatives in China. Manag Decis Econ 34:244–257

Liang Q, Hendrikse GWJ, Huang Z, Xuchu X (2015) Governance structure of chinese farmer cooperatives: evidence from Zhejiang province. Agribusiness 31(2):198–214

Lou D, Kong X (2014) Study on membership heterogeneity in farmer cooperatives: retrospect and prospect. J Huazhong Agric Univ (Soc Sci Ed) 3:75–81

Michels R (1911). 1962 Political parties

Petruchenya A, Hendrikse GWJ (2016) Collective action and member heterogeneity: bottom-up versus top-down emergence. Rotterdam School of Management, Erasmus University

Shao K, Xu X (2008) The member heterogeneity influence on governance structure of farmer cooperatives. J Northwest A&F Univ (Soc Sci Ed) 8(2):5–9

Wu B, Liu J, Xu X, Zhang Z (2016) The effect of farmers' systematization on farmers' technology adoption. J Agrotech Econ 8:25–33

Xu X (2005) Institutional analysis on famer cooperatives in China. Economic Science Press, Beijing

Xu X (2014) The government's action logic in the development of farmer cooperatives in China: based on the perspective of empower theory. Issues Agric Econ 1:19–29

Xu X, Shao K, Liang Q, Guo H, Lu J, Huang Z (2013) Entry of Chinese small farmers into big markets: from enterprise-led structures to farmer cooperatives. Chin Econ 46(1):7–19

Yan Z (2011) Impact analysis of new farmer cooperative economic organization's participation in rural governance. J Henan Norm Univ 3:017

Yang J, Huang Z, Zhang X, Reardon T (2013) The rapid rise of cross-regional agricultural mechanization services in China. Am J Agric Econ 95(5):1245–1251

Yu H, Han L (2013) A study of cooperative governance mechanism based on factor endowment difference and membership heterogeneity. J Shandong Univ (Philos Soc Sci) 2:150–154

Yuan P (2008) An exploring research on the development of farmer cooperatives association: evidence from Beijng Miyun Milk Cooperative Association. Chin Rural Econ 8:44–51

Zhang X (2011) Analysis of the benefit mechanism of farmers' specialized cooperative in Jiangsu Province. Master Thesis, Southwest University

Zhang J (2012) The path of the change of Farmer Cooperatives Association. Rural Econ 11:121–125

Zhang Y (2014) The evolution and reconstruction of cooperatives' principles. Soc Sci Hunan 2:119–123

Cooperatives in Kyrgyzstan: Findings from a Survey of Cooperatives and Users

Zvi Lerman and David Sedik

Abstract Most cooperatives in Kyrgyzstan are production cooperatives—successors of former collective farms. There are hardly any "pure" service cooperatives, although a survey conducted as part of this study reveals that production cooperatives partially fulfill the function of service cooperatives by providing farm services also to nonmembers. Most respondents highlight difficulties due to shortage of inputs and inadequate access to farm machinery, including lack of machinery leasing options. Difficulties with product sales, access to financial sources, and veterinary services were highlighted with lower frequency, but still by more than 20% of respondents. These are precisely the problem areas that service cooperatives are designed to overcome. Respondents indicate that cooperatives play a positive role in rural life: they improve service delivery to farmers and the perceived well-being is higher for cooperative members than for outsiders.

Formal cooperation as manifested in membership in cooperatives is very limited among the farmers surveyed. Informal cooperation is much more widespread, and the substantial gap between the frequency of formal and informal cooperation (8% and 22% of farmers surveyed, respectively) clearly suggests that there is a large potential for development and adoption of service cooperatives in Kyrgyzstan.

Cooperatives in Kyrgyzstan are few in number and widely scattered. More than half the respondents report that there is no cooperative in the vicinity that they can join. Other reasons for not joining a cooperative (fear of losing independence, lack of information about cooperatives) manifest lack of clear understanding of the differences between service and production cooperatives and strongly suggest

Z. Lerman (✉)
Department of Environmental Economics and Management, The Hebrew University of Jerusalem, Rehovot, Israel
e-mail: zvi.lerman@mail.huji.ac.il

D. Sedik
Regional Office for Europe and Central Asia, Food and Agriculture Organisation of the U.N. (FAO), Budapest, Hungary
e-mail: David.Sedik@fao.org

that cooperative development requires a large-scale information campaign to familiarize the rural population with the working of cooperatives.

1 Introduction

Individualization of agriculture manifested in a sweeping shift from large-scale collective farms to small family farms is the most striking change that the transition has produced in the agricultural sector of all former Soviet republics, Kyrgyzstan included (Lerman 2008; Lerman and Sedik 2009). Small farms everywhere in the world face essential constraints in their access to market services (Abele and Frohberg 2003), and Kyrgyzstan is not an exception in this regard. The main difficulties faced by smallholders include difficulties with access to sales channels for farm products, difficulties with access to supply channels for farm inputs, difficulties with purchase of farm machinery and transportation equipment, and difficulties with access to agricultural extension and market information.

Best-practice world experience suggests that farmers' service cooperatives provide the most effective way of improving the access of small farmers to market services in areas where no private intermediaries operate or where private intermediaries unfairly exploit farmers through monopolistic practices (Cobia 1989). Such cooperatives can cover the whole field-to-market value chain, including joint purchase of farm inputs, attention to water distribution and irrigation (through Water User Associations), organization of machinery pools for field work, establishment of sorting and packing facilities, transport of farm products to markets, processing, etc. They can also provide agricultural extension and market information services, as well as veterinary and artificial insemination services, all of which are essential for productivity improvement in both crop and livestock production. Recognizing these positive roles of agricultural service cooperatives for the rural population, the agricultural development strategies for Kyrgyzstan emphasize the development of service cooperatives as one of the priorities (Kyrgyzstan Strategy 2012).

There is a significant disparity in the level of development of service cooperatives between the formerly socialist countries—members in the Commonwealth of Independent States (CIS) and established market economies (Lerman and Sedik 2014). In Ukraine, only one farm in 246 is a member of a service cooperative, while in Western economies (the USA, France, the Netherlands, Spain), each farmer is a member of a service cooperative; in Ukraine and Kazakhstan, there is only one cooperative for every 6000 farms, while in France, there exists one service cooperative for every 178 farms. The development of service cooperatives in CIS is in general far behind that in the USA and Western Europe. A survey of agricultural cooperatives (FAO/REU Survey 2012) was conducted in Kyrgyzstan—one of the CIS countries—in an attempt to describe the functioning of these emergent organizational forms and explain, as far as possible, the reasons for the sluggish development of agricultural cooperation in this country.

The article starts with a brief characterization of the Western classification of cooperatives, contrasting it with the established practice in CIS. We then describe the data sources used in this article, including the official sources on agricultural cooperatives in Kyrgyzstan and the 2012 survey of a sample of agricultural cooperatives. Next, we present the functional typology of cooperatives surveyed and identify their reported service activities. Issues of taxation and financial performance of cooperatives are considered in the section that follows. The article concludes with an analysis of farmers' attitudes toward cooperation and the effect of cooperation on farmers' well-being.

2 Western Classification of Cooperatives

International Cooperative Alliance (ICA) defines a cooperative as an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (ICA 2013). These principles are fully acknowledged in Kyrgyzstan's law of cooperatives (Law 2005). A cooperative is a business-oriented legal entity, and in a certain sense, it is an analogue of a shareholder corporation. However, business corporations aim to maximize their profit, whereas cooperatives aim to maximize the benefits that members derive from their participation in cooperative activities, including lower prices paid for inputs and services and higher prices received for products. Lerman (2013) provides a systematic comparison of the attributes of cooperatives and shareholder corporations.

The Western cooperative paradigm distinguishes between *production cooperatives* and *service cooperatives*.

Production cooperatives are cooperatives in which members are jointly engaged in the production process. In agricultural production cooperatives, members jointly cultivate cooperatively held agricultural resources, such as land or farm machinery, producing a variety of farm products. Collective farms in the former Soviet Union and kibbutzim in Israel are examples of agricultural production cooperatives. Members of production cooperatives do not engage in independent farming on their land, with the possible exception of production on the family's household plot. Production cooperatives sell their output to outsiders; yet the main function of production cooperatives is to improve the well-being of their members by creating conditions for more efficient farming than what would otherwise be feasible in individual farms.

Decision makers in CIS countries often argue that by pooling members' fragmented smallholdings into large farms, production cooperatives exploit economies of scale and achieve higher efficiency. Yet economies of scale generally do not exist in primary agriculture (Binswanger et al. 1995), and agricultural production cooperatives are less efficient than individual and family farms due to agency costs and free-riding effects (Allen and Lueck 2002). As a result, production cooperatives in the world are a tiny minority among producers. According to ICA

data, production cooperatives account for less than 5% of all cooperatives in the world.

Service cooperatives, on the other hand, are the largest and most typical category of cooperatives in developed and developing countries: these are cooperatives that provide services to their members-producers, who continue to carry out all production activities independently on their own land. In contrast to the minor role of production cooperatives in market economies, service cooperatives in many countries account for a large share of transactions in the relevant economic sector. For instance, agricultural marketing, processing, and supply cooperatives are major players in markets for farm products and farm inputs in North America, Western Europe, Japan, and Southeast Asia. In the USA, agricultural cooperatives handle about 30% of farmers' total farm marketing volume and 28% of farmers' total supply purchases (Mather et al. 2004). In the European Union, the market share of agricultural cooperatives is 40% across eight product sectors, reaching a high of 57% in the dairy sector and around 40% in the fruit and vegetables, wine, and olives sectors (Bijman et al. 2012).

Service cooperatives may employ some of their members as workers, but most employees (and even most managers) are hired outsiders. Service cooperatives use members' share contributions to capital as well as borrowed funds to finance purchase of goods and services from various market sources and then resell these services to members at advantageous prices. Agricultural service cooperatives are usually subdivided into marketing cooperatives, processing cooperatives, input supply cooperatives, and farm machinery cooperatives.

Because of the prevalence of agricultural service cooperatives in the West, the term "cooperative" in market economies is automatically interpreted as a service cooperative. On the other hand, in Kyrgyzstan, as in all CIS countries, the term "cooperative" is automatically understood as a production cooperative—the model of a former *kolkhoz* or collective farm (Plunkett Foundation 1995). Although the 2005 Kyrgyzstan Law of Cooperatives attempts to characterize the differences between production and service cooperatives (Law 2005), there is much confusion among the rural population and even among policy makers about the actual nature of the two types of cooperatives: the Soviet-style production cooperative to which rural people had been exposed for decades and the Western-style service cooperative advocated by international experts.

3 Data Sources on Agricultural Cooperatives in Kyrgyzstan

Some statistics on cooperatives in Kyrgyzstan have been available from two sources: a special unit dealing with cooperative development in the Ministry of Agriculture (largely without proper budgets or strategic guidance since 2008) and National Statistics Committee (NSC) in Bishkek. MinAg reports the number of

Fig. 1 Development of
cooperatives in Kyrgyzstan
2004–2011. *Gray bars*:
registered cooperatives
from MinAg; *black bar*:
active cooperatives from
National Statistics
Committee (Kyrgyzstan in
Numbers 2012)
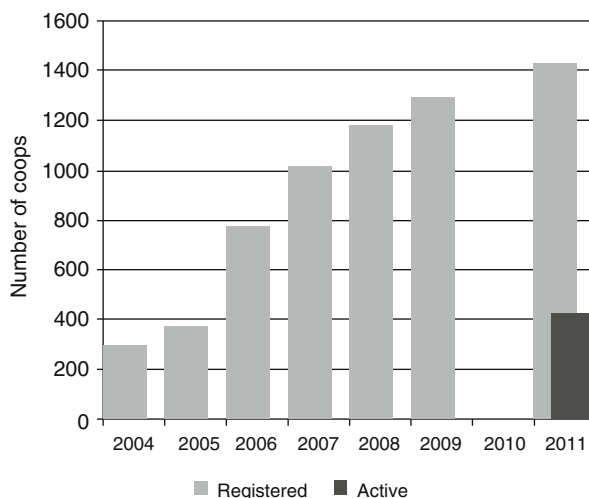
registered cooperatives, which showed impressive growth over time, rising from about 300 in 2004 to 1300 in 2009 (Fig. 1).[1] NSC, on the other hand, based its reporting on the number of *active* (operating) cooperatives. The gap between the two sources is dramatic (Fig. 1). In 2011, MinAg reported more than 1400 registered cooperatives, while according to NSC, there were just 400 active cooperatives in the country (Kyrgyzstan in Numbers 2012). It thus became apparent that more than 70% of registered cooperatives in Kyrgyzstan were inactive and existed only on paper, presumably with the intent of taking advantage of future credit or taxation benefits that might materialize through government policies (Beyshenaly and Namazova 2012).

The dominant majority of registered cooperatives in MinAg statistics are production cooperatives, not service cooperatives. In 2009, 88% of the registered cooperatives were classified as production cooperatives and only 12% were service and processing cooperatives. Unfortunately, the existing statistics are limited to the number of cooperatives: there are no data on land endowments, sales volumes, or the size of membership. Special surveys have to be conducted to elicit any functional information.

One such survey of cooperatives in Kyrgyzstan was conducted in 2012 by a local NGO with FAO funding (FAO/REU Survey 2012). The sample frame for the survey consisted of the 400 active cooperatives in the NSC database. The original objective was to survey a sample of 100 cooperatives from the NSC list, collecting information mainly on service cooperatives, with control information on some production cooperatives. This objective could not be achieved, however, because virtually no pure service cooperatives were found in the NSC database. Among

---

[1]These numbers do not include credit unions, created mainly by the Raiffeisen Foundation in Kyrgyzstan (some 300 in 2009).

400 active cooperatives in the NSC list, only 17 were identified as mixed service/production cooperatives and three as trade/service cooperatives (these three were apparently closest to pure service cooperatives). All these 20 service-oriented cooperatives were included in the survey sample, which additionally included 37 entities identified as agricultural production cooperatives for a total sample of 57 respondents. Given the composition of the NSC list, the cooperative sample after the fact was neither random nor proportional. In addition to cooperatives, the survey also covered 1000 peasant farmers randomly selected across the country, in proportion to the total number of peasant farms in each oblast. These respondents provided insights on the relations between users and cooperatives.

The sample structure is presented in Table 1. Different survey instruments were developed for cooperatives and for peasant farms. The questionnaire for cooperatives was administered to cooperative managers, whereas in peasant farms, the head of the farm, the spouse, or the eldest son was interviewed.

4 Functional Typology of Cooperatives Surveyed

Judging by their asset base and activity profile, 52 of the 57 cooperatives surveyed were in fact production cooperatives. They all reported that they cultivated some agricultural land—a clear distinguishing characteristic of a production cooperative. The land in cooperatives was typically contributed by the members, who were the source for 57% of total agricultural land in the sample; another 27% of land in cooperatives was leased from the municipality or the state. Virtually all cooperatives (51 out of 57) reported that they engaged in agricultural production—predominantly crops, with mixed crop-livestock farming in 11 of the 51 cooperatives. In other words, practically all the cooperatives selected from official registers are actually production cooperatives, with not more than 6 out of 57 cooperatives in the sample possibly qualifying as service cooperatives (these are the six without primary production activities).

Table 1 Sample of cooperatives and peasant farms in the 2012 FAO/REU Survey in Kyrgyzstan

Oblast	Cooperatives		Peasant farms	
	N	% of sample	N	% of sample
Chui	15	26.3	180	18.0
Batken	–	–	18	1.8
Issyk-Kul'	15	26.3	89	8.9
Jalal-Abad	6	10.5	285	28.5
Naryn	–	–	101	10.1
Osh	15	26.3	247	24.7
Talas	6	10.5	80	8.0
Total	57	100.0	1000	100.0

Source: FAO/REU Survey (2012)

Table 2 Services provided by cooperatives in the sample (percentage of respondents, n = 57)

Code	Category of service	For members	For nonmembers
1	Sales of farm products	70	19
2	Storage	74	23
3	Packing	52	21
4	Processing	56	18
5	Fertilizer application	67	12
6	Machinery services	65	28
7	Transportation	58	33
8	Soil melioration	42	21
9	Information	35	19
10	Veterinary	30	9
11	Marketing services	26	12
12	Purchased inputs	26	5
13	Advisory	21	11
14	Construction	19	5
	Average	46	17

Source: FAO/REU Survey (2012)

5 Service Activities of the Cooperatives

In addition to primary production, all cooperatives reported providing services to both members and nonmembers. A production cooperative, in addition to providing services to the joint production process where members work, also supplies inputs to individual production in members' private household plots and sells some of its surplus inputs to nonmembers (for a higher price). Provision of services to members and nonmembers is thus a typical feature of production cooperatives and does not necessarily identify the cooperative as a service cooperative.

Table 2 shows the percentage of cooperatives in the sample that provide various services to their members and nonmembers. The frequency of services to members is substantially higher than the frequency of services to nonmembers (46% compared with 17% averaged over the 14 service categories). The main services provided by more than 50% of cooperatives to members include marketing of farm products (sales, storage, packing, and processing), fertilizer application, mechanical field services, and transportation. Mechanical field services and transportation are also the most common services provided to nonmembers, presumably because the local production cooperative is the main source of farm machinery and vehicles in rural areas. This, combined with the relatively high percentage of cooperatives providing access to storage facilities for nonmembers, is a clear illustration of the positive role that cooperatives play in overall rural development.

A direct indication of the positive role of cooperatives in rural life is provided by the results shown in Fig. 2. Here each dot represents one of the cooperative services, such as storage of farm products, machinery services, input purchases, product

Fig. 2 Local service
sufficiency increases with
the percent of cooperatives
that deliver the service.
Source: FAO/REU Survey
(2012)
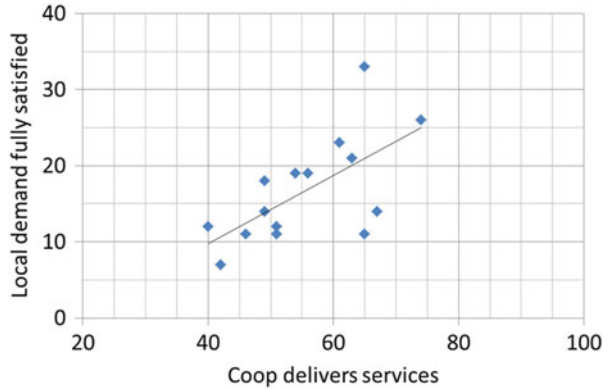
sales, and so on.[2] For each of these services, the cooperative managers were asked if
their cooperative supplied the particular service and to what extent the local
demand for the service was satisfied in their opinion (fully satisfied, partially
satisfied, not satisfied). The vertical axis in Fig. 2 plots the percentage of cases
when the demand for each service was fully satisfied; the horizontal axis is the
percentage of cases when the service was delivered by the coop. There is a clear
positive correlation between the frequency of cases when the local demand for the
service was fully satisfied and the frequency of cases when the particular service
was delivered by the coop. Service sufficiency thus clearly improves when coop-
eratives step in as service providers.

6 Taxation and Financial Performance of Cooperatives

Two-thirds of cooperatives surveyed pay taxes, with land tax figuring as the main
tax (67% of respondents). The next in importance is the obligatory social tax
proportional to salaries paid, which is reported by 40% of the cooperatives. Profit
tax and VAT are reported by very few cooperatives (17% and 2%, respectively).
This can be regarded as evidence that tax authorities generally respect the tax code
provisions explicitly exempting cooperatives from these taxes.

Taxes do not appear to be a major burden for cooperatives, as less than 10%
listed reduction of taxes among the demands for support from the government. The
main areas in which tax reductions were desired include purchase and leasing of
farm machinery (18% of respondents), construction services (17%), and sales of
farm products (16%).

---

[2]Figure 2 covers a slightly different list of services than Table 2. "Processing" (code 1 in Table 2)
is split into "livestock processing" and "crop processing" in Fig. 2, thus increasing the number of
services shown from 14 in Table 2 to 15 in Fig. 2.

More than 80% of cooperatives surveyed do not receive any support from the government, and more than 40% state that they do not require any support. Between 10 and 15% of the cooperatives expect to receive government support in the form of subsidized prices, subsidized credit, and—importantly—training.

All this can be interpreted as signs of satisfactory financial performance. Indeed, the majority of cooperatives (58%) report their financial situation as stable or profitable and only the remaining 42% are loss-making.

7   Farmers' Attitudes Toward Cooperation

Cooperation is expected to alleviate the difficulties that farmers face in their farm operations, and farmers' perception of difficulties therefore provides an indication of the need for cooperation. Most farmers reported that they faced difficulties due to shortage of inputs (fuel, fertilizer, chemicals, seeds) and inadequate access to farm machinery, including lack of machinery leasing options (Fig. 3). Other difficulties, notably difficulties with product sales, access to financial sources, and veterinary services, were highlighted with lower frequency, but still by more than 20% of respondents among the farmers surveyed. Difficulties that are routinely mentioned in various reports, such as high taxes, lack of agricultural experience, shortage of labor, and insufficient land, were reported by 10–15% of farmers surveyed and can be regarded as relatively minor. The pressing difficulties—those reported by more than 20% of respondents in Fig. 3—are precisely the problem areas that cooperatives are designed to overcome.

Two areas of pressing difficulties in Fig. 3 deserve special mention. Water shortages (reported by 40% of respondents) are an endemic problem in Kyrgyzstan. The creation of Water User Associations was expected to alleviate these difficulties, and although almost half the respondents are members in these associations, this form of cooperation according to the survey has so far failed to produce a significant effect on water shortages (30–40% complain of water shortages among both WAU members and nonmembers). Lack of state support is a general macroeconomic

Fig. 3 Most pressing difficulties faced by farmers in their operations (n = 1000). Source: FAO/REU Survey (2012)
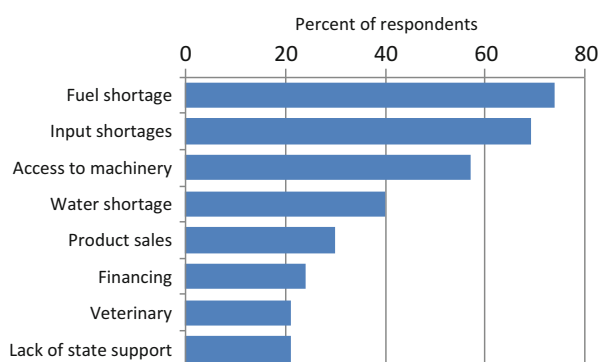
problem not necessarily within the competence of cooperatives, but an association of farmers clearly has more lobbying power in this respect than each individual farmer separately. Cooperatives may be in a better position to secure state support for their members than individuals for themselves.

Informal cooperation is quite widespread among farmers in Kyrgyzstan. Fully 22% of farmers surveyed participate informally in some joint activity with other nearby farmers (Fig. 4). Joint use of farm machinery and transport facilities is the most common, reported by 17% and 14% of respondents, respectively. There is obviously an acute need for these services that cannot be met by individual means, as cooperatives also report provision of mechanical services and transport with high frequency to both members and nonmembers (see Table 2). Joint sales of farm products, joint purchase of inputs, and joint processing are also reported, although with lower frequency of between 5 and 10% of respondents.

It is noteworthy that 10% of peasant farmers surveyed report informal cooperation in agricultural production outside a production cooperative. On the other hand, formal, organized cooperation is very limited among peasant farmers in Kyrgyzstan. Only 8% of the 1000 farmers surveyed (78 respondents) are members of an agricultural cooperative and fully 50% do not belong to any association. Fully 46% are members in Water User Associations, which presumably have established themselves as an effective institution for water management—not without large-scale promotion campaigns by the government and the World Bank.

Among the small number of farmers who are members of a formal cooperative (78 respondents), over 50% enjoy four main services: farm machinery, sales of farm products, supply of fertilizers, and quality seeds (Table 3). Furthermore, 56% of these farmers produce independently, i.e., they receive services from their cooperative without engaging in joint agricultural production. The survey thus distinguishes between two groups of cooperative members among peasant farmers: 44% are in effect members of a production cooperative and receive services as such; 56% are in effect members of a service cooperative, or rather a service component of a production cooperative—they receive services from the cooperative while continuing to produce independently. These farmers represent the nonmember contingent of service recipients shown in Table 2.

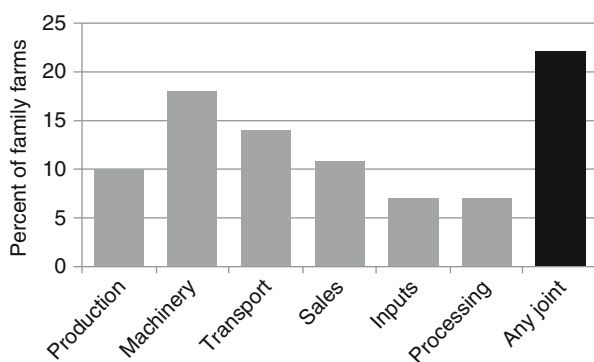Fig. 4 Informal cooperation in various activities among family farms. Source: FAO/REU Survey (2012)

Table 3 Participation of cooperative members in various services and activities (percent of respondents)

Area of cooperation	All coop members (n = 78)	Members who participate in joint production (n = 34)	Members who do not participate in joint production (n = 44)	Satisfaction rating among those using the activity
Joint production	44	100	0	59
Machinery for field work	59	85	39	61
Product sales	54	79	34	64
Seed supply	55	88	30	67
Fertilizer/ chemicals supply	54	88	27	62
Agricultural processing	33	56	16	58
Animal feed	37	65	16	55
Average satisfaction rating				61

Source: FAO/REU Survey (2012)

Members in service cooperatives (i.e., those who do not participate in joint production) receive basically the same services as members in production cooperatives. However, the frequency of these services for farmers who are only members of the service cooperative (i.e., do not participate in joint production) is lower than the frequency for those who participate in joint production, although the relative ranking is the same. In other words, farm machinery, sales of farm products, supply of fertilizers, and quality seeds are the most frequently enjoyed services for both groups of cooperative members.

Cooperative members are generally satisfied with the services they receive from the cooperative: on average, over 60% of members who actually use the various services report that they are satisfied.

The substantial gap between the frequency of formal and informal cooperation (8% and 22% of farmers, respectively) clearly suggests that there is a large potential for development and adoption of service cooperatives in Kyrgyzstan. Why are farmers reluctant to join a cooperative? The main reason cited by the respondents is that there is no cooperative in the vicinity that they can join (55%; see Fig. 5). The second most frequently cited reason is that the respondents wish to preserve their independence (42%). This probably reflects the ingrained influence of Soviet-style production cooperatives, which generally did not observe the basic principles of voluntary participation and democratic governance. Loss of independence does not apply to service cooperatives, and this reason is clearly a facet of the lack of clear

Fig. 5 Reasons for not
becoming a cooperative
member. Source: FAO/REU
Survey (2012)

Percent of respondents

Fig. 5 Reasons for not becoming a cooperative member. Source: FAO/REU Survey (2012)
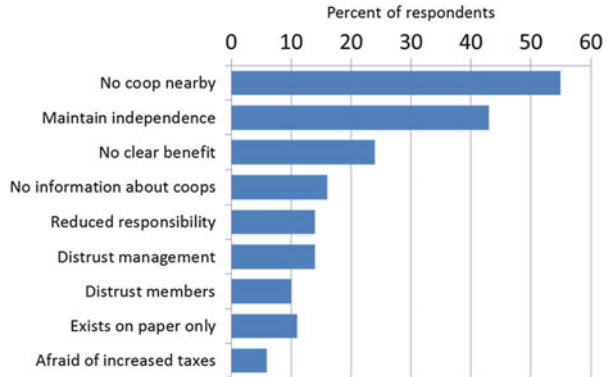
understanding of the differences between service and production cooperatives. About 15% of respondents attribute their not joining a cooperative to insufficiency of information about cooperatives, which strongly suggests that cooperative development requires a large-scale information campaign to familiarize the rural population with the working of cooperatives. The universal issue of lack of trust in managers and other members is cited by more than 10% of respondents. Finally, the danger of increased taxation for cooperative members does not seem to be a problem: only 6% of respondents raise this issue, probably because farmers simply do not understand the taxation issues involved (Lerman 2013; Lerman and Sedik 2014). This finding for potential members is consistent with the generally relaxed attitude of cooperative managers toward taxation (see above, *Taxation and Financial Performance of Cooperatives*).

8   Effect of Cooperation on Farmers' Well-Being

Farmers' well-being was explored in the survey through two qualitative questions. One question probed the absolute perceived level of well-being by asking "how do you rate your family's financial situation," and another question probed the relative perceived well-being by asking "how would you assess your family's financial situation relative to other families in the village."

The respondents classified their absolute perceived well-being into five categories:

1—family income is hardly sufficient to buy food.
2—family income is sufficient for basic necessities.
3—family income is sufficient to buy also clothes and footwear.
4—the family can satisfy all its daily needs, but cannot purchase durables.
5—we do not experience any financial difficulties.

For purposes of statistical analysis, the five categories were aggregated into two levels: categories 1, 2, and 3 were jointly characterized as "basic level of well-being," and categories 4 and 5 were grouped into "comfortable level of well-being."

Survey results indicate that cooperation—either informal or formal—has a strong positive effect on family well-being. Table 4 summarizes the findings. Among farmers who cooperate informally with other farmers, fully 68% perceive their well-being level as comfortable, compared with just 54% among those who do not cooperate with other farmers. Similarly, among farmers who participate in formal cooperation as members of an agricultural cooperative, 74% perceive their well-being level as comfortable, compared with just 55% for those who are not cooperative members. In both cases, the difference is statistically significant by the chi-square test. When formal cooperation is further broken down into membership in a production cooperative (engaging in joint production) and membership in a service cooperative (receiving services without participation in joint production), members in production cooperatives appear to have a slight edge in perceived well-being compared to members in service cooperatives (Table 4), but the difference is not statistically significant.

The question that probed the relative well-being level by asking "how would you assess your family's financial situation relative to other families in the village" received the following answers:

1—better than the rest
2—worse than the rest
3—same as the rest

Here again cooperation has a strong positive effect on relative well-being, but this is observed only for formal cooperation through membership in a cooperative, and no such effect is observed for informal cooperation. Furthermore, the advantage of membership in production cooperatives compared to service cooperatives is expressed more strongly than in the previous case, and the difference between relative well-being of members in production cooperatives and service cooperatives is now statistically significant. The findings are summarized in Table 5.

9   Conclusions

Kyrgyzstan is one of the former Soviet republics where agriculture suffered critical difficulties due to the breakdown of the established supply and marketing systems during the transition. It should therefore welcome the development of agricultural service cooperatives as a means of correcting the widespread market-access constraints.

Yet most registered agricultural cooperatives in Kyrgyzstan appear to be production cooperatives—successors of former collective farms. They mainly engage in primary production on collectively held land and provide services to nonmembers merely as a by-product of their joint production activities. The rural population

Table 4 The effect of cooperation (informal and formal) on absolute perceived well-being

Well-being level	Informal cooperation		Formal cooperation			
	No informal cooperation (n = 758)	Informal cooperation (n = 195)	Not cooperative member (n = 876)	Cooperative member (n = 77)	Member in production cooperative (n = 33)	Member in service cooperative (n = 44)
Basic	46[a]	32[a]	45[b]	26[b]	18	32
Comfortable	54[a]	68[a]	55[b]	74[b]	82	68
Total	100	100	100	100	100	100

Source: Authors' analysis based on FAO survey (2012)

[a, b] Differences between categories statistically significant by chi-square test ($p = 0.10$)

Table 5 The effect of cooperation (informal and formal) on absolute perceived well-being

	Informal cooperation		Formal cooperation			
Relative well-being	No informal cooperation (n = 766)	Informal cooperation (n = 196)	Not cooperative member (n = 888)	Cooperative member (n = 74)	Member in production cooperative (n = 31)	Member in service cooperative (n = 43)
Better than the rest	22	21	20[a]	36[a]	48[b]	28[b]
Same as the rest	65	65	66[a]	54[a]	52[b]	72[b]
Worse than the rest	13	15	14[a]	9[a]		
Total	100	100	100	100	100	100

Source: Authors' analysis based on FAO survey (2012)

[a, b]Differences between categories statistically significant by chi-square test ($p = 0.10$)

is not clear on the fundamental differences between production and service cooperatives and the benefits that can be derived from membership in a proper service cooperative. Although creation of cooperatives is one of the strategic priorities for agriculture declared by the Government of Kyrgyzstan, strategy documents do not distinguish with sufficient clarity between the two types of cooperatives, which only exacerbates the confusion. This situation suggests the need for a broad public awareness campaign to familiarize the rural population with the working and benefits of service cooperatives, thus encouraging bottom-up development of service cooperatives.

Cooperatives in Kyrgyzstan are few in number and widely scattered. More than half the respondents in the sample of peasant farmers in the FAO/REU 2012 survey report that there is no cooperative in the vicinity that they can join. Other reasons for not joining a cooperative, e.g., fear of losing independence and lack of information about cooperatives, manifest lack of clear understanding of the differences between service and production cooperatives.

Formal cooperation as manifested in membership in cooperatives is very limited among the farmers surveyed. Informal cooperation is much more widespread, and the substantial gap between the frequency of formal and informal cooperation (8% and 22% of farmers surveyed, respectively) clearly suggests that there is a large potential for development and adoption of service cooperatives in Kyrgyzstan. Furthermore, most farmers reported that they faced difficulties due to shortage of inputs (fuel, fertilizer, chemicals, seeds) and inadequate access to farm machinery, including lack of machinery leasing options. Other difficulties, notably difficulties with product sales, access to financial sources, and veterinary services, were highlighted with lower frequency, but still by more than 20% of respondents. These pressing difficulties reported by more than 20% of respondents are precisely the problem areas that cooperatives are designed to overcome.

Difficulties that are routinely mentioned in various reports, such as high taxes, lack of agricultural experience, shortage of labor, and insufficient land were reported by 10–15% of the respondents and can be regarded as relatively minor. Taxes are not perceived as a major issue by either cooperative managers or farmers. Tax code provisions exempting cooperatives from profit tax and VAT are generally respected.

Government support plays a minor role in agriculture: most cooperative managers and farmers surveyed report that they do not receive any support. This, however, has not led to a major outcry with demands for more government support in the survey. This probably suggests that information and training are more important than direct financial support for cooperative development.

The survey clearly shows that cooperatives play a positive role in rural life. Thus, sufficiency of services in any given area improves when cooperatives step in to provide the services and farmers' perceived well-being is higher for cooperative members than for outsiders.

References

Abele S, Frohberg K (eds) (2003) Subsistence agriculture in central and eastern Europe: how to break the vicious circle. Studies on the Agricultural and Food Sector in Central and Eastern Europe Vol. 22. IAMO, Halle

Allen D, Lueck D (2002) The nature of the farm: contracts, risk, and organization in agriculture. MIT Press, Cambridge

Beyshenaly N, Namazova B (2012) Development of agricultural cooperatives in the Kyrgyz Republic [in Russian]. IAIR – Institute for Analysis and Development Initiatives, Bishkek

Bijman J, Iliopoulos C, Poppe KJ, Gijselinckx C, Hagedorn K, Hanisch M, Hendrikse GWJ, Kuhl R, Ollila P, Pyykkonen P, Sangen GVD (2012) Support for farmers' cooperatives: final report. Wageningen UR, Wageningen

Binswanger H, Deininger K, Feder G (1995) Chapter 42: Power, distortion, revolt and reform in agricultural land relations. In: Behrman J, Srinivasan TN (eds) Handbook of development economics, vol III. Elsevier Science, Amsterdam, pp 2659–2772

Cobia D (ed) (1989) Cooperatives in agriculture. Prentice Hall, Englewood Cliffs

FAO/REU Survey (2012) Survey of registered cooperatives and peasant farms across Kyrgyzstan, implemented by El-Pikir. Bishkek

ICA (2013) Co-operative identity, values & principles. International Cooperative Alliance. http://ica.coop/en/what-co-op/co-operative-identity-values-principles

Kyrgyzstan in Numbers (2012) Kyrgyzstan v tsifrakh 2007-2001 [in Russian]. National Statistics Committee, Bishkek

Kyrgyzstan Strategy (2012) Agro-business development strategy for Kyrgyzstan 2013-2020 [in -Russian]. Prepared with FAO Technical Assistance. Ministry of Agriculture and Melioration of the Republic of Kyrgyzstan, Bishkek

Law (2005) Law of the Kyrgyz Republic on cooperatives, No. 37. Bishkek

Lerman Z (2008) Agricultural recovery in the former Soviet Union: an overview of 15 years of land reform and farm restructuring. Post-Communist Econ 20(4):391–412

Lerman Z (2013) Cooperative development in Central Asia. FAO/REU Policy Study No. 2013-4

Lerman Z, Sedik D (2009) Agricultural recovery and individual land tenure: lessons from Central Asia. FAO/REU Policy Study No. 2009-3

Lerman Z, Sedik D (2014) Agricultural cooperatives in Eurasia. FAO/REU Policy Study No. 2014-3

Mather JW, DeVille KC, Gessner AL, Adams CC (2004) Farm marketing, supply and service cooperative historical statistics. USDA, Cooperative Information Report 1, Washington, DC

Plunkett Foundation (1995) Review of 1994 activities. Plunkett Foundation, Oxford

Part III
Strategic Alliances

Alliance Portfolio Management: A Model Based on Dynamic Capabilities

Raymond Guillouzo

Abstract Alliances established by firms are increasing since three decades and these firms have to manage an important alliance portfolio. Researches have demonstrated that alliances contribute to the improvement of the firm's performance via savings in coordination costs, access to new resources and competencies, the development of new activities and new markets, or the reinforcement of the competitive position. The increasing contribution of the alliances to the turnover and the organization of the activities of the firm make the portfolio as a key strategic asset. Our research question relates to the definition of an integrating model which takes the multidimensional nature of alliance portfolio management into consideration. In an attempt to improve it, our objective is to suggest a modeling of the portfolio management based on recognized and complementary corpuses: the resource-based approach and the evolutionary model. Specifically, we develop an emerging approach based on the concept of dynamic capabilities (Teece et al., Strateg Manag J 18:509–533, 1997) using business intelligence, networking, alliance management, and absorptive capabilities. The creation of an "alliance unit" plays a crucial role in the development of the alliance portfolio management capabilities. This model aims to optimize the composition and the management of the alliance portfolio to improve the value creation linked to the alliance strategy and the firm performance so that it obtains a specific advantage.

1 Introduction

The increase in alliances since 1980 has generated an extensive literature which may be broken down into three important phases:

– During the first decade (1980–1990), the studies mainly focus on the theoretical framework (transaction costs theory, resource-based approach, etc.) and phenomenological analysis (sectoral, typological, etc.).

R. Guillouzo (✉)
CIAPHS, University of Rennes 2, Rennes, France

55 Ave Flamboyant, District of Black River, Cascavelle, Mauritius
e-mail: raymond.guillouzo@uhb.fr

– The second decade (1990–2000) deals with issues regarding the management and control of the alliances, relating to variables such as trust, organizational learning, performance, etc.
– Since 2000, many studies develop an approach based on the concept of alliance portfolio and its management becomes a priority.

This paper is written in accordance with this recent trend which aims at going beyond the framework of the usual alliance to look at alliance strategy as a whole. While the "why" question has been widely discussed, the question of "how" to manage an alliance portfolio is barely broached except in relation to recommendations in relating to organizational and instrumental arrangements.

Our research question relates to the definition of an integrating model which takes the multidimensional nature of alliance portfolio management into consideration. In an attempt to improve it, our objective is to suggest a modeling of the portfolio management based on recognized and complementary corpuses: the resource-based approach and the evolutionary model. Specifically, we develop an emerging approach based on the concept of dynamic capabilities (Teece et al. 1997) using business intelligence, networking, alliance management, and absorptive capabilities directed by a specific structure, the alliance unit.

It must be underlined that the approach followed here is based on a review of academic literature and is therefore in accordance with a deductive approach which has not been empirically validated. It is meant to trigger a research trend on the methodology of an efficient alliance portfolio management.

Firstly, the concept of alliance portfolio is defined. Then, a theoretical framework for the analysis of portfolio management is suggested to identify the variables and stakes of alliance portfolio management, based on a review of the literature (Sect. 1).

Secondly, a modeling of alliance portfolio management is suggested based on the development of dynamic capabilities as defined by Teece et al. (1997). Having specific capabilities would enable the firm to benefit from a competitive advantage, source of partnership annuity (Sect. 2).

2   The Basis of Alliance Portfolio Management

Authors who were interested in interfirm cooperation and who use the concept of portfolio sometimes disagree on its components. Thus, a specific delimitation of its boundaries is a prerequisite (Sect. 2.1) before demonstrating the benefits of the dynamic capabilities model (Sect. 2.2) and suggesting an analysis of the main components of alliance portfolio management (Sect. 2.3).

2.1 The Alliance Portfolio: A Concept Requiring Specification

While the concept of alliance portfolio is increasingly being used in academic literature, few authors have endeavored to define this concept with precision. The term portfolio is generally seen as obvious, in a similar fashion as the investment portfolios that Markowitz (1952) popularized in his analysis of risk management under uncertainty. It is however important to specify its boundaries in order to clearly distinguish it from the concept of alliance network.

Indeed, the concept of alliance network is widely developed, and some authors even go as far as to use the terms alliance "network" and "portfolio" alternately. Using a more restrictive approach of the reticular structure, based on the work of Gomes Casseres (1994) and Geurts and Van der Zee (2001), we define the alliance network as *a subgroup of interconnected firms, directly or indirectly associated via agreements and belonging to the same industry or connected industries*. These players have a specific common objective: to offer a service together or the standardization a technology, for example. In practice, the management of a network is often carried out by a dominant firm (or a limited number of leader firms), and this structure competes with other networks or isolated firms. Thus, the examination of the alliance portfolio of a firm often reveals its link with several networks. Consequently, we can consider that certain recommendations made by authors who have worked on alliance network management may also apply to alliance portfolio management.

Some approaches to alliance portfolio are too restrictive, like that of Doz and Hamel (1998) who define alliance portfolio as "all the distinct bilateral alliances in which a firm is involved." By including only dyadic agreements, these two authors implicitly deny interactions between some alliances. For example, this definition excludes multilateral alliances like Airbus which they refer to as "alliance constellation." This is also the case for Reuer and Ragozzino (2006) who only include international joint ventures.

In contrast, other definitions are too extensive when they include "any strategic alliance, whether active or closed" (Wassmer 2010) for, only the alliances in progress are components of the portfolio.

Therefore, we define the alliance portfolio as "all the alliances contracted by the same firm, in which it is directly involved at a given time, notwithstanding the legal framework, the function concerned and the number of partners" (Blanchot and Guillouzo 2009).

Until the beginning of 2000, the alliance portfolio was only referred to during the study of the alliance policy of a given firm or for sectoral analysis. The awareness of the necessity to adopt an integrated approach to the alliance practices of a firm is a recent development as can be seen in Anglo-Saxon publications dealing with alliance portfolio and its management.

2.2   The Benefits of the Dynamic Capabilities Model

The approach used here refers to the resource-based view initiated by Penrose (1959) and popularized by the works of Wernerfelt (1984) and Barney (1991). This model states that the success of a firm depends on its possession of resources which are rare and difficult to duplicate. It is thus in opposition with Porter's model based on competitive forces (1980). To complement it, we also use the evolutionary approach (Dosi 1982; Nelson and Winter 1982) which uses very close foundations and develops the concepts of trajectory and path dependency to explain different spatiotemporal paths of the firms.

The first developments focused on specifying the concept of resources and isolating some components like competencies and capabilities. A capability is defined by Makadok (2001) as a specific, nontransferable resource, integrated in the organization, which improves the productivity of the other resources possessed by the firm.

One criticism of the resource-based approach is the relative static nature of the resources involved in contrast to the dynamic nature of the phenomenon under study. Thus, the concept of dynamic capabilities developed by Teece et al. (1997), based on an evolutionary view of resources, helps to overcome this drawback. Teece et al. define dynamic capabilities as the ability of a firm to integrate, produce, and reorganize internal and external competencies to rapidly adapt to changes in the environment. These are organizational capabilities and they are, by nature, internal, but they can also be external as is the case for alliances which extend the boundaries of the firm and draw us into an interorganizational relationship.

Several authors have attempted to define the concept of management capability of an alliance portfolio. Rothaermel and Deeds (2006) define "the alliance management capability" as the capacity of a firm to efficiently manage several alliances. On their part, Heimericks and Duysters (2007) see "the alliance portfolio capability" as the capacity of a firm to capture, share, distribute, and apply knowledge pertaining to alliance management.

We consider these approaches as being too restrictive for they do not take into consideration the objective of portfolio's optimization via the acquisition of new opportunities. Also, the mechanism that governs portfolio management is not explained fully in such models.

2.3   Determining Factors and Stakes of Alliance Portfolio Management

The different publications show that an interest in alliance portfolio management entails questioning several parameters. An overview of these parameters, in the light of the capabilities model, is provided below.

The first parameter relates to the *number of partners* and the *reassertion of connections*. Some authors, who, namely, refer to the social network theory, have demonstrated that the repetition of the connections with the same partner reinforces mutual trust (Gulati 1998) or the relational capital (Kale et al. 2000) and that these agreements are less costly to manage than agreements with new partners (Park and Kim 1997). The reassertion of connections results in savings in negotiation, coordination, and control costs. It also helps in creating a more appropriate context for a warm and interactive relationship that can help to overcome some forms of resistance and to improve the dissemination of information and know-how.

However, it remains the case that the reassertion of alliances with identical partners can limit access to new knowledge and amplify some common difficulties and failures. Firstly, the firm limits its learning and benchmarking opportunities, by limiting his number of partners. By considering the firm as a set of unique resources and competencies (Barney 1991), any new partner represents a potential source for the enrichment of know-how and knowledge of the firm via organizational learning. In addition, a true dependence can arise between partners connected by several consecutive alliances and their flexibility can consequently be limited. The multiplication of agreements with the same partner increases the risk associated to the possession of an alliance portfolio: a conflict arising in one alliance can impact on all the agreements made with the same associate, as was the case for the agreements signed between IBM and Apple in 1991 (Guillouzo 1996). Relying on statistical tests (Goerzen 2007) demonstrates that repeated connections with the same partner clearly have negative effects under technological uncertainty.

Thus, the identification of potential partners possessing the resources and competencies required is connected to the possession of business intelligence capabilities (Duysters et al. 1999), while the location and gathering of information on these partners depend upon the networking capacities of the firm (Gulati 1995).

A second parameter relates to the *size of the portfolio*, that is, the number of agreements. Researches carried out since 1980, whether theoretically or empirically, have demonstrated that alliances contribute to the improvement of the firm's performance via savings in coordination costs, access to new resources and competencies, the development of new activities and new markets, or the reinforcement of the competitive position (Guillouzo 1996). The various benefits seem to confirm the advantages of an increase in the number of agreements, especially considering that the consecutive involvement of the firm in agreements contributes to the development of an alliance management capability which acts as a leverage effect to improve the performance of future agreements (Dyer et al. 2001). However, the expansion of portfolio's size has its limits. Referring particularly to the high-technology industries, Rothaermel and Deeds (2006) demonstrate that too many alliances may have negative effects. They establish an inverted U-shaped curve relationship between the number of alliances in R&D and the development of new products, irrespective of the agreement type. The breaking point of the curve and the emergence of a decreasing usefulness are directly linked to the limits of the firm in terms of alliance portfolio management capability. Another recent empirical study carried out by Oerlemans et al. (2013) shows that the negative effects of high

levels of alliance portfolio diversity can be turned in positive effects on innovation outcomes by the use of management technology tools.

A third parameter relates to the *appropriation of the results* of each alliance for the improvement of the firm's performance. This appropriation relies on two aspects: the assimilation of innovating technological resources and the acquisition of new managerial and organizational competencies. As pointed out in the resource-based model (Wernerfelt 1984; Barney 1991), the acquisition of new resources and competencies is a dominant objective of alliances. In fact, it is now generally accepted that the partnerships with the suppliers and the customers, as well as horizontal integration, may be an important source of knowledge (Keil 2000).

However, Dyer and Singh (1998) demonstrate that the firms are not equal in their ability to effectively assimilate the knowledge possessed by partners. Thus, some result transfers of a joint R&D failed due to insufficient internal expertise with regard to R&D (Mowery 1983).

On their part, Cohen and Levinthal (1990) argue that the absorption of new knowledge requires the initial endowment of knowledge close to the knowledge desired. The ability of the firm to evaluate, assimilate, and apply knowledge from external partners is connected to its absorptive capacity, which includes both its capacity to learn and to use the relevant results. The fourth parameter relates to the opportunity of a *structure dedicated* to alliance management. Many firms such as Eli Lilly (Rothaermel and Deeds 2006), Philips, Hewlett-Packard, Citicorp, or Oracle (Borker et al. 2004) have created a structure dedicated to alliance portfolio management. In practice, this service is sometimes associated to the marketing department (in the case of some software editors) or to the R&D department (in the case of some pharmaceutical companies), but a study carried out with 150 groups shows that this organizational unit is most often associated to the strategy department (de Man and Duysters 2002). This attachment confirms the key role of the alliance portfolio in the strategic management of firms. If the correlation between the existence of a structure and the size of the firm (or of its portfolio) is not clearly established, the large firms have ventured extensively on this path (Hoffmann 2005), while the literature available shows evidence of a large variety of instrumental and organizational units set up in firms (Blanchot and Guillouzo 2012), to encourage and share the competencies and experience acquired. Results from the data analysis of 144 top Spanish companies show that relational governance and portfolio coordination exert significant influence on the alliance portfolio performance (Castro and Roldan 2015).

In summary, previous alliance portfolio management literature has shown that it is beneficial for organizations to have an alliance function and/or a portfolio manager in charge of alliance portfolio management (Oerlemans et al. 2013) and the questions raised mainly relate to the most appropriate organizational structure.

This literature review enables us to note the wide range of works dedicated to alliance portfolio management. However, it must be noted that, while structures, processes, and tools are recommended, the studies found are still limited in scope and do not offer a global view of portfolio management. Although existing studies on alliance portfolio management mainly focus on alliance experience and alliance

portfolio management best practices, they remain silent on how firms structurally design their portfolio management system (Neyens and Faems 2013).

Overall, we identify four capabilities which may contribute to an efficient management of the portfolio, and we recognize that a dedicated structure facilitates learning as well as shares experience and competencies.

3 Proposition of an Emerging Model for the Management of an Alliance Portfolio, based on Dynamic Capabilities

The articles studied in the previous section confirm the relevance of alliance portfolio management. They consider the creation of organizational and instrumental units and, in some cases, highlight the benefits of portfolio management in terms of value creation and performance. However, the available literature does not suggest the modeling of portfolio management using a dynamic approach.

In this second section, our objective is to try to define a portfolio management approach for optimization purposes. The emergent model suggested is based on the development of dynamic capabilities (Sect. 3.1), and the setting up of a structure dedicated to alliances (Sect. 3.2). The specific nature of the alliance portfolio management capabilities is to provide the firm with a competitive advantage (Sect. 3.3).

3.1 The Creation of Dynamic Capabilities: Source of Optimization of the Alliance Portfolio Management

Relying on the interdependent components of the alliance portfolio, we use a systemic approach of alliance portfolio management which requires four main categories of capabilities joining and complementing each other.

3.1.1 The Development of Business Intelligence Capabilities

The optimal enrichment of the alliance portfolio via the grasp of new opportunities is linked to *the relevance of different information provided by the business intelligence system*, about potential partners and/or alliances linked by competitors. However, while the role of technological intelligence and competitive intelligence is widely analyzed in the literature, the specific nature of the partnership intelligence is barely broached.

The objective of a business intelligence system focused on the alliances contracted and the partners involved is to provide a synoptic view of the alliance strategies used in a given sector. As noted by Duysters et al. (1999), the highest

performing firms set up "business intelligence" units to ensure that new developments are identified. The partnership intelligence completes the technological intelligence which aims at following various evolutions which concern the firm's business activities, identifying the emerging or embryonic technologies developed beyond its frontiers, and at detecting the technological opportunities.

We consider a partnership intelligence which is not limited to a search for information on the firm's partners only but explores all the alliances contracted at the sector level. The partnership intelligence must not only provide information on the web of connections made with other firms by the firm's partners under consideration but should also allow the reorganization of the alliance portfolio of the main players of the industry. The objective is to establish a true cartography of the partnerships contracted in the main fields of activity of the firm and evaluate the alliance portfolio of each competitor. This knowledge of the competitors' alliance portfolios then allows for a benchmarking approach.

The grasp of opportunities and the avoidance of association with potential partners seemingly unreliable thus depend on partnership intelligence capabilities. Moreover, contact with potential partners is also linked to the firm's ability to create social ties.

3.1.2 The Development of Networking Capabilities

The ability of a firm and its members *to create interpersonal or interorganizational social ties* is a source of opportunities for cooperation. This statement is based on the social network theory initiated by some sociologists (Granovetter 1973) and the possession of a wide and sustainable relationship network being seen as part of the social capital.

First considered at an interpersonal level, this approach has been widely developed and extended to include interorganizational relationships. Granovetter's theory (1973) on the strength of the "weak ties" and that of the "structural holes" (Burt 1992), for example, demonstrates how the structuring of a network and the key player's positioning within this network can provide the latter with competitive advantages.

As highlighted by Meschi (2006), the interorganizational network is seen as both an internal market of partners and a set of embedded interorganizational connections. As an internal market, the network enables its members to create new links within it. The network is thus a dynamic entity which evolves due to the development and the reorganization of the connections between the same members. As a set of embedded connections, the network offers a unique window on the resources, the objectives, and the behavior of one and all to each of its members. By following this line of reasoning, Gulati (1995) has demonstrated that if two firms have a partner in common, this context encourages the signature of an alliance between these two firms.

As soon as the *ad hoc* partner is contacted, the question of alliance management is raised. This issue is widely discussed in the literature.

3.1.3   The Development of Alliance Management Capabilities

The management of an alliance refers to its control. Controlling an alliance entails the regular monitoring and adjustment of its attributes in view of modifying the undesirable perceptions and behavior. The creators and the controllers of an alliance can activate different managerial leverages in view of improving its performance. The processing of information and the modes of communication, the decision processes, the conflict resolution mechanisms, the resources, and incentive distribution systems are particularly important elements as they influence mental states and behaviors. These leverages can be mobilized to manage the relationship between the partners and the common teams and/or the joint entities set up (Blanchot and Guillouzo 2011).

In this sense, the alliance management capability, understood as the capability to control an alliance individually, is only a component of the management capability of an alliance portfolio.

The consecutive involvements of the firm in various alliances contribute to the creation of an alliance management capability, which acts as leverage to improve the performances of future agreements (Dyer and Singh 1998). These capabilities are mainly analyzed at the level of the follow-up and the progress acquired of the cooperation. They are based on the accumulated experience and know-how, and they are mostly derived from implicit knowledge that is unique and difficult to duplicate.

Acquiring alliance management capabilities is crucial to limit the failure rate of agreements, but the success and the performance of an alliance also depend on the ability of the firm to acquire new knowledge and know-how.

3.1.4   The Development of Absorptive Capabilities

As highlighted by Mowery (1983), as well as Cohen and Levinthal (1990), the firms which have their own internal R&D unit benefit from a context more inclined to integrate information and grasp opportunities coming from the outside. Indeed, the technological innovation initiated and developed outside can be fully assimilated and transformed into economical innovation only under certain conditions. One of the main conditions is the firm's possession of an absorptive capability in order to be able to assimilate new knowledge.

However, it seems necessary to go beyond R&D to also consider the spread of positive externalities (distribution of spillovers; Almedia and Kogut 1999). Indeed, the results of the cooperation are not limited to the innovations developed outside the firm but also include information on the production processes or commercial data. The knowledge spillovers represent all information gathered from a partner, resulting from interactions between the allies. The quality of the inter- and intraorganizational information transfer processes determines the proper internalization of these spillovers.

The variety of the exogenous sources of innovation, knowledge, and information confirms the need for the development of absorptive capabilities able to encourage the acquisition of knowledge and enrich all the functions of the organization. As highlighted by Nooteboom (2004), improved absorptive capacities enable to bridge some cognitive distance and collaborate with organizations which are cognitively quite remote.

These four capacities are thus components of the portfolio alliance management capabilities. They are interrelated in a systemic framework.

3.2 A Dedicated Structure as Catalyst for the Alliance Portfolio Management Capabilities

The development and articulation of the capabilities do not take place spontaneously; they require a structure which is able to mobilize them and direct them, as soon as they are generated by the different functions of the firm.

The aim of an integrated approach is to increase the value of all the alliances. This becomes the main concern of portfolio management. It is based on the coordination of all the components of the firm which participate at different levels in the organization and the setup of cooperation practices. The importance and the diversity of the tasks which must be carried out confirm the need for the creation of a specific structure, mostly in charge of:

– Capitalizing on the experience acquired in the negotiation and the follow-up of the different types of agreements contracted
– Helping in the proper progress of the ongoing agreements and the realization of new projects
– Initiating new directions and ensuring the optimization of the alliance portfolio

A governance structure for the alliance portfolio seems to be essential to encourage cooperation initiatives, supervise the alliances, solve potential conflicts of interest between the different parties involved, and ensure the cohesion of the alliance strategy. The "alliance unit" plays a crucial role in the development of the alliance portfolio management capabilities. This unit is both connected to top management, which directs and controls the alliance strategy, and the operational divisions for a decentralized management of each agreement. It must also suggest relevant processes for negotiation, follow-up, and cessation of cooperation, develop evaluation and training methods, create analysis tools and grids, etc.

Overall, for a more effective management of its alliance portfolio (cf. Fig. 1), the firm will attempt to develop the capacities discussed, so as to better:

– Identify new opportunities (business intelligence capabilities)
– Contact and gather information on potential partners (network capabilities)
– Manage each of the alliances (alliance management capabilities)
– Integrate new resources and competencies (absorptive capabilities)

Fig. 1 Modeling of the management of an alliance portfolio
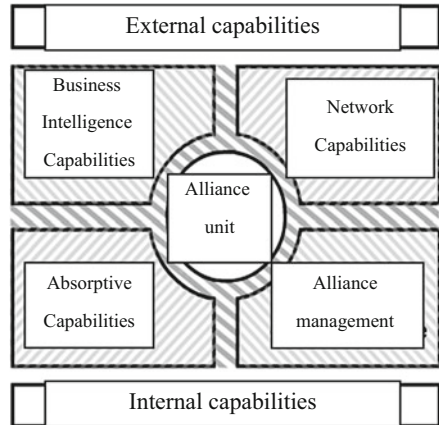
This active search for capability organization will only take place if initiated by the alliance unit which will conduct the initiatives of various components of the firm while providing them with its know-how and experience (tools, procedures, etc.).

3.3 The Portfolio Management Capabilities: Source of a Competitive Advantage

In this last point, we analyze how the accumulation of alliance portfolio management capabilities leads to the creation of a rare resource, generating a lasting competitive advantage. Consequently, we focus on some specificities discussed in the resource-based approach. Indeed, the "evolutionary" model specifies that the tacit characteristic of resources, their causal ambiguity, and their complexity hinder organizational learning and, consequently, this becomes a barrier to imitation by competition (Barney 1991).

The tacit nature of the management capabilities of an alliance portfolio lies in their specificity. They are time-consuming to create, linked to accumulated experience and embedded in the organization, consisting mostly of knowledge and know-how that cannot be codified. As a result, they are difficult to transfer. Vapola et al. (2010), in a study based on five multinational corporations (MNCs), show that global alliance portfolio management differs from MNC to MNC and depends on the MNC's international strategy. In data processing industry, a relation between alliance portfolio management and MNCs' trajectories was identified too (Guillouzo and Thenet 2007).

The causal ambiguity can be defined as the imprecision which exists in the causal relationship between actions and results (Reed and de Filippi 1990). In the case of the alliance portfolio, it resides in the difficulty to establish a close

relationship between the alliance portfolio management and the performance of the firm, especially since the results generated by the alliance portfolio (innovation, standardization, grasp of new opportunities, etc.) are rarely measurable in short term. When the impact of a decision in the portfolio's management cannot be clearly identified, the imitation of good practices is difficult for a competitor.

Finally, the portfolio is a heterogeneous entity due to the variety of its components, the multiplicity of the connections, etc. The complexity of its management can be seen at the level of the routines, the knowledge, and the know-how which must be mobilized, most often complementarily or in interaction. These capacities are thus difficult to transfer, due to their variety and their overlapping nature.

The three characteristics that have just been discussed (tacit nature, causal ambiguity, and complexity) impact on a resource which is unique and difficult to duplicate. They are therefore clearly established in the case of the management capabilities of an alliance portfolio. Furthermore, effective dynamic capabilities generate auto-reinforcement mechanisms, by rendering the firm more attractive for future partners, while the strengthening of its capacities allows for the possibility of an increase in the portfolios' size.

Overall, the efficient management of an alliance portfolio gives the firm a strong (strategic role of the portfolio) and lasting (low duplicability of its capacities) competitive advantage. This advantage provides a portfolio rent, that is, a profit linked to the possession of superior portfolio management capabilities.

4   Conclusion

This paper enables us to justify the requirement to go beyond the usual management of alliances and to adopt an integrated approach in view of increasing the value of the alliance portfolio. The increasing contribution of the alliances to the turnover and the organization of the activities of the firm make the portfolio as a key strategic asset.

In theory, our analysis enables the development of a modeling of alliance portfolio management based on a renowned theoretical corpus, using dynamic capabilities which combine the benefits of the resource theory and the evolutionary model.

With regard to management aspect, the model developed must enable the directors to better identify the leverages for an improvement of the components of their portfolio and for the value creation linked to the alliance strategy, in view of obtaining a specific advantage.

This model suggests other developments to verify the possibility of other components of alliance portfolio management capabilities. Besides, this emerging model is based on a deductive approach and calls for wide empirical verification. Complementary research on thorough studies, essentially of a qualitative nature, to validate the model and better identify the processes generating dynamic capabilities, is required. This is certainly a difficult task due to the fact that the management

capabilities discussed are relatively unobservable. However, this difficulty could be bypassed by adopting an indirect measurement approach (Rothaermel and Deeds 2006). Finally, a second way of research could consist of the elaboration of useful new management tools for managers faced with the complexity and plasticity of the portfolio.

References

Almedia P, Kogut B (1999) Localization of knowledge and the mobility of engineers in regional networks. Manag Sci 45(7):905–918

Barney JB (1991) Firm resources and sustained competitive advantage. J Manag 11:791–800

Blanchot F, Guillouzo R (2009) La gestion stratégique des portefeuilles d'alliances. In: Meïer O (éd) Stratégies de croissance. Dunod, Paris

Blanchot F, Guillouzo R (2011) La rupture des alliances stratégiques: une grille d'analyse. Manag Int 15(2):95–107

Blanchot F, Guillouzo R (2012) Est-il utile de manager un portefeuille d'alliances? Une revue de la littérature, Working paper, DPM, Université Paris Dauphine

Borker M, de Maan AP, Weeda P (2004) Embedding alliance competence: alliance offices. In: Van der Zee H, Strikwerda H (eds) Fostering execution. Nolan Norton & Co., De Meern, pp 84–92

Burt RS (1992) Structural holes. The social structure of competition. Harvard University Press, Cambridge

Castro I, Roldan JL (2015) Alliance portfolio management: dimensions and performance. Eur Manag Rev 12(2):63–81

Cohen WM, Levinthal DA (1990) Absorptive capacity: a new perspective on learning and innovation. Adm Sci Q 35(1):128–152

de Man AP, Duysters G (2002) The state of alliance management. Summit of the Association of Strategic Alliance Professionals, Chicago, March

Dosi G (1982) Technological paradigms and technology trajectories: a suggested interpretation of the determinants and directions of technical change. Res Policy 11:147–162

Doz YL, Hamel G (1998) Alliance advantage. Harvard Business School Press, Cambridge

Duysters G, de Man AP, Wildeman L (1999) A network approach to alliance management. Eur Manag J 17(2):182–187

Dyer JH, Singh H (1998) The relational view: cooperative strategy and sources of interorganizational competitive advantage. Acad Manag Rev 23:660–679

Dyer JH, Kale P, Singh H (2001) How to make strategic alliances work. Sloan Manag Rev 42 (4):37–43

Geurts D, Van der Zee H (2001) Does alliances management differ from network management? In: de Man AP, Duysters G, Vasudevan A (eds) The allianced enterprise – global strategies for corporate collaboration. Imperial College Press, London, pp 41–49

Goerzen A (2007) Alliance networks and firm performance: the impact of repeated partnerships. Strateg Manag J 28:487–509

Gomes Casseres B (1994) Group versus group: how alliance networks compete. Harv Bus Rev 72 (4):62–74

Granovetter MS (1973) The strength of weak ties. Am J Sociol 78:1360–1380

Guillouzo R (1996) Les stratégies de coopération dans l'industrie informatique. Une lecture en termes de portefeuille d'accords. thèse pour le doctorat de l'Université de Rennes 1

Guillouzo R, Thenet G (2007) Management du portefeuille d'alliances et performance innovatrice de la firme: une étude exploratoire à partir du cas de l'industrie informatique. Rev Sci Gest 224–225:131–141

Gulati R (1995) Social structure and alliance formation pattern: a longitudinal analysis. Adm Sci Q 40:619–652

Gulati R (1998) Alliances and networks. Strateg Manag J 19:293–317

Heimericks KH, Duysters GM (2007) Alliance capability as a mediator between experience and alliance performance: an empirical investigation into the alliance capability development process. J Manag Stud 44(1):25–49

Hoffmann WH (2005) How to manage a portfolio of alliances. Long Range Plan 38:121–143

Kale P, Singh H, Perlmutter H (2000) Learning and protection of proprietary assets in strategic allian-ces – building relational capital. Strateg Manag J 21:217–237

Keil T (2000) Strategic alliances – a review of the state of the art. Working paper, Helsinki University of Technology, 50 p

Makadok R (2001) Toward a synthesis of the resource-based and dynamic-capability views of rent creation. Strateg Manag J 22(5):387–401

Markowitz HM (1952) Portfolio selection. J Financ 7:77–91

Meschi PX (2006) Réseaux interorganisationnels et survie des alliances. In: XVe conférence internationale de management stratégique, Annecy-Genève

Mowery DC (1983) The relationship between intrafirm and contractual forms on industrial research in America manufacturing. Explor Econ Hist 20(4):351–374

Nelson R, Winter S (1982) An evolutionary theory of economic change. Harvard University Press, Cambridge

Neyens I, Faems D (2013) Exploring the impact of alliance portfolio management design on alliance portfolio performance. Manag Decis Econ 34(3–5):347–361

Nooteboom B (2004) Learning and innovation in organizations and economies. Oxford University Press, Oxford

Oerlemans LAG, Knoben J, Pretorius MW (2013) Alliance portfolio diversity, radical and incremental innovation: the moderating role of technology management. Technovation 33 (6–7):234–246

Park S, Kim D (1997) Market valuation of joint ventures – joint ventures characteristics and wealth gains. J Bus Ventur 12:83–108

Penrose E (1959) The theory of the growth of the firm. Basil Blackwell, Oxford

Porter M (1980) Competitive strategy. Free Press, New York

Reed R, de Filippi RJ (1990) Causal ambiguity, barriers to imitations, and sustainable competitive advantage. Acad Manag Rev 15:88–102

Reuer JJ, Ragozzino R (2006) Agency hazards and alliance portfolios. Strateg Manag J 27 (1):27–43

Rothaermel FT, Deeds DL (2006) Alliance type, alliance experience, and alliance management capability in high technology ventures. J Bus Ventur 21(4):429–460. Special Issue

Teece DJ, Pisano G, Shuen A (1997) Dynamic capabilities and strategic management. Strateg Manag J 18:509–533

Vapola TJ, Paukku M, Gabrielsson M (2010) Portfolio management of strategic alliances: an international business prospective. Int Bus Rev 19(3):247–260

Wassmer U (2010) Alliance portfolios: a review and research agenda. J Manag 36(1):141–171

Wernerfelt B (1984) A resource-based view of the firm. Strateg Manag J 5:171–180

The Antecedents of Relationship Phase Affect in Alliances

Muhammad Zafar Yaqub

Abstract The primary aim of this paper is to extend the interfirm exchange relationships' literature by examining antecedents of the transitions that take place in the life cycles of business relationships. While making an appeal to the relational exchange theory, transaction cost economics, (network) bargaining power theory, and the organizational control model, the author proposes a (theoretical) model that takes an account of the antecedents of changes that take place in the firms' states of affect during different phases of the development/evolution of their exchange relationships with other firms. It has been theorized that the varying extents of relational governance, relationship quality, interorganizational commitment, relational investments, behavioral uncertainty, bargaining influence, and perceived control affect changes in the affective states of exchange partners across different phases/stages of development/evolution of their exchange relationships. The paper sets an agenda for the future research to regard phases of business relationship life cycle as a (behavioral) outcome construct and explain its antecedents instead of merely considering it as a moderating condition as has been done in the interfirm relationships' literature in the last few decades.

1 Introduction

Evolutionary relationship theorists agree that constructing a cooperative relationship takes time (Jap and Anderson 2007). Macneil (1978) argues that a relational exchange transpires over time; each transaction is viewed in terms of its history and its anticipated future. According to Dwyer et al. (1987), the valuation of the (individual and/or mutual) outcomes of the cooperative exchange relationships among the exchange partners fluctuates due to the changes in their needs, requirements, desires, and/or preferences. According to Flint et al. (2002), a value change over the course of time may lead the exchange partners to explore, maintain, or abandon a cooperative business relationship. According to Hamel et al. (1989), for

M.Z. Yaqub (✉)
Faculty of Economics and Administration, Department of Business Administration, King Abdulaziz University, Jeddah 21589, Kingdom of Saudi Arabia
e-mail: mzyaquob@kau.edu.sa; zafar.yaqub@yahoo.com

the cooperative (business) relationships to perpetuate, each party must contribute something distinctive. According to Lazzarini et al. (2008), forces that once drove to take a partner into a cooperative business relationship can also cause it to decide the other way around when preferences change.

By their content, (dyadic) business relationships consist of series of episodes that take place over a period of time between the business partners, with each episode comprising of specific interactions among these actors. The exchange parties continuously assess the overall costs and rewards from an association against the level of outcomes available from alternatives outsides the association, and the moment it starts feeling like a zero or a negative sum affair with no expectations of reversal, the spirit of association begins to wear out (Park and Ungson 2001). Though there is a widespread consensus among researchers and practitioners over the dynamic nature of cooperative business relationships (Holmlund 2004; Johnson and Selnes 2004; Medlin 2004), for a number of reasons, they have mostly treated such relationships in static terms, whereas in fact they characterize a dynamic process. Even though interorganizational relationships research has mushroomed (Koza and Lewin 1998), relatively little is known about how interorganizational relationships evolve over time (Ariño and de la Torré 1998; Jap and Anderson 2007). Though some studies have assessed the changing nature of key variables during the life cycles of business relationships, the dynamics of business relationships remain an under-researched topic (Eggert et al. 2006; Wilson 1995).

According to Jap and Anderson (2007), an appreciation of the dynamics associated with business relationships requires a processual understanding of how and why such relationships develop, evolve, and/or dissolve over time. They propound that the business relationship life cycle (hereafter BRLC) is a powerful theoretical mechanism that could profoundly capture and reflect transitions, over time, in the business (exchange) relationships. Even though Jap and Anderson (2007) have revealed the relationship life cycle as a useful concept for understanding how business relationships begin, evolve, and/or dissolve over time, in their opinion, constructing a lifetime theory of business relationships is exceptionally difficult. The (theoretical) challenge is to sacrifice descriptive richness judiciously to highlight processes that are general and robust and that offer falsifiable implications. Empirically, the challenge is to trace ongoing processes (often unnoticed by the participants themselves) over a long time period as cooperation between organizations usually builds slowly. That is why, despite the fact that the pioneering model (Dwyer et al. 1987) of the BRLC was proposed nearly three decades ago, the research in this tradition has failed to grab that attention, interest, momentum, and progress as the contemporary and similar concepts like product life cycle, customer lifetime value, customer loyalty, etc., have gained over the years.

The author agrees to the notion that despite being considered a vital construct in the contemporary strategy literature, BRLC has always been an under-researched phenomenon in business research. He argues that the fragile and complex nature of this phenomena, lack of an appropriate constitution/structure, methodological complexity, as well as the time and cost constraints associated with longitudinal studies may have been the major constraints responsible for the lack of (especially the

empirical) research in this area. Despite this failure to kick off, the fact of the matter remains that inter-temporal nature of the business relationships is one of their most salient characteristics and it is significantly important (from both the theoretical and the managerial standpoints) to get to know the dynamics associated with the changes taking place (in the affects/behaviors of the exchange partners) across different stages of their relationships' evolution. As such, there exist significant research gaps, at both the theoretical and the empirical levels that need to be addressed in future research. The theoretical research needs to dig out more about the nature, scope, constitution, definition, description, and dynamics of the BRLC phenomenon (as an affect/behavior), whereas the empirical research may focus on the development of an exhaustive explanation of the antecedents of this higher-order behavioral construct/phenomenon. Besides advancing the theory, the insights gained through a research aiming at developing an exhaustive and explicit under-standing of these dynamic processes can profoundly enable business managers to develop highly efficient and efficacious business models for designing, developing, maintaining, leveraging, and/or successfully concluding (cooperative) exchange relationships. With these considerations in mind, this paper aims at synthesizing and extending the contemporary understanding of the phenomena by making an appeal to the theoretical frameworks such as relational exchange theory, transaction cost economics, (network) bargaining power theory, and the organizational control model. More specifically, it intends to set an agenda for the future research to regard phases of business relationship life cycle as a (behavioral) outcome construct (more specifically a state of affect) and explain its antecedents instead of merely consid-ering it as a moderating condition as has been done in the interfirm relationships' literature in the last few decades.

The paper is divided into three parts. The first part discusses the nature, scope, and structure of business relationship life cycle as has been revealed in the relevant literature. The second part discusses BRLC as a behavioral construct (a state of affect), whereas the third part presents a (theoretical) framework that reveals some important antecedents of the relationship phase affect.

2   The Business Relationship Life Cycle Theory

The scholars who have studied the evolution of exchange relationships in various business contexts have discussed the notion of business relationships' life cycle differently. However, the pioneering model proposed by Dwyer et al. (1987) has dominated the BRLC research throughout the last three decades. They describe BRLC as a discrete linear process spread over five distinct phases of relationship evolution, i.e., awareness, exploration, expansion, commitment, and dissolution. According to them, a multitude of properties follow the same path, rising and falling tidily because many are related over time. These properties are low in the exploration phase, rise in the buildup phase, reach their climax at maturity, and then fall, reaching their nadir as the relationship dissolves. Researchers like

Chattopadhyay (2001), Heffernan (2004), Hsieh et al. (2008), Jap (2001), Jap and Anderson (2007), Jap and Ganesan (2000), and Redendo and Fierro (2006) have used a similar typology of relationship phases (with little adaptations) in their respective research endeavors. However, Jap and Anderson (2007) regarded the DSO model to be predicatively valid but overly complex and advocated the Rousseau et al. (1998) model as an appropriate simplification of it. Rousseau et al. (1998) espouse that the boundaries between the buildup and maturity phases may blur, particularly after the dyads develop a history, trust, harmony, and a comparison level of alternatives. Consequently, they simplify the development of (trusting) business relationships to include only three stages, i.e., building, stability, and dissolution. Eggert et al. (2006) and Jap and Anderson (2007) used a similar approach in their respective studies. However, on the contrary, Crosby et al. (2009) expanded the BRLC into seven phases, i.e., awareness, exploration, expansion/buildup, commitment, maturity, decline, and dissolution.

Whereas the DSO framework has focused on the dynamics of *close* relationships, a number of researchers like Claycomb and Frankwick (2005), Croteau et al. (2008), Hafsi et al. (1987), Ring and Van de Ven (1994), Spekman et al. (1998), and Zineldin (1996, 2002) have treated them as *ongoing* (with no decline/abandonment) in their descriptions of the evolution of business relationships. Ring and Van de Ven (1992, 1994) (the pioneers of this thought) contend that interfirm relationships evolve in successive collaboration cycles through a process of *negotiations-commitment-execution*. However, they explicitly reveal that these continuous cycles of events occur and recur within each of the stages proposed by DSO.

In the supply chain context, two groups of authors have proposed similar frameworks that clearly distinguish different stages of interorganizational relationships among supply chain partners. In a study involving networks of learning in biotechnology, Powell et al. (1996) propose that major steps in the business relationship life cycle are the relationship development, settling, routinization, and dissolution. However, in another study, Spekman et al. (1998) use a classification scheme that includes five stages (i.e., open market, negotiation, cooperation, coordination, collaboration) while examining differences in practices and processes between buyers and sellers along the supply chain. Later, in an empirical study aiming at explaining the role of life cycle concepts in the assessment of interorganizational alignment, Croteau et al. (2008) used the same classification scheme as introduced earlier by Spekman et al. (1998). However, by eliminating the negotiation stage, they have reduced it to a four-stage model.

Besides the mainstream frameworks like Dwyer et al. (1987), Ring and Van de Ven (1994), and Rousseau et al. (1998), there exist some (contextualized) explanations about the evolution of business relationships over time. Hafsi et al. (1987) in an endeavor to explore the factors that shape the state-owned enterprise (SOE)-government relationships linked the three relationship stages (cooperative, adversarial, autonomy) to five configurations (infant, wafer, flower pot, asparagus, autonomous) of top management in SOEs, which differed in composition and structure, performance criteria, and critical tasks. Zineldin (1996) used a four-stage model—i.e., early stage, development stage, long-term stage, and final or

ongoing stage—in his research explaining the dynamics of bank-corporate partnerships. Later, Zineldin (2002) described the evolution of strategic business relationships akin to a relation between people or as a love affair and/or a commitment to marriage that is ideally based on shared interest, love, mutual trustworthiness, and commitment to continue the relationship. His classification of relationship phases comprised of four elements, i.e., discovery (romance), development/basic relationship (engagement), commitment (marriage), and loyalty (old married).

The author contests that the existing (theoretical) frameworks like DSO, RV, and their other offspring though offer some useful insights into the evolution of business relationships, they offer little explanations about the factors that lead to the changes which take place in the perceptions, attitudes, affects, and/or behaviors of actors across different phases/stages of the development/evolution of their interorganizational exchange relationships. Moreover, he also contends that much of the empirical research (e.g., Claycomb and Frankwick 2005; Crosby et al. 2009; Eggert et al. 2006; Heffernan 2004; Hsieh et al. 2008; Jap 2001; Jap and Anderson 2007; Jap and Ganesan 2000; Redendo and Fierro 2006) on this subject has been limited to investigating only the moderating role of relationship phase(s) among various causes and their respective effects in a variety of business contexts. It has not at all addressed the proposition that, if, for example, regarded as a behavioral/relational construct of a higher order, BRLC can also be a subject of research as an antecedent, a mediator, or even as an outcome in its own respect. The model extended in this paper has primarily endeavored to bridge this research gap in the strategic management literature. But before starting any discussion on it, let us have a look at the author's conceptualization of the BRLC as a behavioral construct, more specifically, as a state of affect.

3   BRLC as a Behavioral Construct

Rousseau et al. (1998) argue that in times where we are witnessing the breaking up of large firms into smaller units, it is eventually the dynamics of relationships at the micro (dyadic and/or interpersonal) levels that determine directions of the organizations at the macro levels. The scholars like Doz (1996), Larson (1992), Ring and Van de Ven (1992, 1994), and Zaheer and Venkatraman (1995) contend that the interpersonal relationships formed between the boundary spanners (or alliance managers) play a critical role in the evolution of interorganizational exchange relationships. Quite consistently, the author maintains that it is the changes (any progression or regression) taking place in the perceptions, beliefs, orientations, affects, mind-sets, etc., of the boundary spanners (or alliance managers) that mark the beginning/end of the different phases of relationship evolution for, after all, it is the people not the inanimate organizational entities who make decisions (Cetinkaya et al. 2011). Consequently, BRLC is designated to be a *complex* higher-order behavioral construct, more precisely a state of affect. The complexity depends upon if the entity dispelling the boundary spanner's (or alliance management)

role is an individual, few individuals, or a relatively bigger group(s) of individuals featuring significant diversity especially in their beliefs and affects toward a specific dyadic business relationship. When there are several actors involved, even the dynamics of behavior of an individual may change as we feel, perceive, and react differently to the same objects while being in personal capacity compared to being members of a group primarily due to the in-group pressures—the group-think (Luthans 2006). We can also not neglect the instrumentality of personalization in the business relationships in that it is not unlikely that the person(s) in boundary spanner's (alliance management) role(s) would be reluctant to part ways with their "friends" in the partner firms, even if it is in the best interest of their respective organization(s) and/or the cooperative relationship altogether (Anderson and Jap 2005).

Anyways, if we regard BRLC as a (higher-order) state of affect (or a behavior), then we would also have to appreciate the fact that some antecedents or determinants could also exist for this state of affect. A similar account had earlier been made by Jap and Anderson (2007) after making an empirical examination of the evolution of cooperative interorganizational relationships as revealed by the DSO and RV models, when they noted (p. 273): "Much about relationship dynamics remains to be explored and understood. For example, one un-researched area involves the drivers that move the relationship from one phase to the next. What factors prod the relationship from an exploratory phase into build-up? From awareness to exploration? . . . . How do firms manage to put aside a disappointing history to renew their relationships?" Despite such an explicit realization for the need for further research, no (theoretical and/or empirical) investigation (to date) has endeavored to give an integrated and exhaustive explanation as to why and how do the business relationships evolve over time through the different stages/phases of their respective life cycles. Much of the (empirical) research, rather, has focused on what difference does it make when the beliefs, perceptions, affects, etc., of the exchange partners change while assuming that "something" creates and moderates the effects of these changes. Therefore, there exists a profound need to investigate the drivers that move an ongoing exchange relationship from one phase to the next (especially from stability to dissolution). This paper specifically contributes to the relationship evolution (life cycle) theory by bridging this research gap by discussing some antecedents of the BRLC as a state of affect while making an appeal to the relational exchange theory, transaction cost economics, (network) bargaining power theory, and the organizational control model. The reason for selecting these frameworks has been their (perceived) higher relevance and instrumentality in arriving at an exhaustive explanation about our phenomena of interest.

4 The Theoretical Model

In order to arrive at an exhaustive explanation about our phenomena of interest, we have integrated the relational *view of networks* with three other theoretical frameworks, namely, transaction cost economics, bargaining power perspective, and the organizational control model. The bases for choosing these theoretical frameworks have been their relevance and higher efficacy in rendering exhaustive explanations about the constructs that have constituted our (conceptual) model. Figure 1 shows the framework about the evolution of the (closed and/or ongoing) business relationships through different phases.

It has been postulated that the extent(s) of relational governance, perceived quality of relationships, appropriation of relational investments, behavioral uncertainty, bargaining influence, and the perceived control affect the changes in the affective state(s) of the actors across different phases of the development/evolution of their respective exchange relationships. These (higher-order) affects influence a host of transitional behaviors which eventually determine the direction, modalities, and fate of the business relationships by influencing the strategic and operational decisions of the exchange partners. The following sections discuss the nature, scope, and relationships among the various constructs (along with their respective theoretical foundations) constituting the framework presented in Fig. 1.
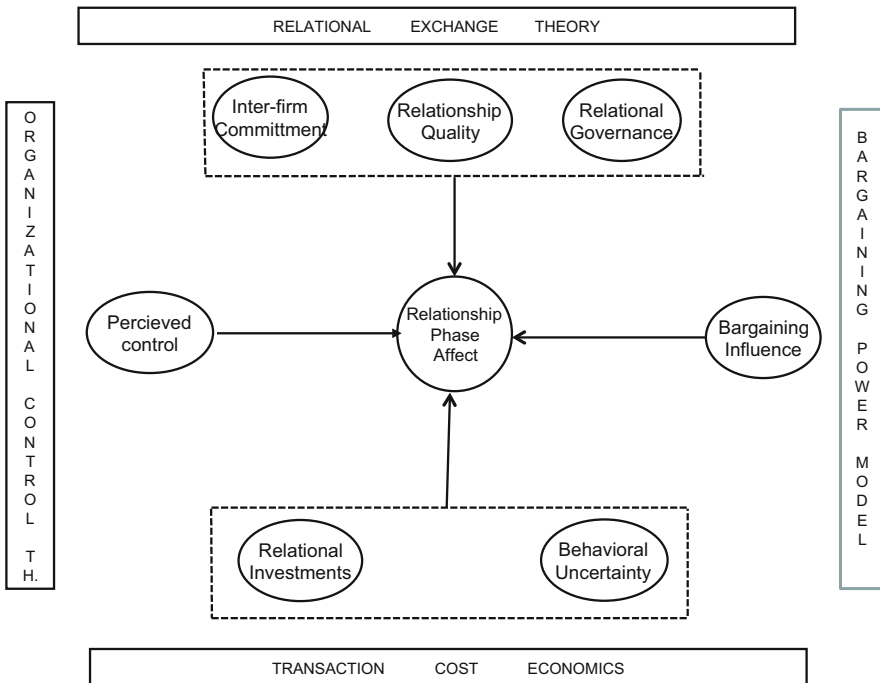

Fig. 1 The theoretical framework

4.1   (Business) Relationship Life Cycle Theory

Jap and Anderson (2007) have revealed BRLC model as a powerful theoretical mechanism that captures and reflects transitions, over time, in the business (exchange) relationships. It leads to an explicit understanding of how the interaction history between the exchange partners forms a context that differently influences their perceptions, attitudes, and orientations (Boyle et al. 1992; Dwyer et al. 1987). It argues that business relationships develop over time via distinct phases that exhibit systematic differences in behaviors, orientations, and processes (Dwyer et al. 1987; Ring and Van de Ven 1994). Relevant studies have termed these stages as "relationship phases" (Dwyer et al. 1987) or "relationship life cycles" (Jap and Ganesan 2000). The author has postulated the same as an outcome construct and has endeavored to explain its antecedents through the model shown in Fig. 1. This stands in sharp contrast to the past research/literature that has mostly treated it as a contingency only.

4.1.1   Relationship Phase Affect

Dwyer et al. (1987) describe BRLC as a discrete linear process spread over five distinct phases of relationship evolution, i.e., awareness, exploration, expansion, commitment, and dissolution. *Awareness* refers to a realization to Party A that it is feasible to exchange with Party B. In this phase, situational proximity plays a vital role in ensuring future collaborations, as it is more likely that parties physically closer to each other will come across. Any type of bilateral interaction—even tacit coordination—marks the beginning of the next phase, i.e., *exploration*. Here, each party gauges and tests the goal compatibility, integrity, and performance of the other to determine if it is (or is not) worthwhile to collaborate. This stage is highly fragile in that minimal investment and interdependence make it easy to terminate the relationship. *Expansion* marks a continual increase in benefits to the cooperating exchange partners that leads to an increased interdependence. The higher level of outcomes realized by the partners reduces the number of alternatives sought. The rudiments of trust and joint satisfaction established in the exploration stage now lead to an increased risk-taking within the dyad. *Commitment* refers to an implicit or explicit pledge of relational continuity between exchange partners. Because they do not vigorously seek alternatives anymore, the parties consistently provide relatively high levels of input to the association. Durability and trust encourage continued (mutual) investments. *Dissolution* of relationship is more likely if at least one party perceives that the cost of continuing or modifying the relationship outweighs the benefits accruing from it, not just at present, but the same is likely to continue in the future. Although the possibility of withdrawal or disengagement is implicit throughout the relationship life cycle, it is difficult and highly consequential if it takes place after the high interdependence characterizing phases of expansion and commitment. Sometimes, the declining/dissolution phase can escalate surprisingly

long with no parties terminating, possibly due to inertia, others' orientation, compassion, etc. The framework contained in Fig. 1 has, while postulating relationship life cycle/relationship phase as a dynamic behavioral construct (more specifically a state of affect), endeavored to take an account of the factors that act as antecedents of moving the exchange relationships forth and back in this awareness-dissolution continuum while attributing these movements to the changes in the state of affect of the exchange partners. The following sections present a detailed discussion on all such factors as shown in our model (see Fig. 1).

4.2 Relational Exchange Theory (RET)

Relational exchange theory has been revealed in the literature as the most appropriate theoretical framework to study interorganizational behaviors (Blau 1964; Emerson 1972). It is based on the notion that the exchanging partners are in some sort of mutual agreement about expecting better outcomes from their association than from any other forms of exchange (Goles and Chin 2002). According to Xu and Meyer (2013), the relational exchange view of networks focuses on the inner working of networks and social relations among the actors involved in exchange relationships and their implications for strategy. Using research from social psychology, sociology, and law, the RET provides foundation for the two prevalent perspectives—relational norms perspective and the relationship quality model—that discuss the role of a number of (relational) antecedents to successful interfirm exchange relationships. The relational norms perspective or relationalism (Macneil 1980) suggests that the strength of relational norms prevalent in the exchange environment affects the level of cooperative behavior (Cannon et al. 2000). The relationship quality model holds that the exchange partners' perceptions of the appropriateness of exchange relationships influence their decisions to stay in or exit from those exchange relationships (Yaqub 2013a, b; Yaqub and Vetschera 2011). By elaborating upon the central tenets of relational norms perspective and the relationship quality model, RET explains the essence of relational norms/governance as being an *impetus to successful exchange relationship*s (Yaqub and Vetschera 2011). According to Blios and Ivens (2006), relational governance envisages the creation of a highly *relational environment* by putting in place a social contract based on a multitude of relationship-preserving norms. The criterion for the successful culmination of such an environment is its ability to enhance relationship quality among the exchanging parties (Ivens 2004, 2006). Consequently, RET suggests that firms should consider the development and promotion of trust-based commitment through promoting an adherence to relational norms as one of their key strategic objectives (Ivens 2004; Yaqub 2013a, b).

4.2.1 Relational Governance

Norms are expectations about behavior that are partially shared by a group of decision makers and are directed toward collective goals (Jap and Ganesan 2000; Macneil 1980). They constitute the expectations shared by exchange partners about what constitutes the "right" behavior within the environment of their (exchange) relationship (Morgan and Hunt 1994). While management can put in place the directives and/or incentives to develop cooperative norms, these mainly emerge from complex social processes that the management cannot fully control (Bercovitz et al. 2006). Even though, in early phases of the development of business 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/or observe ability (Bercovitz et al. 2006), these norms, at large, evolve over time as a consequence of partners' transacting experiences (Ring and Van de Ven 1992; Zaheer and Venkatraman 1995). According to Kaufman and Stern (1988), norms that govern exchange behaviors in discrete transactions are different from those in the relational exchange. According to Blois and Ivens (2006), norms associated with discrete exchanges are more likely to create an environment where an exchange partner will give his own interests priority over those of the other party or even the cooperative gains. According to Bercovitz et al. (2006, p. 725), ". . . . . with discrete norms, partners adjust terms of trade through bargaining before entering short-term exchange arrangements (Macneil 1978, 1980). On the other hand, at the relational end of the spectrum norms support cooperative adaptation by stressing behaviors that will preserve and continue the relationship even when pure self-interest might suggest otherwise (Macneil 1980)."

Relational exchange theory (RET) reveals relational norms as a distinct form of governance (the relational governance) that prescribes commitment and proscribes opportunism in exchange relationships (Blios and Ivens 2006; Joshi and Stump 1999; Morgan and Hunt 1994). Relational governance refers to a state of affairs where the exchange relationships are governed by a social contract based on relationship-preserving norms of behavior (Macneil 1978). The extent of relational governance is gauged through the strength of relational norms prevalent in the exchange environment (Noordewier et al. 1990) where strength refers to the rigor of the norms mix along with the degree of "normative compliance" exhibited by the exchange partners (Yaqub and Vetschera 2011). Low levels of rigor and compliance with relational norms are equated with transactional or contractual governance (Ferguson et al. 2005)—the polar opposite of relational governance. In an operational sense, relational governance is usually regarded as a higher-order construct in a second-order factor model where the first-order factors are a number of correlated (relational) norms (Noordewier et al. 1990).

According to Roehrich et al. (2002), the stability and success of an exchange relationship, to a substantial extent, are determined by conductivity of the overall atmosphere of that exchange. According to Blios and Ivens (2006), Macneil (1978),

and Yaqub and Vetschera (2011), 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 relationship-preserving norms. Bercovitz et al. (2006) find that an adequate compliance to the relational norms leads to benefits like smoother coordination, increased adaptability within the exchange relationship, reduced opportunism, and increased efforts from transacting parties. Yaqub and Vetschera (2011) argue that an adequate compliance to the relationship-preserving norms not only reduces transaction costs by substituting more elaborate governance but also contributes to the revenue/value by promoting a trust-inspired commitment. A number of studies such as Ivens (2004, 2006), Joshi and Stump (1999), Kaufman and Stern (1988), Zhang et al. (2003), and Yaqub (2013a, b) have, in a variety of business contexts, shown a positive association between adherence to relational norms and the success of these structural arrangements.

Though most of the scholars and the practitioners would assume that creating a highly relational environment through effective relationship management (RM) efforts from the exchange partners generates stronger interfirm relationships which eventually enhance their longevity and the performance outcomes (Crosby et al. 1990; Morgan and Hunt 1994), still some business executives have embraced nothing more than sheer disappointment from their RM efforts of creating a higher relationality in the exchange environment (Colgate and Danaher 2000). Some researchers have gone even farther by suggesting that in certain situations, RM efforts may even have a negative impact on the performance (De Wulf et al. 2001; Hibbard et al. 2001). Paulin et al. (1999) and Yaqub and Hussain (2013) argue that the context of exchange may influence instrumentality, relevance, and relative efficacy of individual norms in ensuring a strong relational bonding in interfirm exchange relationships. According to Bercovitz et al. (2006) and Yaqub (2013a), relational governance becomes more effective when the relationship-specific norms are perceived by the exchange partners to be increasingly instrumental for the attainment of their individual as well as collective goals. 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 which management in focal firm(s) cannot directly and/or fully control (Bercovitz et al. 2006). 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."

4.2.2 Relationship Quality

According to Henning-Thurau and Klee (1997), relationship quality refers to the exchange partners' perceptions of the appropriateness of an exchange relationship to fulfill their needs, desires, and/or objective to become a part of that cooperative association. Garbarino and Johnson (1999) have designated it to be the overall assessment of the strength of a (business) relationship. Even though researchers like

Crosby et al. (1990), Henning-Thurau et al. (2002), Storbacka et al. (1994), and Wong and Sohal (2002) use a bidimensional model of relationship quality, however, others like Baker et al. (1999), Garbarino and Johnson (1999), Ivens (2004), Ulaga and Eggert (2006), and Walter et al. (2003) use a multidimensional model of relationship quality with satisfaction, trust, and commitment being the three dimensions.

The relationship quality model basically assumes that an actor's perceptions of the appropriateness of a relationship influence its decision to join, stay in, or exit from that exchange relationship. According to Finn (2005), RQ model plays a critical role in the study of the maintenance of long-term relationships. According to Jap et al. (1999), Rajaobelina and Bergeron (2009), and Ural (2007), it captures the essence of relationship management efforts. A number of studies conducted in various business contexts (e.g., Crosby et al. 1990; Garbarino and Johnson 1999; Henning-Thurau et al. 2002; Rajaobelina and Bergeron 2009; Storbacka et al. 1994; Ulaga and Eggert 2006; Wong and Sohal 2002) have shown the instrumentality of relationship quality in ensuring longevity and success of exchange relationships.

Yaqub and Vetschera (2011) argue that if the actors perceive relationships with other partners to be of sufficiently high quality, the recurring transactions take place automatically. According to Crosby et al. (1990), these perceptions (of high relationship quality) emerge from experiencing higher satisfaction and trust in previous exchange episodes. Schul et al. (1985) argue that satisfaction positively affects the morale of exchanging parties and induces them to actively participate in collective activities in the successive cooperation cycles. Similarly, Spekman (1988) has postulated the relational trust that emerges from mutually beneficent successive collaboration cycles among the exchanging parties, as the *cornerstone of cooperative relationships*. The *principle of generalized reciprocity* in social exchange theory holds that *mistrust breeds mistrust* that hampers the continuity of exchange relationships and/or shifts the transaction to one of more short-term exchanges (McDonald 1981). Hence, we postulate satisfaction and trust (together, the relationship quality) as important determinants of the continuity and superior performance of exchange relationships over time by positively affecting the partners' affective states across different phases of the development/evolution of their respective exchange relationships.

4.2.3 Interorganizational Commitment

Quite consistent with the pioneers Crosby et al. (1990), majority of the researchers such as Leuthesser (1997), Rajaobelina and Bergeron (2009), Selnes (1998), Sun (2010), Wray et al. (1994), and Woo and Cha (2002) have treated relationship quality as a two-dimensional higher-order construct with satisfaction and trust being those two dimensions. Even though researchers like Henning-Thurau et al. (2002), Storbacka et al. (1994), and Wong and Sohal (2002) have also used a bidimensional model of relationship quality, they paired commitment (instead of trust) with the satisfaction. Some researchers like Baker et al. (1999), Garbarino and

Johnson (1999), Ivens (2004), Ulaga and Eggert (2006), and Walter et al. (2003) have used a multidimensional model of relationship quality with satisfaction, trust, and commitment being the three dimensions. However, considerable conceptual and empirical evidence in research concludes that commitment is the ultimate outcome, whereas satisfaction and trust are its causal precedents (Anderson and Weitz 1992; Bloemer et al. 2003; Hess and Story 2005; Morgan and Hunt 1994). Geyskens et al. (1996) have rather propounded a sequential link among the three relational constructs by saying that over the time, satisfaction develops first, trust develops in the medium term, and commitment emerges only in the long term. As a significant body of empirical research has espoused satisfaction and trust to be the drivers of commitment (Morgan and Hunt 1994), therefore, we have regarded relationship quality to be a bidimensional construct with satisfaction and trust being its two dimensions, whereas the interfirm commitment has been regarded as its natural consequence.

Defined as an attitude that reflects the desire to continue a valued relationship (Moorman et al. 1992) and a 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), workplace contexts (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 an exchange relationship context, we define commitment as a predisposition that comprises of an exchange partner'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 exchange relationship. Whereas organizational researchers like Garbarino and Johnson (1999) and Morgan and Hunt (1994) viewed commitment as a unidimensional construct, a vast majority of researchers has, however, regarded it as a multidimensional construct in a variety of business contexts (Allen and Meyer 1990, Geyskens et al. 1996; Gundlach et al. 1995). If Geyskens et al. (1996) differentiate between affective commitment and calculative commitment, Allen and Meyer (1990), on the other hand, have revealed three dimensions of commitment that include continuance commitment (cost-based attachment), affective commitment (desire-based attachment), and normative commitment (obligation-based attachment).

Social scientists across a wide range of literature have examined the effects of commitment on continuity- and performance-related outcomes of exchange relationships (Jap 2001; Skarmeas et al. 2002; 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. Chaturvedi and Gaur (2009) argue that the ultimate outcomes of a cooperative relationship depend on the culmination of interorganizational commitment over time, which in itself depends on the motives/expectations with which actors enter into those relationships. Seppänen et al. (2007) have also revealed the development of mutual commitment to be an important prerequisite for the culmination of relationship capital that consists of the

sociopsychological aspects of an alliance that are positive and beneficial to the alliance. Hwang (2006) concludes that commitment attenuates the fear of exploitation due to higher TSIs. Axelrod (1984) argues 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 among them is more likely to occur and recur (Alstyne 1997). Game theorists also suggest that committed relationships establish an expectation of repeated exchange that discourages opportunistic behavior since parties in exchange perceive (or expect) that the payoffs from continued exchange would surpass short-term gains from defection (Abreu 1988; Axelrod 1984).

4.3 Transaction Cost Economics (TCE)

With its roots in the new institutional economics, transaction cost economics perspective (Williamson 1975, 1985), which centers on the role of transaction-specific investments (TSIs) and the opportunism to predict governance and exchange performance, has received consistent research attention in the last few decades (Heide and John 1990; Wathne and Heide 2000). It suggests that firms should vertically integrate in the face of higher TSIs and opportunistic concerns (Williamson 1985). Making TSIs (especially when it is asymmetric) by an exchange partner though sometimes proves to be instrumental in inducing commitment in other partners (Ganesan 1994), it also increases the investing party's vulnerability to an opportunistic exploitation by the latter (Heide and John 1990; Yaqub 2013a, b). However, if the TSIs are made mutually and complemented with the instruments such as common ownership, muted incentives, enhanced monitoring, and/or the threat of sanctions (Williamson 1985; Yaqub and Vetschera 2011), the concern for such an opportunistic exploitation is minimized and so is the need (and cost) to monitor performance and/or employ additional safeguards. With fewer opportunistic concerns and lower monitoring and safeguarding costs, the exchange relationship becomes more efficient, becomes more prone to joint action, and exhibits greater expectations of continuity, all of which eventually lead to its continuity and superior performance (Heide and John 1990; Parkhe 1993). Transaction (or relationship)-specific investments and the surrounding environmental uncertainty are the two key constructs debated in the transaction cost economics literature.

4.3.1   Relational Investments

Relational investment refers to the time, effort, and resources that a focal actor expends in building stronger relationships with the other parties in exchange. Research in TCE has long established that the investment of idiosyncratic assets by exchange partners leads to longevity of relationships (Anderson and Weitz 1989,

1992; Ganesan 1994; Palmatier et al. 2006; Yaqub 2013a, b). However, the focus in most of these studies has been on developing long-term relationships through creating dependence and "locking in" the exchange partners by getting them to invest in transaction-specific assets (TSAs). Yaqub (2013a, b) argues that exchange-specific investments should not be limited just to those investments made by a focal supplier to increase its asset specificity in the relational space so as to signal a "hostageship" to the buyer(s). Rather, these should also include the investments aimed at enhancing the value-creation-ability of the other partners so that they could contribute more surpluses to the cooperation. Palmatier et al. (2007, p. 191) also suggest "the focus on investments and asset specificity should shift from a transaction cost perspective of safeguarding and monitoring to a focus on improving the effectiveness and efficacy of relationship value creation."

Hwang (2006) argues that firms can get greater productivity gains from cooperation when they are willing to commit relationship-specific investments and combine resources in unique ways. Palmatier et al. (2006) found that relational investments improve financial and relational outcomes by improving the ability of an exchange relationship to create value by either increasing benefits or reducing costs. Anderson and Weitz (1992) argue that mutual investments positively affect the actors' commitment to the relationship by acting as "potent pledges." Ganesan (1994) found that a vendor's relational investments increase its credibility in the eyes of retailer(s) by signaling that the vendor cares for the relationship and is willing to make sacrifices for its continuation. Similarly, Yaqub and Hussain (2013) found that relational investments made by focal actors create economic satisfaction by positively affecting the economic outcomes (like sales, revenue, profits) and create social satisfaction by signaling (to the partners) the presence of a *sense of comradeship* in the focal actors. Anderson and Weitz (1989), Ganesan (1994), Palmatier et al. (2006), and Yaqub and Vetschera (2011) argue that relational investments help in maintaining and/or strengthening exchange relationship(s) by positively influencing relational mediators primarily through creating expectations of reciprocation, a positive affect, and/or fear of losing the subsequent appropriations of such investments.

4.3.2 Behavioral Uncertainty

Transaction cost economics has revealed uncertainty as an important contingency to be accounted for while making the governance choices in order to safeguard one's dedicated investments against the opportunism risk. Whereas the early TCE literature (Williamson 1979) does not distinguish between different forms of uncertainty, there has been, however, a wide array of uncertainties like environmental uncertainty, behavioral uncertainty, technological uncertainty, competitive uncertainty, decision uncertainty, social uncertainty, etc., that has been debated extensively in the later research. Behavioral type of uncertainty has quite often been revealed as the most important form of uncertainty relevant to the context of exchange (Sutcliffe and Zaheer 1998; Williamson 1979, 1985). According to

Zhou and Poppo (2010), exchange hazards triggered by high behavioral uncertainty may lead to increased transaction costs that could undermine the efficiency of economic exchange. Verbeke and Greidanus (2009) pinpoint that due to the lack of explicit information (owing to information asymmetry fostered by behavioral uncertainty), parties cannot readily determine courses of actions should preference reversals occur. To mitigate these concerns, they draft more explicit (detailed) contracts regarding nonperformance, incentives, roles and responsibilities of each party, and periodic monitoring or reviews (Krishnan et al. 2006), all of which leads to high contracting and monitoring costs (in sum, the transaction costs).

In previous research, a host of scholars have extended multiple views about the behavioral uncertainty. Williamson (1985) has viewed behavioral uncertainty as the strategic nondisclosure, disguise, or distortion of information from the exchange partners. According to him, such opportunistic behaviors can occur both ex ante and/or ex post. John and Weitz (1988) referred to it as the difficulty in ascertaining exchange partners' adherence to contractual agreements. Carson et al. (2006) have regarded it as the difficulty in separating "honest" errors or differences of opinion from "guileful" and self-interested behaviors. Finally, according to Zhou and Poppo (2010), behavioral uncertainty occurs when one party cannot effectively monitor or assess contributions of the other partner(s) in the collective performance of the exchange relationship.

According to John and Weitz (1988), behavioral uncertainty is endogenous and arises within the exchange context itself due to the opportunistic tendencies of the exchange partners. Transaction cost economics suggests that opportunism can arise whenever it is deemed feasible and profitable by the actors involved in economic exchanges. It further posits that the actors engage in opportunistic behaviors to affect both the value creation and the value sharing (Ghosh and John 2005). Wang et al. (2012) argue that behavioral uncertainty has a greater impact on fostering opportunism in exchange partners than do the relationship-specific investments. Carson et al. (2006) maintain that a higher extent of behavioral uncertainty prevalent in the exchange environment leads to increased incentives for partners to act opportunistically.

Williamson (1985) theorizes that behavioral uncertainty stems from difficulties in monitoring the contractual performance of exchange partners. According to Sutcliffe and Zaheer (1998) and Williamson (1985), it characterizes a deliberate nondisclosure of information as well as the strategic misrepresentation of information by the economic agents which according to Ouchi (1980) makes it difficult for the focal actors to evaluate the value added to the relationship by the other partner (s). Amidst such an increased information asymmetry, the focal actors become more vulnerable of being taken advantage of by the other partner(s). A similar argument has been made by Alstyne (1997) and Yaqub (2009) who maintain that the existence of information asymmetry makes it difficult for the focal actors to assess the relativity in contributions, thus making it easy for opportunistic actors to free ride over the efforts of others. Zhou and Poppo (2010) also argue that in the situations where performance is difficult to measure, parties have incentives to limit their efforts, because their partner cannot accurately measure and/or reward

productivity. Alstyne (1997) and Yaqub (2009) maintain that if the incentive structure fails to ensure (ex post) distributive justice, the disadvantaged players are negatively reinforced to contribute in the successive episodes of cooperative exchanges (Park and Ungson 2001). However, the reduction of uncertainty due to high asset specificity, more explicit contracting, and/or the culmination of trust-based commitment creates a desirable transaction climate (Reve and Stern 1976). Wang et al. (2012) also reveal that a higher frequency of social interactions and the culmination of shared values between the partner firms may help mitigate the negative impacts of behavioral uncertainty and may lead to the culmination of a desirable exchange environment that has a profound bearing on the mutual states of affect of the exchange partners.

4.4   (Network) Bargaining Power Model

According to Yadong (2007), an actor's bargaining power is its ability to change the bargaining relationship in its favor, win concessions from the other party, and influence the outcomes of negotiation whenever conflicts arise. The notion of bargaining power has been viewed differently in various contexts across multiple disciplines such as economics, sociology, law, and/or political science. Even in strategic management literature, it has been debated differently while making appeals to various theoretical frameworks such as transaction cost economics, resource-based view, relational view, network analysis, etc. Early research in this area mostly concentrated on the bargaining power of actors involved in dyadic exchanges (the *canonical* bargaining power model). However, over the years, bargaining power theory has progressed to appreciate the fact that bargaining often involves multiple actors (Eden and Molot 2002; Ramamurti 2001). Several scholars have expanded the analysis of bargaining beyond dyadic relationships, leading to what is referred to as *augmented* bargaining power (ABP) models (Nebus and Rufin 2010). One variation of these models is the network bargaining power (NBP) model that extends the bargaining power paradigm to the complex business exchange contexts and has consequently lead to the development of a network-based theoretical framework of bargaining power (Nebus and Rufin 2010). It holds that bargaining is power driven, i.e., actors use their (bargaining) power over other actors in the same structural arrangements to achieve their desired outcomes (Boddewyn and Brewer 1994; Gourevitch 1999). *Bargaining influence* has been discussed in much of the NBP literature as the focal (outcome) construct. NBP models the bargaining environment as a system of actors represented as a network and primarily endeavors to explain which actors enjoy the highest bargaining influence and why.

4.4.1 Bargaining Influence

Bargaining influence refers to the degree to which each element in a system of actors influences the overall bargaining outcome (Nebus and Rufin 2010). NBP model reveals three determinants of the bargaining influence of an actor, i.e., the *basis of power*, structural *prominence*, and the *motivation* to exercise the bargaining power (Nebus and Rufin 2010). An actor's *basis of power* refers to its power over other actors in terms of material resources, ability to pass or enforce laws, capital, access to other powerful actors, voting rights, knowledge, or other actors' economic or political dependence on this actor (Burt 1977; Nebus and Rufin 2010). According to Bueno de Mesquita (2006), NBP considers power to be *fundamentally relational* and posits that an actor's basis of power translates into bargaining influence only to the extent that it is greater than (or less than) the power of other actors as mediated by network structure (Nebus and Rufin 2010). *Prominence* reflects the essence of an actor's bargaining influence through its direct and indirect ties to other actors (Knoke 1990). According to Bonacich (1987), an actor's bargaining influence is positively associated with the number of its direct incoming support ties, whereas the number of direct incoming constraint ties reduces its bargaining influence. Finally, according to Mahon et al. (2004), an actor's *motivation* to exercise its power over others in order to embrace its desired outcomes moderates the impact of power on the bargaining influence. According to Brewer (1992), the motivation to exercise the bargaining influence is highly issue specific in that it is unlikely for an actor to "waste" its resources on unimportant issues, whereas the opposite holds true for the issues linked to its survival or legitimacy (Nebus and Rufin 2010).

According to Yaqub and Vetschera (2011), business relationships are formed with the expectations of complementary benefits. According to Palmatier et al. (2006), partners perceive value in exchange relationships only when they are able to consistently materialize these (desired) benefits, which in turn increase their willingness to continue, maintain, and/or strengthen relational bonds with each other. According to Hill (1990) and Parkhe (1993), objectives conformity—the degree to which private objectives of different exchange partners are congruent or consistent—acts as a catalyst for the spirit of cooperation by harmonizing parties' interests, responses, and action. On the other hand, Williamson (1979) has designated goal incongruence to be the key antecedent to the opportunistic pursuits that adversely affect the spirit and outcomes of cooperation. According to Nebus and Rufin (2010), it is quite possible that the exchange partners may be able to establish congruent interests (and goals) at the founding stage of certain collaborative arrangements, but a power disequilibrium may diverge their interests in subsequent stages of their relationship evolution.

A number of factors like asymmetric resource contributions, lack of attractiveness of certain partner(s), lack of social support, differences in absorptive capacity, size, etc., could lead to bargaining power asymmetries among the actors involved in an exchange relationship (Blodgett 1991; Yan and Gray 1994, 2001). Such asymmetries at times provoke the dominant actor(s) to expect and appropriate a

greater share in the pie, which is cocreated. Such actors (especially when they are not inequity averse) quite often manage to grab a (bigger) portion of the pie beyond their equitable share that creates a state of discomfort in the power-recessive partners, and it could cultivate serious conflicts over the pie sharing (Yaqub 2009). If so happens, each actor strives hard to attain (bargaining) outcomes that are as close as possible to its desires. However, the lesser the bargaining influence of an actor, the less likely it is to get its desires materialized. In the absence of distributive justice, the dependent (or disadvantaged) actors are left with no option other than to renegotiate contractual terms to maintain a favorable position, escalate the conflict, or exit the relationship all together (Lazzarini et al. 2008; Yaqub 2009). Even if they do not quite, they are least motivated to contribute in the successive exchange episodes as they begin to dislike and distrust their partners for their opportunistic exploitation.

4.5 Organizational Control Model

Organizational control model has been a useful framework for theoretical development in various fields (Carver and Scheier 1981) primarily because of its dynamic structure that allows an easy integration of this model with other explanatory frameworks (Lord and Hanges 1987). Research on organizational control traces its roots to the very origins of modern organizational and management science research (Cardinal et al. 2004). Extant literature on organizational control reveals it as encompassing all attempts to ensure that the actors behave in a manner that is consistent with meeting their collective goals and objectives (Eisenhardt 1985; Kirsch 1997; Ouchi 1977, 1979, 1980). In an interfirm context, it may reflect the influences exerted by exchange partners over the outcomes and/or functioning of their respective structural arrangements (Geringer and Hebert 1989). Like equity structures and contracts, organizational control is an essential aspect of the governance of interorganizational networks and has a significant bearing on their sustainability and success (Cardinal et al. 2004).

Over the times, control systems have widely been acknowledged to be ubiquitous and critical to how organizations function (Cyert and March 1963). Kirsch (1996), Ouchi (1979), and Turner and Makhija (2006) have discussed various types of formal and informal controls like outcome control, behavioral control, clan control, self-control, etc. However, Turner and Makhija (2006) argue that there are no "pure" forms of control and that organizations generally need to configure various "portfolios of control" (Choudhury and Sabherwal 2003; Kirsch 2004) where different compliance-orientated and values-oriented forms of formal and informal control mechanisms complement each other (Kirsch 1996, 2004; Paine 1995). Chen et al. (2010) and Yadong et al. (2001) note that partners usually exercise strong controls when there is high uncertainty stemming from goal incongruence. However, Rustagi et al. (2008) maintain that a culmination of mutual trust

among the exchange partners impacts the need for and the types of organizational controls that could be applied to effectively govern a collaborative arrangement.

Lazonick and O'Sullivan (1996) adopt a revolutionary approach toward organizational control and reveal corporate governance as an organizational issue that concerns primarily with the distribution of decision-making power, i.e., the power to determine the allocation of resources. According to Cardinal et al. (2004), the key issue that the firms involved in cooperative relationships usually face is to decide who should control critical resources. The social exchange perspective holds that control is determined by partners' resource contributions (Chen et al. 2010), i.e., an actor gains more control when its partner(s) depends on its contribution of critical resources (Cardinal et al. 2004; Chen et al. 2010; Steensma and Lyles 2000; Yan and Gray 2001).

4.5.1 Perceived Control

Several authors while recognizing the potential of control model for such endeavors have used it to examine the motivational behaviors in organizations (Campion and Lord 1982; Cooke 1999; Falk and Kosfeld 2006; Baldauf et al. 2001; Yaqub et al. 2010). Control view of intra- and interorganizational network context envisages a positive association between perceived control and the motivation to cooperate (Windsperger et al. 2009). Choi and Beamish (2004) and Kamminga and Van der Meer-Kooistra (2007) note that the actors feel a greater incentive to join, stay, and contribute in an exchange relationship where they feel to have an adequate and/or equitable control over the resources, goal setting, processes, and appropriation of rewards. Yaqub et al. (2009) argue that the (higher) extent of control perceived by the actors most responsible for the particular domain(s) of actions positively contributes to the "spirit of cooperation" and spurs greater motivation in those actors. Sacconi (2007, 2010) reveals that an asymmetry of control leads to an asymmetry in the final surplus distribution due to an inevitable imbalance in the bargaining power. If so happens, the disadvantaged actors may give up fairness and fiduciary duties so as to achieve the most efficient constitution of the collaborative exchange which if not attained could adversely affect their motivation to contribute enthusiastically in the successive exchange episodes of their ongoing exchange relationships.

5 Conclusion

Business relationship life cycle is a powerful theoretical mechanism that captures the transitions in the business (exchange) relationships over different phases of their development/evolution. It reveals that business relationships evolve over time via distinct phases that exhibit systematic differences in behaviors, orientations, and interactions of the actors associated with each other. It allows for an explicit

understanding of how the interaction history between the exchange partners forms a context that differently influences the perceptions, attitudes, and orientations of the parties involved in an exchange relationship. Despite a widespread realization of its vitality, BRLC is a much under-researched phenomenon in business research. The fragile and complex nature of this phenomenon, lack of an appropriate constitution/ structure, methodological complexity, as well as the time and cost constraints associated with longitudinal studies are some of the reasons behind this lack of BRLC research. Even though the DSO and RV classification and descriptions of the dynamics of business relationships are quite useful, a universal description of the BRLC that transcends across all the business contexts is still awaited. Moreover, much of the empirical research involving BRLC has mostly concentrated on the moderating role of the BRLC while ignoring the possibility that, being a behavioral construct of a higher order, it could also be a subject of research as antecedent, mediator, or an outcome in its own respect. As such, there exists a need for future research, at both the theoretical and the empirical levels, in this area. The theoretical research should endeavor to dig out more about the nature, scope, constitution, definition, description, and dynamics of this phenomenon while treating the same as a mind-set, a state of affect, a philosophy, etc., whereas the empirical research may focus on the development of an integrative explanation about the antecedents of this higher-order behavioral construct/phenomenon. As a first step in this direction, while making an appeal to the relational exchange theory, transaction cost economics, bargaining power theory, and the organizational control model, a framework has been proposed to take an account of the antecedents of the changes which take place in the firms' states of affect during different phases of the development/ evolution of their exchange relationships with other firms. This pioneering effort is geared to set an agenda for the future research to expand the theoretical account extended herein. Future research may endeavor to empirically substantiate the theoretical argument extended in the model discussed in the paper. Future research may also enhance the explanatory power of this model by integrating insights from other relevant theoretical frameworks such as agency theory, game theory, systems theory, real options view, organizational capabilities theory, etc.

References

Abreu D (1988) On the theory of infinitely repeated games with discounting. Econometrica 56:383–396

Allen NJ, Meyer JP (1990) The measurement and antecedents of affective, continuance and normative commitment to the organization. J Occup Psychol 63(1):1–18

Alstyne MV (1997) The state of network organization: a survey in three frameworks. J Organ Comput 7(3):88–151

Anderson E, Jap SD (2005) The dark side of close relationships (customers and suppliers relationships). MIT Sloan Manag Rev 46(3):75–82

Anderson E, Weitz BA (1989) Determinants of continuity in conventional industrial channel dyads. Mark Sci 8(4):310–323

Anderson E, Weitz BA (1992) The use of pledges to build and sustain commitment in distribution channels. J Mark Res 29:18–34

Ariño A, de la Torré J (1998) Learning from failure: towards an evolutionary view of collaborative ventures. Organ Sci 9(3):306–325

Axelrod R (1984) The evolution of cooperation. Basic Books, New York

Baker TL, Simpson PM, Siguaw JA (1999) The impact of suppliers' perceptions of reseller market orientation on key relationship constructs. J Acad Mark Sci 27(1):50–57

Baldauf A, Cravens DW, Piercy NF (2001) Examining the consequences of sales management control strategies in European field sales organizations. Int Mark Rev 18(5):474–508

Bercovitz J, Jap SD, Nickerson JA (2006) Antecedents and implications of cooperative exchange norms. Organ Sci 17(6):724–740

Blau P (1964) Exchange and power in social life. Wiley, New York

Blios KJ, Ivens BS (2006) Measuring relational norms: some methodological issues. Eur J Mark 40(3/4):352–365

Blodgett LL (1991) Towards a resource-based theory of bargaining power in international joint ventures. J Glob Mark 5:35–54

Bloemer J, Odekerken-Schroeder G, Kestens L (2003) The impact of need for social affiliation and consumer relationship proneness on behavioral intentions: an empirical study in a hairdresser's context. J Retail Consum Serv 10(4):231–240

Boddewyn J, Brewer T (1994) International business political behavior: new theoretical directions. Acad Manag Rev 19(1):119–143

Bonacich P (1987) Power and centrality: a family of measures. Am J Sociol 92(5):1170–1182

Boyle B, Dwyer RF, Robicheaux RA, Simpson JT (1992) Influence strategies in marketing channels: measures and use in different relationship structures. J Mark Res 29 (November):462–473

Brewer T (1992) An issue-area approach to the analysis of MNE-government relations. J Int Bus Stud 23(2):295–309

Bueno de Mesquita B (2006) A predictive model of international affairs. In: Bueno de Mesquita B (ed) Principles of international politics. CQ Press, Washington, pp 627–659

Burt R (1977) Power in a social topology. Soc Sci Res 6(1):1–83

Campion MA, Lord RG (1982) A control systems conceptualization of the goal-setting and changing processes. Organ Behav Hum Resour 30:265–287

Cannon JP, Achrol RA, Gundlach GT (2000) Contracts, norms, and plural form governance. J Acad Mark Sci 28(2):180–194

Cardinal LB, Sitkin SB, Long CP (2004) Balancing and rebalancing in the creation and evolution of organizational control. Organ Sci 15(4):411–431

Carson SJ, Madhok A, Wu T (2006) Uncertainty, opportunism, and governance: the effects of volatility and ambiguity on formal and relational contracting. Acad Manag J 49(5):1058–1077

Carver CS, Scheier MF (1981) Attention and self-regulation: a control-theory approach to human behavior. Springer, NewYork

Cetinkaya B, Cuthbertson R, Ewer G, Klaas-Wissing T, Piotrowicz W, Tyssen C (2011) Sustainable supply chain management: practical ideas for moving towards best practice. Springer, Berlin/Heidelberg

Chattopadhyay SP (2001) Relationship marketing in an enterprise resource planning environment. Mark Intell Plan 19(2):136–139

Chaturvedi S, Gaur A (2009) A dynamic model of trust and commitment development in strategic alliances. IIMB Manag Rev 21:173–188

Chen D, Paik Y, Park S (2010) Control in IJVs: evidence from China. J Int Bus Stud 41 (3):526–537

Choi CB, Beamish PW (2004) Split management control and international joint venture performance. J Int Bus Stud 35(3):201–215

Choudhury V, Sabherwal R (2003) Portfolios of control in outsourced software development projects. Inf Syst Res 14(3):291–314

Claycomb C, Frankwick GL (2005) The dynamics of buyer perceived costs during a relationship development process: an empirical assessment. J Bus Res 58(12):1662–1671

Colgate M, Danaher P (2000) Implementing a customer relationship strategy: the asymmetric impact of poor versus excellent execution. J Acad Mark Sci 28(3):373–385

Cooke EF (1999) Control and motivation in sales management through compensation plan. J Mark Theory Pract 7(1):80–83

Crosby LA, Evans KR, Cowels D (1990) Relationship quality in service selling: an interpersonal influence perspective. J Mark 54(3):68–81

Crosby LA, Corner BA, Rieger CG (2009) Breaking up should be hard to do. Mark Manag 18 (1):14–17

Croteau AM, Leger PM, Cassivi L (2008) The role of life cycle concepts in the assessment of interorganizational alignment. Ind Manag Data Syst 108(2):145–161

Cyert RM, March JG (1963/1992) A behavioral theory of the firm, 2nd edn. Prentice Hall, Englewood Cliffs

De Wulf K, Odekerken-Schröder G, Iacobucci D (2001) Investments in consumer relationships: a cross-country and cross-industry exploration. J Mark 65(4):33–50

Doz YL (1996) The evolution of cooperation in strategic alliances: initial conditions or learning processes? Strateg Manag J 17(1):55–83

Dwyer RF, Schurr P, Oh S (1987) Developing buyer-seller relationships. J Mark 51(April):11–27

Eden L, Molot MA (2002) Insiders, outsiders, and host country bargains. J Int Manag 8 (4):359–388

Eggert A, Ulga W, Schultz F (2006) Value creation in the relationship life cycle: a quasi-longitudinal analysis. Ind Mark Manag 35(1):20

Eisenhardt KM (1985) Control: organizational and economic approaches. Manag Sci 31 (2):134–149

Emerson RM (1972) "Exchange theory, Part I: a psychological basis for social exchange" and "Exchange theory, Part II: exchange relations and network structures". In: Berger J, Zelditch M, Anderson B (eds) Sociological theories in progress. Houghton Mifflin, Boston

Falk A, Kosfeld M (2006) The hidden costs of control. Am Econ Rev 96(5):1611–1630

Ferguson JR, Paulin M, Möslein KM, Müller C (2005) Relational governance, communication and the performance of biotechnology partnerships. J Small Bus Enterp Dev 12(3):395–408

Finn A (2005) Reassessing the foundations of customer delights. J Serv Res 8(2):103–116

Flint DJ, Woodruff RB, Gardial SF (2002) Exploring the phenomenon of customers' desired value change in business-to-business context. J Mark 66(4):102–117

Ganesan S (1994) Determinants of long-term orientation in buyer–seller relationships. J Mark 58 (2):1–19

Garbarino E, Johnson MS (1999) The different roles of satisfaction, trust, and commitment in customer relationships. J Mark 63(2):70–87

Geringer M, Hebert L (1989) Control and performance of international joint ventures. J Int Bus Stud 20(2):235–254

Geyskens I, Steenkamp JEM, Scheer LK, Kumar N (1996) The effects of trust and Interdependence on relationship commitment: a trans-Atlantic study. Int J Res Mark 13 (4):303–315

Ghosh M, John G (2005) Strategic fit in industrial alliances: an empirical test of governance value analysis. J Mark Res 37(August):346–357

Goles T, Chin WW (2002) Relational exchange theory and IS outsourcing: developing a scale to measure relationship factors. In: Hirschheim R, Heinzl A, Dibbern J (eds) Information systems outsourcing. Springer, Berlin, pp 221–250

Gourevitch P (1999) The governance problem in international relations. In: Lake DA, Powell R (eds) Strategic choice and international relations. Princeton University Press, Princeton, pp 137–164

Gruen TW, Summers JO, Acito F (2000) Relationship marketing activities, commitment, and membership behaviors in professional associations. J Mark 64(3):34–49

Gundlach GT, Achrol RS, Mentzer JT (1995) The structure of commitment in exchange. J Mark 59 (1):78–92

Hafsi T, Kiggundu MN, Jorgensen JJ (1987) Strategic apex configurations in state-owned enterprises. Acad Manag Rev 12(4):714–730

Hamel G, Doz YL, and. Prahalad C.K. (1989) Collaborate with your competitors—and win. Harv Bus Rev 67(1):133–139

Heffernan T (2004) Trust formation in cross-cultural business-to-business relationships. Qual Mark Res 7(2):114–125

Heide J, John G (1990) Alliances in industrial purchasing: the determinants of joint action in buyer–supplier relationships. J Mark Res 27(1):24–36

Henning-Thurau T, Klee A (1997) The impact of customer satisfaction and relationship quality on customer retention: a critical reassessment and model development. Psychol Mark 14 (8):737–764

Henning-Thurau T, Gwinner KP, Gremler DD (2002) Understanding relationship marketing outcomes: an integration of relationship benefits and relationship quality. J Serv Res 4(3):230–247

Hess J, Story J (2005) Trust-based commitment: multidimensional consumer-brand relationships. J Consum Mark 22(6):313–322

Hibbard JD, Brunel FF, Dant RP, Iacobucci D (2001) Does relationship marketing age well? Bus Strateg Rev 12(4):29–35

Hill CWL (1990) Cooperation, opportunism, and the invisible hand: implications for transaction cost theory. Acad Manag Rev 15:500–513

Holmlund M (2004) Analyzing business relationships and distinguishing different interaction levels. Ind Mark Manag 33(4):279–287

Hsieh Y, Chie H, Hsu Y (2008) Supplier market orientation and accommodation of the customer in different relationship phases. Ind Mark Manag 37(4):380–393

Hwang P (2006) Asset specificity and the fear of exploitation. J Econ Behav Organ 60(3):423–438

Ivens BS (2004) How relevant are different forms of relational behavior? An empirical test based on Mcneil's exchange framework. J Bus Ind Mark 19(5):300–309

Ivens BS (2006) Norm-based relational behaviors: is there an underlying dimensional structure. J Bus Ind Mark 21(2):9–105

Jap SD (2001) The strategic role of the sales force in developing customer satisfaction across the relationship lifecycle. J Pers Sell Sales Manag 21(2):95–108

Jap SD, Anderson E (2007) Testing a life-cycle theory of cooperative inter-organizational relationships: movement across stages and performance. Manag Sci 53(2):260–275

Jap SD, Ganesan S (2000) Control mechanism and the relationship life cycle: implications for safeguarding specific investments and developing commitment. J Mark Res 37(2):227–245

Jap SD, Manolis C, Weitz BA (1999) Relationship quality and buyer-seller interactions in channels of distribution. J Bus Res 46(3):303–313

John G, Weitz BA (1988) Forward integration into distribution: an empirical test of transaction cost analysis. J Law Econ Organ 4:337–355

Johnson MD, Selnes F (2004) Customer portfolio management: toward a dynamic theory of exchange relationships. J Mark 68(2):1–17

Joshi AW, Stump RL (1999) Transaction cost analysis: integration of recent refinements and empirical test. J Bus-to-Bus Mark 5:37–71

Kamminga PE, Van der Meer-Kooistra J (2007) Management control patterns in joint venture relationships: a model and an exploratory study. Acc Organ Soc 32:131–154

Kaufman PJ, Stern LW (1988) Relational exchange norms, perceptions of unfairness, and retained hostility in commercial litigation. J Confl Resolut 32(3):534–552

Kirsch LJ (1996) The management of complex tasks in organizations: controlling the systems development process. Organ Sci 7(1):1–21

Kirsch LJ (1997) Portfolios of control modes and IS project management. Inf Syst Res 8 (3):215–239

Kirsch LJ (2004) Deploying common systems globally: the dynamics of control. Inf Syst Res 15 (4):374–395

Knoke D (1990) Political networks: the structural perspective. Cambridge University Press, Cambridge

Koza MP, Lewin AY (1998) The co-evolution of strategic alliances. Organ Sci 9(3):255–264

Krishnan R, Martin X, Noorderhaven NG (2006) When does trust matter to alliance performance. Acad Manag J 49(5):894–917

Larson A (1992) Network dyads in entrepreneurial settings: a study of the governance of exchange relationships. Adm Sci Q 37(1):76–104

Lazonick W, O'Sullivan M (1996) Organization, finance, and international competition. Ind Corp Chang 5(1):1–49

Lazzarini SJ, Miller GJ, Zenger TR (2008) Dealing with the Paradox of embeddedness: the role of contracts and trust in facilitating movement out of committed relationships. Organ Sci 19 (5):709–728

Leuthesser L (1997) Supplier relational behavior: an empirical assessment. Ind Mark Manag 26 (3):245–254

Lord RG, Hanges PJ (1987) A control system model of organizational motivation: theoretical and applied implications. Behav Sci 32:161–178

Luthans F (2006) Organizational behaviour. McGraw-Hill, New York

Macneil IR (1978) Contracts: adjustment of long-term economic relations under classical, neo-classical, and relational contract law. Northwest Univ Law Rev 72(6):854–905

Macneil IR (1980) The new social contract. Yale University Press, New Haven

Mahon J, Heugens P, Lamertz K (2004) Social networks and non-market strategy. J Public Aff 4 (2):170–189

McDonald GW (1981) Structural exchange and marital interaction. J Marriage Fam 43:825–839

Medlin CJ (2004) Interaction in business relationships: a time perspective. Ind Mark Manag 33 (2):185–193

Mohr JI, Spekman RE (1994) Characteristics of partnership success: partnership attributes, communication behavior and conflict resolution techniques. Strateg Manag J 57(1):135–152

Moorman C, Zaltman G, Deshpande R (1992) Relationships between providers and users of market research: dynamics of trust within and between organizations. J Mark Res 29 (8):314–328

Morgan RM, Hunt SD (1994) The commitment-trust theory of relationship marketing. J Mark 58 (3):20–38

Nebus J, Rufin C (2010) Extending the bargaining power model: explaining bargaining outcomes among nations, MNEs and NGOs. J Int Bus Stud 41:996–1015

Noordewier T, John G, Nevin J (1990) Performance outcomes of purchasing arrangements in industrial buyer-vendor relationships. J Mark 54:80–93

Ouchi W (1977) The relationship between organizational structure and organizational control. Adm Sci Q 22:95–113

Ouchi W (1979) A conceptual framework for the design of organizational control mechanisms. Manag Sci 25:833–848

Ouchi WG (1980) Markets, bureaucracies and clans. Adm Sci Q 25:120–142

Paine LS (1995) Managing for organizational integrity. Harv Bus Rev 72(2):106–117

Palmatier RW, Dant RP, Grewal D, Evans KR (2006) Factors influencing the effectiveness of relationship marketing: a meta-analysis. J Mark 70(4):136–153

Palmatier RW, Dant RP, Grewal D (2007) A comparative longitudinal analysis of theoretical perspectives of interorganizational relationship performance. J Mark 71(4):172–194

Park SH, Ungson G (2001) Inter-firm rivalry and managerial complexity: a conceptual framework of alliance failure. Organ Sci 12(1):37–53

Parkhe A (1993) The structure of strategic alliances: a game-theoretic and transaction cost examination on the dissolution of joint ventures. Acad Manag J 40(2):279–307

Paulin M, Ferguson RJ, Salazar AMA (1999) External effectiveness of service management: a study of business-to-business relationships in Mexico, Canada and the USA. Int J Serv Ind Manag 10(5):409–429

Powell WW, Koput K, Smith-Doer L (1996) Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology. Adm Sci Q 41:115–145

Rajaobelina L, Bergeron J (2009) Antecedents and consequences of buyer-seller relationship quality in the financial services industry. Int J Bank Mark 27(5):359–380

Ramamurti R (2001) The obsolescing 'bargain model'? MNC-host developing country relations revisited. J Int Bus Stud 32(1):23–39

Redendo YP, Fierro JJC (2006) Moderating effect of relationship life cycle in long-term orientation of firm-supplier relationships: an empirical study in the Spanish context. J Glob Mark 19 (3/4):63–91

Reve T, Stern LW (1976) The relationship between interorganizational form, transaction climate and economic performance in vertical interfirm dyads. In: Pellergrini L, Reddy S (eds) Marketing channels: relationships and performance. Lexington Books, Lexington, pp 75–102

Ring PS, Van de Ven AH (1992) Structuring cooperative relationships between organizations. Strateg Manag J 13(7):483–498

Ring PS, Van de Ven AH (1994) Developmental processes of cooperative interorganizational relationships. Acad Manag Rev 19(1):90–118

Roehrich G, Spencer R, Valette-Florence P (2002) The nature of relationship atmosphere and links with the value of relationships: the case of Europe and Asia. In: Proceedings from the 18th IMP conference in Perth, Australia

Rousseau DM, Sitkin SB, Burt RS, Camerer C (1998) Not so different after all: a cross-discipline view of trust. Acad Manag Rev 23:393–404

Rustagi S, King WR, Kirsch LJ (2008) Predictors of formal control usage in IT outsourcing partnerships. Inf Syst Res 19(2):126–143

Ryu S, Park JE, Min S (2007) Factors of determining long-term orientation in interfirm relationships. J Bus Res 60(12):1225–1233

Sacconi L (2007) Incomplete contracts and corporate ethics: a game theoretical model under fuzzy information. In: Caffagi F, Nicita A, Pagano U (eds) Legal orderings and economic institutions. Routledge, London

Sacconi L (2010) A Rawlsian VIEW of CSR and the game theory of its implementation (Part II): fairness and equilibrium (August 5, 2010). Econometica Working Paper No. 23. Available at SSRN. http://ssrn.com/abstract=1777989 or http://dx.doi.org/10.2139/ssrn.1777989

Schul PL, Taylor EL, William MP (1985) Channel climate: its impact on channel members' satisfaction. J Retail 61(2):9–38

Selnes F (1998) Antecedents and consequences of trust and satisfaction in buyer–seller relationships. Eur J Mark 32(3/4):305–322

Seppänen R, Blomqvist K, Sundqvist S (2007) Measuring inter-organizational trust: a critical review of the empirical research in 1990–2003. Ind Mark Manag 36:249–265

Skarmeas D, Katsikeas CS, Schlegelmilch BB (2002) Drivers of commitment and its impact on performance in cross-cultural buyers-seller relationships: the importer's perspective. J Int Bus Stud 33(4):757–783

Spekman RE (1988) Strategic supplier selection: understanding long-term buyer. Bus Horiz 31 (4):75–81

Spekman RE, Kamauff JW, Myhr N (1998) An empirical investigation into supply chain management: a perspective on partnerships. Supply Chain Manag 3(2):53–67

Steensma HK, Lyles ML (2000) Explaining IJV survival in a transitional economy through social exchange and knowledge-based perspectives. Strateg Manag J 21:831–851

Storbacka K, Strandvik T, Grönroos C (1994) Managing customer relationships for profit: the dynamics of relationship quality. Int J Serv Ind Manag 5(5):21–38

Sun H (2010) Transferring attributes of e-commerce systems into business benefits: a relationship quality perspective. J Electron Commer Res 11(2):92–109

Sutcliffe KM, Zaheer A (1998) Uncertainty in the transaction environment: an empirical test. Strateg Manag J 19(1):1–23

Turner KL, Makhija MV (2006) The role of organizational controls in managing knowledge. Acad Manag Rev 31(1):197–217

Ulaga W, Eggert A (2006) Relationship value and relationship quality: broadening the nomological network of business-to-business relationships. Eur J Mark 40(3/4):311–327

Ural T (2007) The antecedents and consequences of relationship quality according to stages of the relationship between exporters and importers. Probl Perspect Manag 5(3):111–138

Verbeke A, Greidanus NS (2009) The end of the opportunism vs trust debate: bounded reliability as a new envelope concept in research on MNE governance. J Int Bus Stud 40(9):1471–1495

Verhoef PC, Franses PH, Hoekstra JC (2002) The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: does age of relationship matter? J Acad Mark Sci 30(3):202–216

Voss KE, Johnson JL, Culln JB, Sakano T, Takenouchi H (2006) Relational exchange in US-Japanese marketing strategic alliances. Int Mark Rev 23(6):610–635

Walter A, Muller T, Helfert G, Ritter T (2003) Functions of industrial supplier relationships and their impact on relationship quality. Ind Mark Manag 32(2):159–169

Wang Q, Li JJ, Ross WT, Craighead CW (2012) The interplay of drivers and deterrents of opportunism in buyer-supplier relationships. J Acad Mark Sci 41(1):111–131

Wathne KH, Heide JB (2000) Opportunism in interfirm relationships: forms, outcomes, and solutions. J Mark 64(3):36–51

Williamson OE (1975) Markets and hierarchies: analysis and antitrust implications. The Free Press, New York

Williamson OE (1979) Transaction-cost economics: the governance of contractual relations. J Law Econ 22(2):233–261

Williamson OE (1985) The economic institutions of capitalism. The Free Press, New York

Wilson DT (1995) An integrated model of buyer-seller relationships. J Acad Mark Sci 23(4):335–345

Windsperger J, Kocsis E, Rosta M (2009) Exploring the relationship between decision and ownership rights in joint ventures: evidence from Hungarian joint ventures. Int Stud Manag Organ 39:43–59

Wong A, Sohal A (2002) An examination of the relationship between trust, commitment and relationship quality. Int J Retail Distrib Manag 30(1):34–50

Woo GK, Cha Y (2002) Antecedents and consequences of relationship quality in hotel industry. Int J Hosp Manag 21(4):321–338

Wray B, Palmer A, Bejou D (1994) Using neural network analysis to evaluate buyer–seller relationships. Eur J Mark 28(10):32–48

Xu D, Meyer KE (2013) Linking theory and context: strategy research in emerging markets after Wright et al. (2005). J Manag Stud 50(7):1322–1346

Yadong L (2007) An integrated anti-opportunism system in international exchange. J Int Bus Stud 38:855–877

Yadong L, Shenkar O, Nyaw M-K (2001) A dual parent perspective on control and performance in international joint ventures. J Int Bus Stud 32(1):41–58

Yan A, Gray B (1994) Bargaining power, management control, and performance in US China joint ventures: a comparative case study. Acad Manag J 37:1478–1517

Yan A, Gray B (2001) Antecedents and effects of parent control in international joint ventures. J Manag Stud 38:393–416

Yaqub MZ (2009) The antecedents, consequences, and control of opportunistic behavior in strategic networks. J Bus Econ Res 7(2):15–31

Yaqub M (2013a) The impact of relational norms on key relational outcomes in supplier–buyer relationships. In: Ehrman T, Windsperger J, Cliquet G, Hendrikse G (eds) Network governance: alliances, cooperatives and franchise chains. Springer, Heidelberg, pp 51–72

Yaqub MZ (2013b) Value enhancement through value creating relational investments in inter-firm relationships: the moderating role of leverage potential and relational polygamy. Manag Decis Econ 34(3–5):328–346

Yaqub MZ, Hussain D (2013) How do the relational investments affect relational outcomes? J Appl Bus Res 29(2):433–442

Yaqub MZ, Vetschera R (2011) The efficacy of relational governance and value-creating relational investments in revenue-enhancement in downstream networks. In: Hendrikse G, Tunnanen M, Windsperger J, Cliquet G (eds) New developments in the theory of networks: franchising, alliances and cooperatives. Springer, Berlin

Yaqub MZ, Yaqub RMS, Nazar MS (2010) Dynamics of motivation in strategic networks. Eur J Econ Finance Adm Sci 19:28–33

Zaheer A, Venkatraman N (1995) Relational governance as an organizational strategy: an empirical test of the role of trust in economic exchange. Strateg Manag J 16(5):373–392

Zhang C, Cavusgil ST, Roath A (2003) Manufacturer governance of foreign distributor relationships: do relational norms enhance competitiveness in the export market? J Int Bus Stud 34(6):550–566

Zhou KZ, Poppo L (2010) Exchange hazards, relational reliability, and contracts in China: the contingent role of legal enforceability. J Int Bus Stud 41(5):861–881

Zineldin M (1996) Bank-corporate client "partnership" relationship: benefits and life cycle. Int J Bank Mark 14(3):14–22

Zineldin M (2002) Developing and managing a romantic business relationship: life cycle and strategies. Manag Audit J 17(9):546–558

Food Safety Management Through the Lens of Hybrids: The Case of Fresh Fruit and Vegetable Shippers

Jean-Marie Codron, Alejandra Engler, Cristian Adasme-Berríos, Laure Bonnaud, Zouhair Bouhsina, and Gabriela Cofre-Bravo

Abstract Managing the pesticide safety risk to provide end markets with safe fruit and vegetables raises complex issues due to the diversity and stringent nature of public and private safety requirements and the high cost of controlling the product and the production process. More often than not, this leads to the development of diversified and more integrated relationships between growers and their buyers. Our paper is a case study of the hybrid forms underlying such relationships. It begins by developing the analytical framework, drawing on transaction cost, positive agency, and property rights theories with a special focus on the model proposed by Ménard (*The Handbook of Organizational Economics*, Princeton, 1066–1108, 2013), positioning the hybrid forms along the two dimensions of decision rights and strategic resources. It then presents a selection of quantitative and qualitative findings obtained from data collected through face-to-face interviews with managers of fresh produce shipping firms in France and Chile. Both case studies confirm that the level of centralization increases with the buyer's commercial reputation, the level of customer safety requirements (a key component in the marketing strategy of the buyer), and the level of asset specificity which is mostly embedded in the technical assistance and training provided by the buyer to the growers. Moreover,

J.-M. Codron (✉) • Z. Bouhsina
French National Institute for Agricultural Research, UMR1110 MOISA, 2 Place Pierre Viala, 34060 Montpellier Cedex1, France
e-mail: codron@supagro.inra.fr; zouhair.bouhsina@inra.fr

A. Engler • G. Cofre-Bravo
Faculty of Agrarian Science, Department of Agricultural Economics, University of Talca, Lircay s/n, Talca, Chile
e-mail: engler@utalca.cl; gcofre@utalca.cl

C. Adasme-Berríos
Faculty of Social Science and Economy, Department of Economy and Administration, Universidad Católica del Maule, Avenida San Miguel, 3605 Talca, Chile
e-mail: cadasme@ucm.cl

L. Bonnaud
French National Institute for Agricultural Research, UR RiTME, 65 Boulevard de Brandebourg, 94200 Ivry-sur-Seine, France
e-mail: laure.bonnaud@ivry.inra.fr

our paper establishes a clear divide between firms that only control product safety at the delivery stage and firms that also control safety throughout the production process and may take decisions on behalf of the grower before harvesting.

1 Introduction

Food scares and consumers' suspicions concerning pesticides have led to the development of public and private standards relating to the use of pesticides in agricultural production and to the pesticide residue levels not to be exceeded when marketing the products (Codron et al. 2005; Fulponi 2006). They have also led to stricter control of these standards by both the public authorities and the private sector. At a European level, a thorough review of food regulations gave rise to the General Food Law (Regulation R178/2002 which took effect on January 1, 2006) which henceforth required all operators in the supply chain to check the safety of the products on sale and in particular their compliance with the residue standards (Rouvière and Latouche 2014).

This obligation primarily concerns the first trader, i.e., the operator in the value chain immediately after the producer. The former was required to define more stringent rules than the public regulations, to impose best practice standards requiring third-party certification, and to revise the control and monitoring procedures implemented by their suppliers. Over a period of 10 years, the simple control of the product and the best practice certificates approved by third parties became a more complete and more complex control also targeting the production process and implemented directly by the buyer.

In the fresh produce sector where pesticides are the main concern for human health, buyers facing stringent pesticide safety requirements do not limit their control to the product itself (pesticide residue analysis at the platform level) but are also involved in controlling the production process (monitoring and often taking decisions with regard to certain production practices). The more tightly meshed coordination desired for this type of control is all the more necessary as perishability must also be managed. With the development of health requirements in the fruit and vegetable sector, we therefore observe increased integration in the transaction between the producer and his buyer, often reflected by the transfer of decision and control rights from the producer to the buyer.

From a theoretical point of view, such coordination issues are better governed by hybrid forms and sometimes hierarchical forms which develop as substitutes for the previously dominant market forms. According to transaction cost theory, hybrid forms or hybrids are intermediate forms between market and hierarchy. They combine market incentives and coordination rules (Williamson 1991). More insightful is the characterization by property rights scholars who suggest modeling these intermediate forms by differentiating decision rights from property rights and looking at the allocation of these distinct rights among the parties to a transaction (Baker et al. 2008; Ménard 2013). Hybrid forms can first and foremost be explained

by a need to improve coordination while managing the risk of opportunism linked to the use of strategic or specific resources. They can be analyzed as in the simplified model put forward by Ménard (2013) which calls on both TCT and property rights theories according to the two main determinant variables: the level of strategic resources or specific assets pooled in the transaction and the level of centralization of the controls or decisions when completing the transaction. In particular, this makes it possible to go beyond the simple dichotomy between the market and hybrid forms or hybrid forms and integration and to differentiate hybrid forms according to the specific assets and the allocation of property rights, two criteria which are pivotal to TCA and PR theories, respectively.

According to Ménard (2014), however, few works have made it possible to specify Ménard's model and to test the relationship that exists between the allocation of rights and the strategic resources pooled. Our paper contributes to bridging this gap by producing a health risk management model in the relationship between fruit and vegetable producers and shippers enabling the two key variables of Ménard's model to be specified and the relationship between these two variables predicted by Ménard's model to be tested. The model is specified and tested using data collected by means of two face-to-face surveys, one conducted in France with 20 groups of tomato producers (Codron et al. 2013) and the other conducted in Chile with 33 fresh fruit exporters (Engler et al. 2016). Our survey highlights a diversity of hybrid forms which can be characterized by the degree of centralization of the main safety strategic decisions (residue controls on the products, control of the production process). We show that such diversity depends not only on the safety-specific strategic resources but also on certain general organizational and marketing strategic choices.

Our paper is organized as follows. Section 2 develops our analytical framework, based primarily on the transaction cost, organizational, and property rights theories with a special focus on the model proposed by Ménard (2013) positioning the hybrid forms along the two dimensions of decision rights and strategic resources. Section 3 specifies Ménard's model in the case of managing the pesticide safety risk in the fresh produce sector. To this end, it identifies the nature of the transactional issue and builds on the analytical framework to characterize the allocation of decision rights and formulate hypotheses concerning the factors influencing this allocation. Section 4 is an empirical test of the predictions of the theory, based on the data collected through face-to-face interviews with firm managers in two case studies (French tomato shippers and Chilean fruit exporters). It aims to explain why safety controls are performed through a diversity of hybrid forms. Section 5 compares the two case studies, highlighting the key theoretical and empirical contributions of our paper, its managerial implications, and the associated limitations. Section 6 concludes and suggests avenues for further research.

2 Analytical Framework of the Hybrid Forms

Safety management pursues two different and contrasting objectives: on the one hand, it aims to minimize control costs by providing incentives and the appropriate coordination rules in order to avoid agent opportunism, free riding, or shirking and to protect specific investments against the threat of holdup by the other party to the transaction. On the other hand, it endeavors to maximize the creation of value by pooling specific resources and encouraging learning or the development of skills while minimizing the coordination costs necessary to adapt to exogenous uncertainty. Although both objectives are usually pursued by the firms included in our survey, we have focused on rent appropriation and the governance solutions that help minimize control costs, leaving the magnitude and impact of the other objective for further research.

Different bodies of literature have addressed the issues of transaction costs and rent appropriation by considering the diversity of governance solutions, their legal status, structures, mechanisms, and performance and elaborating hypotheses concerning the factors influencing the choice of a governance solution. Among the most influential are transaction cost theory (TCT) and positive agency theory (PAT). The TCT branch of governance (Williamson 1991), which is the most influential, focuses on asset specificity and the consequent threat of holdup over the rent derived from the implementation of specific assets. Solutions to overcome such contractual hazards have been extensively studied in transaction cost theory (for literature surveys, see, for instance, Shelanski and Klein 1995; Macher and Richman 2008). The prediction in a context of radical uncertainty is that the greater the asset specificity, the more integrated the governance structure of the transaction will be.

Additional insights have been given by Barzel, who is identified as a leader in the field of measurement in TCT (Williamson 1985), and scholars of the positive agency theory (Jensen and Meckling 1976; Fama 1980; Eisenhardt 1989). Both theories raise the issue of measurement costs for the organization of a relationship. In the former, a main source of measurement cost is the difference in expertise when estimating the value of the good which may lead to a risk of information manipulation by the party with more expertise. The positive agency theory emphasizes monitoring expenditure by the principal, bonding expenditure, and residual loss in organizations featuring tasks exhibiting non-separability and/or low programmability. While non-separability deals with the difficulty in measuring certain attributes of the output, low programmability relates to the production process and the difficulty in programming certain important decisions ex ante, in the contract or the agreement, which condition the performance of the transaction. A main result in both theories (TCT branch of measurement and PAT) is that the higher the measurement costs, the more integrated the governance structure. Of course, both asset specificity and measurement costs may be important issues in the transaction at stake. Considering the complementary predictions of TCA and PAT, Mahoney

(1992) built a predictive matrix of the solutions arising from variations of asset specificity, output separability, and process programmability.

Property rights theories (Grossman and Hart 1986; Hart and Moore 1990) allow for a complementary analysis of the institutional arrangements by focusing on decision rights and relating them to ownership rights. They help explain the structure of residual decision rights by the distribution of assets that generate the firm's residual surplus. Barzel (1989, 2005) and Ménard (2013), who both claim to belong to TCT and more widely NEI, also contribute to the development of property rights theories by combining the two theories to predict the choice of governance structure. Barzel, who focuses on measurement costs as a main source of transaction costs, predicts that parties faced with high measurement costs will allocate control and decision rights to the party with more expertise, provided that the party with less expertise, which abandons some control and decision rights, is given guarantees concerning the sharing of the quasi-organizational rent.

Ménard (2013), who clearly sides with Williamson's thoughts, oriented a large part of his work toward the analysis of hybrid forms, the modalities of their governance, and the factors explaining the choice of these modalities. Drawing on property rights theories, he clearly differentiates hybrids from markets and hierarchies and defines them as arrangements where "key rights are in the hands of autonomous partners who retain titles as residual claimants, while subsets of assets, rights, and associated payoffs are shared and monitored jointly." He then observes that there is, in reality, a broad diversity of hybrids such as franchising, strategic alliances, and cooperatives (Ménard 2013, chapter "A Short Visit to the Zoo"), but notes that "efforts for capturing the specificity of the arrangements within a coherent analytical framework remain underdeveloped." He thus calls for a transversal model that would allow the different categories of hybrids to be analyzed with a few key concepts. To develop such a model, Ménard refers to the works of the property rights theory and in particular to the model proposed by Baker et al. (2008) who suggested modeling alternative organizational arrangements by differentiating decision rights from property rights and looking at the allocation of these distinct rights among parties to a transaction.

Ménard goes a step further by providing a simplified model based on the central prediction of the property rights theories saying that the greater the pooling of ownership rights, the higher the level of centralization (or pooling) of decision rights between the parties. In this two-dimensional model (Fig. 1), the horizontal axis measures the level of strategic resources and associated ownership rights that might be pooled, while the vertical axis is defined by the level of centralization in the coordination and control of the pooled strategic resources, a level which may be deemed a good proxy of the regime of allocation of the decision rights.

The link with the theory of transaction costs is clear. On the horizontal axis, the strategic resources may be considered as the specific assets in the Williamson terminology. They also may include the knowledge, skills, or expertise that helps reduce measurement costs as underlined in Barzel's TCT branch of measurement or in the positive agency theory. On the other hand, the level of centralization or decentralization of decision rights may be seen as a key feature of the governance

Fig. 1 Positing the "hybrids" along the two dimensions of decision rights and strategic resources. Source: Ménard in Gibbons and Roberts (2013)
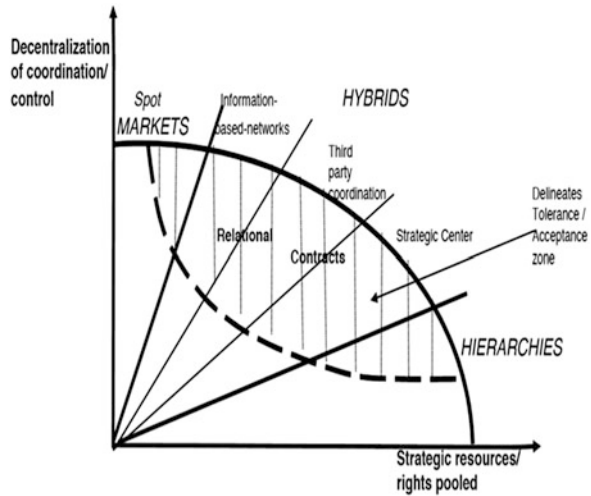
structure. We thus retrieve the central prediction of Williamson, establishing a relationship of causality between asset specificity and the choice of governance structure.

This model makes it possible to posit hybrids and differentiate them according to the intensity observed in sharing both types of rights. Three types of governance of hybrids are identified, corresponding to a specific coordination device and at the same time to a different allocation of control and ownership rights: information-based networks, third-party coordination, and strategic center. Hybrids relying on information-based networks are the least centralized systems and have little or no pooled strategic resources, while hybrids having established a strategic center, which may be one of the two parties or a common entity, are the arrangements with the highest level of decision centralization and the highest rate of pooled assets. Third-party-coordination hybrids are an intermediate type.

Relational contracts add to the governance mechanisms of decision rights allocation. They play a significant role in coordinating and enforcing hybrid arrangements. Because of the importance of non-contractible elements in the hybrid arrangement, there is a need for tightly meshed relations to limit the impact of (a) imperfect and costly information, (b) opportunistic behavior, and (c) difficulties for outsiders to enforce agreements plagued with non-verifiable elements (Goldberg 1980; Baker et al. 2002). Relational contracts thus help maintain stability and efficiency and delineate a zone of tolerance and acceptance below the optimization frontier; this area, represented as a lens on the graph, has a lower boundary (dotted line) below which a hybrid loses efficiency and can no longer survive.

3   The Specific Pesticide Safety Management Model

The Ménard model is useful in giving analytical insights into the management of the pesticide safety risk in the fresh produce sector and describing the hybrid form underlying such management. A preliminary step in this description is to characterize the nature of transaction costs and the sources of transaction costs (specific assets, uncertainty, reputation, and collective action) before identifying the appropriate mechanisms to govern the safety objective and the significance of their role in the governance structure.

3.1   Nature and Sources of the Safety Transaction Costs

Before safety quality became a crucial dimension of the transaction between a producer and a buyer, relationships were managed with market or close-to-market mechanisms. Buyers' requirements focused mostly on volume, commercial quality, and logistics. Since all these transaction attributes were easy to measure, there was no need for incomplete contracts. Complete contracts with pure incentives were sufficient to govern the relationship and provide buyers with the required characteristics. With the development of pesticide safety requirements one or two decades ago, significant changes have occurred in the farmer-buyer relationship. Transaction costs, which were previously very low, have significantly increased and have become pivotal to the choice of control strategy.

Transaction costs are basically derived from an agency issue where the goals of the farmer (maximizing yield) may conflict with the goals of the buyer (compliance with safety rules) and where deviant behavior is difficult to detect given the strong exogenous hazards. Farmers may thus be reluctant to reveal information or to produce information that may be useful to the buyer with regard to safety management. For instance, a farmer may prefer to use a forbidden pesticide which is cheaper and may have a stronger impact on the pest but which is not accepted by the buyer for regulatory or customer-related reasons. To reduce such agency costs, buyers may choose to focus their controls on the product or the production process.

Controls implemented on the product to detect pesticide residues are costly (Ruben et al. 2007), if not prohibitive if applied to all products delivered by the growers. This leads buyers to use sampling and penalties to enforce compliance with safety requirements. However, given the complex production function and the high level of environmental uncertainty, it is difficult to distinguish between a grower's efforts and hazard and thus to draft a complete contract and determine the optimal sanction which could lead a grower to make the "utmost effort" required by the buyer. Consequently, most buyers are encouraged to draft incomplete contracts and to monitor growers' efforts in the production process.

Controls targeting the production process mean high transaction costs, due mainly to uncertainty and asset specificity. Uncertainty derives from the complexity

of the production function and the difficulty in evaluating the right decision (Codron et al. 2013) for some key pest and disease management activities. Decisions concerning activities such as chemical spreading or the introduction of biological auxiliaries are so complex and contingent on fluctuating parameters which have to be measured at the last moment that they cannot be defined ex ante and have to be taken at short notice. Such uncertainty is also observed in the literature as (low) ease of measurement (Williamson 1991), difficulty of measurement (Barzel 1982), or low task programmability (Ouchi 1979; Eisenhardt 1985). Allocation of monitoring and decision rights to the party best informed (Barzel 1989) allows such uncertainty to be reduced but, at the same time, creates new transaction costs referred to as "errors of measurement" by Barzel (2005) and relating to the possible manipulation of information by the party which has been allocated control and decision rights. In our case study, it is usually the buyer who is granted this allocation as he is the better informed due to his market knowledge and his greater resources to recruit technical advisors. Of course, there is variation in this allocation of decision rights. While the buyer usually decides the phytosanitary program, he may allow some leeway in the application of the program, depending on a grower's phytosanitary skills and the buyer's technical resources.

Asset specificity is mainly embodied by the human resources that the buyer invests to perform his controls of the production process. Most buyers recruit technicians with some knowledge of IPM to recommend or impose actions to be taken by the grower. Given the exogenous uncertainty and the difficulty in monitoring the grower, there is potential for grower opportunism and a risk of poor efficiency on the part of the technician. Drawing on the literature on the allocation of property rights (Barzel 1989) and asset specificity (Williamson 1991), the risk of maladaptation or abusive appropriation of the quasi-organizational rent created in the grower-buyer transaction increases with uncertainty (or difficulty to measure), asset specificity, and the safety level targeted by the buyer.

A third class of transaction costs has to be considered for the protection of the commercial brand or reputation of the buyer. If the buyer is a private firm, the brand may be considered as a specific asset which has to be protected from grower opportunism. If the buyer is a marketing group, the brand is a collective good which generates free-riding and exclusion costs. Such transaction costs increase significantly with the development of safety, as reputation now depends on the capacity of the private firm or the marketing group to deliver a safe product, which is a relatively costly affair. The rules to comply with customer requirements are indeed difficult to define and monitor, while the incentives to reward safety performance are almost nonexistent. Before safety became a commercial issue, the costs for building and protecting a commercial reputation were mostly production costs and less so transaction costs. It was indeed much easier to control for opportunism or free riding when delivering the product as the attributes (size, color, packaging, etc.) were easier to measure and reward. As a result, coordination with suppliers was mostly governed by incentives and there was little need for the allocation of control/decision rights.

A fourth class of transaction costs exists in the case of marketing groups since, according to Olson, free-riding costs increase with the size of the group. Of course, traceability helps identify the defaulting grower and alleviate the responsibility of the group. Best agricultural practices standards, such as GlobalGap or Tesco, help improve individual behavior and mitigate the risk of opportunism. However, they do not totally exonerate the buyer or the group which is deemed responsible for grower control, must justify such a flaw, and may suffer damage to its commercial reputation. We can therefore expect that the delegation of authority, which helps reduce transaction costs, will increase with commercial reputation and, in the case of marketing groups, with the size of the group. This is in line with the emerging literature on contract design focusing on the allocation of control/decision rights (Arrunada et al. 2001; Hu and Hendrikse 2009).

3.2   Governance Structures and Mechanisms

In the model proposed by Ménard, the allocation of decision rights is equated to a governance structure and the strategic resources to specific assets. However, the allocation of decision rights that we adopt as a solution to manage the health risk cannot be equated with the entire governance structure. This specific allocation is actually one governance mechanism among others in the governance structure governing the transaction between the producer and his buyer (Bijman et al. 2013). We must therefore ensure that the other governance mechanisms will not have a significant impact on the relationship we assume exists between the allocation of decision rights to manage the health risk and the strategic resources implemented to manage this health risk.

In both situations studied, we have observed that other governance mechanisms may play an important role in characterizing the governance structure or the level of centralization of the decision-making process. This is particularly the case for the allocation of rights for product commercialization or the management of the commercial quality of the products.

The allocation of rights relating to marketing decisions exists in particular for negotiations with potential customers and the assignment of production to meet the customer demand. In a simple grower-buyer relationship, the marketing decision more often than not belongs to the buyer who is entrusted by the grower to sell his product. In the fresh produce sector, there used to be frequent transfers of decision rights from the grower to the shipper for product commercialization. This is true for cooperatives or producers' organizations which mandate a marketing manager to sell their products. This may also be true for private buyers when there is a need to sell on consignment, which is the case in the Chilean case study. Selling on consignment is a common method of selling for long-distance exports by boat, for instance from Valparaiso to Rotterdam, where the minimum duration is 21 days. In such conditions, it is not possible to fix a firm price in advance at loading due to the high price volatility on this market. As a result, consignment is still the most

widespread means of selling fresh produce for these long-distance exports by boat. Although the grower remains the owner of the fruit, consignment means that he has to abandon his decision rights for selling the product to the shipper (exporter), who himself often transfers the marketing decision rights to an importer.

The allocation of decision rights concerning the sale of the products may lead to certain information asymmetries, in particular when the buyer is a private entity. There are nevertheless numerous strategies available to the producer to reduce this information asymmetry (prices regularly communicated by the buyer throughout the season, informal producer networks creating a certain transparency with regard to the prices obtained from different buyers, producer organization centralizing invoices for a season and render each individual price in relation to reference prices, etc.). Rights are therefore allocated not to reduce transaction costs but to reduce production costs. If rights are allocated for the commercialization, this is done for reasons of efficiency and economies of scale as effective commercialization requires both large volumes and specific competences without this leasing to high transaction costs. It is crucial to note that in both cases (marketing group and private buyer), the transfer of decision and control rights only concerns the commercialization of the product and does not extend to the production of this product.

Governance mechanisms could also be envisaged to manage the commercial quality of the product (size, color, faults, sugar level, etc.). As these characteristics are easy to measure, the commercial quality of a product at delivery is often transparent for both parties and is not subject to manipulation by the buyer. Nor does the buyer gain any advantage by deciding how these characteristics are produced instead of the producer as the price mechanism and the commercial quality standards are very effective in guiding the producers' actions. The allocation of decision rights with regard to the production process is therefore almost nonexistent. The buyer simply provides market information and indicates his customers' preferences which result from his commercial strategy. Commercial quality is therefore primarily managed according to a "price"-type governance mechanism and is generally not the subject of an "allocation of decision rights" type of governance.

The transfer of decision/control rights may be much more extended as soon as there are safety requirements at stake. Such a transfer is primarily used to reduce the transaction costs linked to the difficulty of measuring the product or programming the production process. As a matter of fact, it is difficult and costly to measure product safety and thus to define incentives to reward safety performance. For the same reasons, products with excess residues due to exogenous hazards are not punished and receive the same price as compliant products. It is therefore much more efficient to complement product monitoring by monitoring the production process. However, the latter remains a difficult task to perform. Many decisions concerning the production process cannot be planned in advance and have to be taken at short notice. This is true of chemical treatments or integrated pest management. In line with the theoretical prediction of Barzel (TCA branch of measurement) and Mahoney (PAT), non-programmability may lead to a transfer of decision/control rights to the party with more expertise accompanied by

compensation for the other party to the transaction. In our case, the difficulty of programming crucial actions such as IPM may lead to a transfer of control/decision rights over the production process to the buyer who clearly has much more information concerning the customers' safety requirements than the grower and, more often than not, enjoys better technical expertise than the grower.

As a first approximation, we have thus assumed that the allocation for the management of health quality leads to the highest possible involvement of the buyer in the producer's decision concerning production. In multitiered structures (cooperatives or private exporters) with a transfer of control and decision rights concerning the production process, the issue is how the rights are allocated among the different tiers of the structure. Strategic decisions, such as the phytosanitary program to be imposed on the growers, are usually taken at the central level which has the best information concerning customers and their safety requirements and where branding activities take place. Conversely, most decisions relating to the application and adjustment of safety programs to local hazards (pest pressure, climate, etc.) are much more efficient when they are taken at the local level by intermediate structures which are better informed about the idiosyncratic characteristics of the problem. Retaining local information and taking account of the fact that the intermediate structure remains a key level of decision-making for safety management, every intermediate structure has been surveyed and considered as a unit of analysis, even though they belong to a superstructure dictating strategic orientations.

3.3   A Tentative Model for Safety Management in the Fresh Produce Sector

In conclusion, to reduce the risk of finding a product with excess residues over the legal limit (maximum residue limit) or over the private standard imposed by the retailer, the transfer of control/decision rights in the fresh produce sector is not always restricted to the commercialization of the product and often extends to the production process as soon as there is a need to comply with customer safety requirements. Conversely, the transfer of control/decision rights is more limited when there is little concern for safety and when the main focus is on commercial quality (size, color, packaging, etc.). Given that commercial quality is much easier to measure than safety quality and may be rewarded with incentives defined ex ante by the buyer, transaction costs are lower. We therefore consider that the transfer of decision rights from the grower to the buyer mostly occurs with the development of private and public safety requirements and is much more extended and more costly in terms of transaction costs than traditional transfers implemented for the commercialization of the product. Drawing on the transactional, organizational, and property rights theories, we can predict that this transfer is strongly oriented by the safety dimension of a marketing strategy, safety-specific assets, commercial reputation, and group size (Fig. 2).

Fig. 2 Factors influencing
the level of decision-
making centralization for
safety management
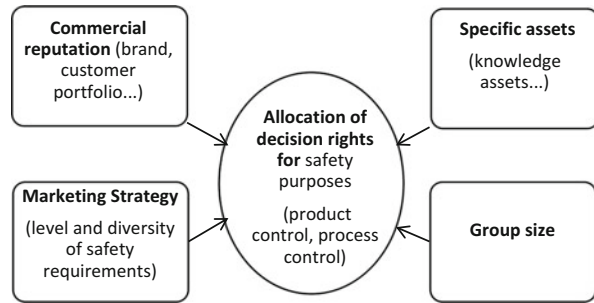
4 Empirical Test of the Relationship Between Decision Rights and Strategic Resources: The Case of Tomato POs in France and Fruit Grower-Exporter Relationships in Chile

Testing the prediction is a challenging task. While much has been written on buyer-supplier relationships and the way they can reduce transaction costs, in particular ex post monitoring and enforcement costs (Hueth et al. 1999), testing the choice of a governance structure is not easy, primarily due to the lack of relevant data or the small size of the samples (Hobbs 1996; Sykuta 2008). One of the problems is to know how to represent the governance structure. Several types of proxy have been suggested (see Shelansky, Sikuta) including duration, number of clauses, etc. In Ménard's model, the proxy is the level of centralization in the decision-making process. We deemed this suitable to represent the solution facilitating the management of health quality.

Only a few empirical studies (Arrunada et al. 2001; Windsperger 2009; Hu and Hendrikse 2009; Malatesta and Smith 2015) have tested the relationship between the level of centralization and strategic resources. They show that the organization becomes more efficient (in terms of value added or reduction of transaction costs) when there is a good match between the distribution of decision rights and the set of strategic resources (specific assets such as knowledge assets, commercial reputation, level of quality, etc.) implemented by the parties of the organization. Our paper contributes to this empirical literature by focusing on the safety management systems of fresh produce grower-shipper dyads. It aims to test the predictions of the theories presented above. Within this theoretical framework, we can predict that the delegation of safety controls to the buyer, either the private buyer or the managers of the marketing group, will increase with the level of safety targeted by the buyer or the group, commercial reputation, asset specificity, and possibly group size.

Hypothesis 1 *More decision rights are assigned to the buyer, when the firm deals with high customer safety requirements.*

Hypothesis 2 *More decision rights are assigned to the buyer, when the commercial reputation of the buyer is better recognized.*

Hypothesis 3 *More decision rights are assigned to the buyer, if the level of buyer's specific investment increases.*

Hypothesis 4 *More decision rights are assigned to the buyer, if the size of the group of suppliers increases.*

The four variables impacting the transfer of property rights are closely linked to safety management and are the result of strategic choices made by the private buyer or the marketing group. Moreover, we make a clear distinction between controlling the process and controlling the product, which are two different ways of transferring control rights from the grower to the shipper. Our hypothesis is that the two types of control are positively but differently impacted by the four variables mentioned above and that the intensity of each of the two controls also results from a strategic choice.

4.1 Presentation of the Case Studies and Sampling

Two case studies with primary data collection were conducted to test the hypotheses. The first concerned 20 marketing groups of French tomato growers accounting for more than 95% of French tomato production with market organization (Codron et al. 2013). The second was conducted with 38 Chilean fruit exporters selected at random from the 79 exporters recorded by ASOEX, the Chilean exporter association, in O'Higgins and Del Maule regions which include the national leaders in the production of apples, pears, grapes, and kiwi (Engler et al. 2016). The sample of export firms was obtained by means of a simple random sampling formula with a 95% confidence level and 12% standard error with p equal to 0.5.

4.2 Data Collection and Quality of the Data

In both surveys, data were collected by means of closed questionnaires and face-to-face semi-structured interviews. The questionnaires considered five series of items: (1) structures and marketing strategies of the buyer, (2) technical assistance and training of the growers, (3) private certifications such as GlobalGap, (4) types of control of pesticide residues and penalties in case of noncompliance with buyer rules, and (5) types of control over the process, grower production practices, and how the latter are managed/monitored by the buyer.

It is worth mentioning the factors that may impact the quality of data collection in the field of safety. Safety issues are usually hot social topics for operators in the supply chain. Given the propensity of some mass media to deal with safety issues without taking the precautions required by the complexity of such issues, most operators are reluctant to communicate details concerning the measurement and results of their safety management, especially regarding residues. As a result, data

collection is a difficult and very time-consuming exercise for scholars requiring considerable expertise and networking in the sector. The resources available for data collection are thus a crucial element in such research.

In the French survey, face-to-face interviews were conducted separately with the technical staff, the quality manager, and the director of the cooperative/firm and were quite intensive (the average duration of each interview was about one and a half hours). In the Chilean survey, the interviews were shorter in time and conducted with only one person, most frequently the agronomist responsible fo providing technical assistance to suppliers. The data collection therefore proved less fruitful and resulted in a lower number of significant items for analysis.

4.3   Measurement of the Dependent Variables

In the Chilean survey, the focus was on the safety risk management practices associated with MRL. Five discriminatory items were used to represent those practices: (1) number of residue tests per year per supplier (i.e., farm-level producer), (2) payment of residue testing (paid by the export firm, by the supplier, shared payment), (3) the importance of MRL when selecting destination markets, (4) the moment when the destination market is decided (before harvest, during harvest, or in packing), and (5) timing of testing (before harvest or during harvest and at the packing arrival). Items (1) and (2) were related to the control over the product, while items (3), (4), and (5) may be considered as proxies of the control over the process.

In the French survey, ten items serve as proxies to measure the dependent variables. The control over the product is documented by the number of residues analysis per grower per year and by six other proxies measuring the sanctions in case of default (type of penalty, incentives for grower transparency, communication of individual results at the collective level) and the procedures of control (grower sampling for residue analysis, at least one analysis per grower per year, information/association of the technician). To approximate the control of the buyer over the process, the following three proxies have been found discriminatory: (1) frequency of greenhouse visits by the quality manager, (2) consultation between the quality manager and the IPM technician over residue management and prevention, and (3) type of management of the crop sheets and centralization of the information at the PO level.

4.4   Measurement of the Independent Variables

In the French survey, nine items serve as proxies to measure the independent variables. Group size was measured by the number of tomato growers in the PO, while the reputation of the group was approximated by means of three variables: the

existence of an association of POs with a collective brand, the average value per kilo obtained by a PO during the year (total value/total production), and the level of segmentation measured by the percentage of "nonstandard" tomatoes (small tomatoes, old varieties). Quality/safety targeted by the group was approximated by three variables: the existence of customers in the UK, the market share of the fast food industry, and the existence of specific safety requirements in terms of pesticide residues. Two items were finally selected to represent asset specificity: the quality manager's profile and the IPM technician's profile. The former was defined by the level of professional education and the number of years' experience in this activity, while the latter was characterized by his level of IPM involvement: strong involvement for technicians hired by the PO and fully dedicated to IPM, medium involvement for technicians hired by the PO and sharing their time between IPM, and general technical assistance and low involvement when no technician has been hired.

In the Chilean survey, 12 items were used as proxies of the independent variables: three items for commercial reputation (export size, number of market destinations, number of fruit species exported), three items for the level of customer safety requirements (number of GAP certified suppliers, buyer certification (BRC or ISO)), four items for asset specificity (general and safety-specific technical assistance provided by the buyer, training provided by the buyer, number of growers per technical adviser), and two items for group size and control of free riding (number of suppliers, use of contracts with suppliers).

4.5 Analysis

In the French case study, the following OLS regressions were run for each of the ten variables of control over the nine independent variables (see Table 1). Given the differences in nature of the items, we used a series of combinatorial tests to assign a weight and aggregate the items associated with a given variable (dependent or independent). Resulting weightings were validated by experts.

$Decision/monitoring\ Rights\ allocation_{i=1\ à\ 10} = \beta_0 + \beta_1 Size + \beta_{2\text{-}4} Quality\ targeted_{2\text{-}4} + \beta_{5\text{-}7} Reputation_{5\text{-}7} + \beta_8 QM_8 + \beta_9 Technician_9 + \varepsilon_i$

In the Chilean case study, a cluster analysis was used with the aim of defining groups of firms with similar characteristics of safety management practices within the group, but different between groups. The five practices mentioned above were used for the cluster analysis. Two clusters were obtained by means of a hierarchical method. Once the clusters and therefore the management strategies were defined, the influence of the independent variables was analyzed using a Chi-square contingency table.

Table 1 Proxies for the variables in our safety management model

Main theoretical variables	Variables in our model	Proxies in the French study	Proxies in the Chilean study
Control rights	Control over the product	Number of residue analysis/grower/year	Number of residue analysis/grower/year
		Type of penalty	
		Incentives for grower transparency	
		Communication of individual results at the collective level	
		Grower sampling for residue analysis	Who pays for residue testing?
		At least one analysis per grower per year	
		Information/association of the technician	
	Control over the process	Crop sheet management	Role of MRL when selecting destination markets
		Consultation between the QM and the IPM technician	Timing of testing residues
		Frequency of greenhouse visits by the QM	Timing of the decision of the destination market
Strategic resources	Buyer reputation	Group of PO's with collective brand	Exporter's size
		Average price of tomatoes per kilo/year	Number of market destinations
		Level of tomato segmentation	Number of fruit species exported
	Level of customer safety requirements	Specific safety requirements in terms of pesticide residues	% of GAP certified suppliers
		Fast food industry market share	Buyer BRC certification
		Existence of UK customers	Buyer ISO certification
	Specific assets	Profile of the quality manager	Safety technical assistance
		Profile of the IPM technical advisor	Training provided by the buyer
			Number of growers per technical adviser
	Group size	Number of tomato growers/PO	Number of suppliers
			Use of contract with suppliers

4.6 Findings

In the French case study, we obtain results (see Appendix 1.1 and for more details Appendix 1.2) that confirm most of the predictions, namely, that the allocation of control rights increases with commercial reputation, customer safety demands, and asset specificity (IPM technical assistance). A more thorough analysis helps to differentiate the impacts of the nine independent variables on the ten dependent variables and in particular sheds light on the following aspects. First, it highlights the considerable sensitivity of the pressure of residue analysis to customer safety demands, in particular when compliance with private standards is required. Second, it invalidates the initial assumption of a strong specificity of the investment made by the marketing group in employing a quality manager considering that the investment is primarily implemented to control commercial quality which may conflict with safety quality. This finding is in line with the qualitative analysis conducted by Bonnaud et al. (2012). Third, it emphasizes the role of the IPM technician who not only provides technical assistance and training but also makes a decisive contribution to assessing the responsibility of a grower in the event of a deviant residue analysis. Fourth, it does not help draw any conclusions about the effect of group size which remains ambiguous, most likely because of a trade-off between gains obtained through economies of scale and costs to protect from potential free riding or between control and learning.

In the Chilean case study, data analysis (see Appendices 2.1 and 2.2) highlights the existence of two clusters with contrasting safety management systems: a first cluster with buyer control focusing on the product at the delivery stage without any involvement of the buyer in the grower production process and a second cluster embedded in a close relationship with growers, with allocation of control and decision rights over the production process to the buyer and ultimately with more residue control per grower. The two clusters primarily differ in the timing of residue testing and product market orientation: while the first cluster does not take any action before the harvest, the second performs residue testing and decides the destination market of a grower's production before the harvest, partially based on such testing. Such differences illustrate the contrast between the two safety management systems. As regards the factors which may explain such a contrast, the cluster analysis illustrates that export firms in the second cluster are larger and provide growers with more training and technical assistance, in particular regarding safety management.

5 Discussion and Implications

5.1 Discussion

Our paper is part of an ongoing research program aimed at studying the impact of increased safety requirements on the organization of the fresh produce sector and in particular on the relationship between a grower and his buyer, irrespective of the nature of the buyer (private buyer or marketing group). In the mainstream literature,

management of the health risk in agricultural production has primarily been studied from the standpoint of the individual producer (adoption of IPM practices or agricultural best practice certificates) with far less attention paid to the relationship with the buyer, i.e., from an organizational standpoint. Literature on this organizational topic is emerging for the safety domain and provides new insights that were overlooked in the mainstream literature on IPM or on the adoption of grower certificates.

On the theoretical side, our paper combines TCT, PAT, and PRT to build an analytical framework to study the hybrids that govern safety management in the fresh produce grower-buyer transaction. To this end, we use the simplified model developed by Ménard (2013) which differentiates hybrids along the two dimensions that are crucial to TCT and PRT, namely, ownership rights and control rights, and more precisely the strategic resources pooled by the parties and the level of centralization in the decision to manage these strategic resources. We then apply the model to the field of safety in the fresh produce sector by using data collected in two face-to-face surveys in France and Chile. In doing so, we aim to contribute to reinforcing the empirical relevancy of the Ménard model, filling the gap observed by Ménard who notes that "efforts for capturing the specificity of the arrangements within a coherent analytical framework remain underdeveloped."

Empirically speaking with regard to the health control of F&V, the most frequently mentioned control solutions adopted by the buyer are residue analyses and best practice certification. Buyer control of the production process and the allocation of rights to the buyer by the producer are less frequently studied. In our paper, we give insights into this allocation of rights which, according to our first observations, plays as important a role as the control over the product or over the certificate.

Both country surveys exhibit convergent findings with regard to Ménard's model despite the differences in the sets of proxies representing the main variables of the model. The main differences concerning the proxies for the allocation of decision rights are that the Chilean study has only a limited number of variables. It emphasizes residue analyses (number of analyses, timing before or after the harvest, and influence on the choice of market destinations) and the technical assistance and producer training services. In contrast, the French study calls on a broader and more informative series of indicators, in particular through the modalities of sanction, the procedures of control, the involvement of the quality manager in the production process, the relationship between the technical advisor and the quality manager, and the management of the crop sheet. The two studies nevertheless converge with regard to the importance of the possible involvement of the buyer in the production process, thereby enabling the choice of product destination to be refined to ensure increased compliance with the customer's specifications or, more generally speaking, to obtain enhanced product value in light of the existing customer portfolio.

While the four categories of strategic resources (reputation, customer safety requirements, specific assets, and group size) are documented by both studies, they significantly differ in the proxies that have been found to be most relevant, as highlighted in Table 1. One of the reasons for this is again the differences in resources allocated to data collection. Another reason is the nature of the buyer (marketing

group versus exporter) and the resulting level of commodity specialization of the transaction: French tomato producers' organizations mostly focus on tomatoes, while Chilean fruit exporters usually buy most of the fruits that are locally grown with apples, pears, kiwis, cherries, and plums, among the most important.

Our empirical analysis supports the theoretical prediction of Ménard in both case studies. Although using different analysis tools (cluster analysis in the Chilean case, regression in the French case), our results confirm the relationship between the strategic resources pooled by the two parties and the level of centralization of the decision concerning the use of these resources.

The results of the few rare studies calling on property rights theories to analyze the relationship between strategic resources and decision rights (Arrunada et al. 2001; Hu and Hendrikse 2009; Windsperger 2009) converge with those obtained from our two case studies. Differences naturally exist but these are linked to the specificity of the situations and most probably to the data available. For example, Arrunada et al. (2001) use the clauses of contracts between manufacturers and car dealers and distinguish three categories of decision rights: ex post completion rights, monitoring rights, termination rights. Windsperger (2009), who studies rights allocations in joint ventures, focuses on knowledge assets as strategic resources pooled in the joint venture. Hu and Hendrikse (2009) observe the different types of decision rights in fruit and vegetable contracts in China and highlight independent variables (quality, reputation, firm's specific assets, etc.) that are quite similar to those in our case studies, which is not surprising given the nature of the activity.

5.2   Contribution to Theory

By specifying and testing the simplified model proposed by Ménard concerning the relationship between control rights and ownership rights, the key variables of property rights theories, we contribute to reinforcing the empirical relevancy of this model, filling the gap observed by Ménard who notes that "efforts for capturing the specificity of the arrangements within a coherent analytical framework remain underdeveloped."

We also contribute to fleshing out the "uncertainty" argument used by TCT to take into account the measurement issues that are central to the safety management system in the fresh produce sector. The positive agency theory concepts of separability and programmability, which are used to define measurement problems and give more precision to the concept of uncertainty, help to specify our safety management model and its relevant proxies more clearly.

In light of the specificities of our safety management system, we are led to include three types of transaction costs in our model that are usually implemented separately in the analysis: the holdup costs derived from the use of specific assets which are central to the Williamson prediction, the measurement costs that mostly derive from a heterogeneity of knowledge skills or perceptions and which are central to the Barzel TCT branch of measurement and the positive agency theory,

and the coordination costs derived from the perishability constraint which differ from the holdup and measurement appropriation costs and are often forgotten in TCT (Gulati and Singh 1998).

Finally, by exploring the details of the mechanisms that help manage the safety risk, we apply the Coase recommendation[1] and thus contribute to a better understanding of the factors that can explain the intensity and diversity of decision rights in the safety management of the fresh produce sector.

5.3 *Managerial Implications*

In the field of safety, and especially in the fresh produce sector, GAP certificates and residue testing are seen as the main control tools. Our paper adds a crucial mechanism that is most often forgotten, namely, the allocation of decision rights helping buyers to control suppliers not only at the delivery stage on the platform but also in the production process.

In any management system of health risks, such as pesticide residues, affecting human health, a choice must be made between controlling the product and controlling the process which in reality corresponds to a choice between two very different operating methods: those who opt for the first choice only control the product by conducting residue analyses and by ensuring that the producers are GG-certified, while those opting for the second choice also control the product but go beyond this through an involvement in controlling and taking decisions relating to production, thereby requiring human, technical assistance and training resources. The ability to satisfy demanding customers depends on this capacity to become involved in the producer's decision-making process; limiting oneself to residue controls could theoretically satisfy the customer's specifications, but the error risk is high in light of the measurement difficulties, thereby pushing traders to guarantee themselves by also monitoring the production process.

Centralizing the decision-making process often means a loss of autonomy for one of the two parties; in the field of health, this loss of autonomy concerns the producer. As with any allocation of decision rights to one of the two parties, the other party (the producer) must receive some form of compensation. In both systems, the incentives system is poorly adapted to rewarding health quality. At best, a free-riding producer can be penalized, although is exceptional. Compensation must be found elsewhere. In the "producer groups" system, the allocation of rights is a delegation of authority to managers for a limited time period and is likely to be called into question during the general assembly. Generally speaking, the

---

[1]"An inspired theoretician might do as well without such empirical work, but my own feeling is that the inspiration is most likely to come through the stimulus provided by the patterns, puzzles, and anomalies revealed by the systematic gathering of data, particularly when the prime need is to break our existing habits of thought" (Ronald Coase, prize lecture to the memory of Alfred Nobel, December 9, 1991).

producer is not expelled from the group but has the power to influence the collective decision. In the private system, this allocation of rights lasts for a production campaign and is called into question the following year when the new contract is signed. In the case of Chile, where producers are large-scale entities, accepting an allocation of rights to the exporter is offset by the possibility for the producer to change partners the following year.

5.4 Limitations

A first limitation is methodological in nature. The limited size of the populations of buying firms is a handicap to obtaining good statistics or econometrics. There is, however, no radical solution to increase the size as in the French case, the population is almost exhaustive and in the Chilean case, the sample is half the total population. Another methodological constraint is the difficulty of access to relevant data. Primary data collection in this field is challenging as it has to be performed by means of face-to-face semi-structured interviews with managers who are usually very busy and are moreover reluctant to communicate and expand on safety issues, which have become a hot topic in our society. Duplicating such research in another country or another fresh produce sector is not easy as it requires expertise and tacit knowledge which are not always available to researchers. Other methodological limits for such research are highlighted by the second survey (Chilean case study) which did not benefit from enough time for interviews and addressed a more heterogeneous population (wide variety of fruits while the French case study focused on marketing groups specializing in tomatoes).

A second limitation relates to the approximation that commercialization rights are fully centralized by the buyer and do not influence decision rights for the safety management system. This is true for all one-tiered structures but may be different in multitiered structures where the marketing decision may not be fully centralized but instead be shared between the highest and intermediate levels. Our case studies are not concerned by such structures. We nevertheless had the opportunity to observe such marketing decentralization and its impact on safety management in other fresh produce chains.[2] Giving the intermediate levels a certain degree of autonomy in commercial decision-making provides strong economic incentives, in particular for management of the pesticide safety risk. Such autonomy may lead to a different

---

[2]We observed a decentralized governance structure for marketing decisions in Blue Whale, a large-scale two-tiered French apple grower/shipper, selling the production of ten apple producers' organizations. While the central marketing structure of Blue Whale has the delegated authority to negotiate a series of transactions (volume, variety, price, etc.) with potential customers every day, each of the ten marketing groups is allocated the right to decide which transaction(s) to honor among the series of transactions negotiated at the central level. Such a governance structure allowing intermediate levels to decide on the allocation of their own production has the advantage of enabling them to implement their own investments strategy and to allocate resources in an efficient way, thanks to a good knowledge of the local safety characteristics.

allocation of control and decision rights for managing the pesticide safety risk, as predicted by our analytical framework. Sharing the marketing decision therefore becomes a crucial issue for the analysis of safety management as it may lead to a significant change in the allocation of control and decision rights for this purpose.[3] It has to be included in our research program.

Another factor that was not documented in the questionnaire but that, according to our observations, may influence the choice of safety management system is grower size. In the French study, we observe the case of a marketing group with large-scale growers who pool resources to sell their production but not to recruit a technical advisor and allocate him decision and control rights over their production process. They argue that they have experience and skills to manage the pesticide safety risk on their own. Such a marketing group behaves like the firms in the first Chilean cluster and essentially limits control to residue testing as soon as the product is delivered to the packing station. Conversely, small-scale growers sometimes abandon most of their decision rights with respect to safety management, as in South Tyrol where growers have to go to the cooperative to fill the spraying machine with the chemical solution under the supervision of a technical advisor working for the cooperative. Again, this may be put on our agenda for future research.

6 Conclusions and Perspectives

Managing the pesticide safety risk to provide end markets with safe fruit and vegetables raises complex issues due to the diversity and stringent nature of public and private safety requirements and the high cost of controlling the product and the production process. Our paper combines transaction cost, positive agency, and property rights theories to build an analytical framework to study the hybrid forms governing safety management in the fresh produce grower-buyer transaction. To this end, it uses the simplified model developed by Ménard (2013) which positions the hybrid forms along the two dimensions of decision rights and strategic resources. It then presents a selection of quantitative and qualitative findings obtained from data collected by means of face-to-face interviews with managers of fresh produce shipping firms in France and Chile.

Our results highlight how a significant increase in public and private safety requirements has led to greater integration in the supply chain and radical changes in the organization of the grower-buyer relationship, namely, a tendency toward increased involvement of the buyer in the control and decision-making process relating to the grower's production. Moreover, they establish a clear distinction between firms that only control product safety at the delivery stage and firms that also control safety throughout the production process and may take decisions on behalf of the grower before harvesting.

---

[3]To date, however, Blue Whale is the only organization we have been able to observe with such a decentralization of the marketing decision process.

On the theoretical side, our results are consistent with Ménard's prediction that the level of centralization increases with the level of strategic resources pooled by both parties. They show that (1) stringent customer safety requirements, a good commercial reputation, and more specific resources invested in technical assistance and grower control lead buyers to request greater allocation of control and decision rights from the grower; (2) otherwise, buyers do not monitor the grower's production process and limit their safety controls to the product.

Several issues have been barely explored and deserve more extensive research, for instance, the issue of regulatory traceability and third-party certified GAP standards and their impact on organization. Do they allow controls and buyer involvement in the production process to be reduced or, conversely, are they a precondition for developing a more ambitious phytosanitary program and being able to serve more demanding markets?

Another interesting issue to be pursued further is the trade-off between the two types of control: control over the product and control over the process. In the French case study, we tested for the complementarity and substitutability of the two controls by examining the conditional correlations between each pair of the four strategic variables: "pressure of residue analysis," "sanctions," "procedures of control over products," and "control over practices." Our analysis requires further work, but we have already shown that there are two types of control that are substitutable and complementary. On the one hand, buyers focus either on product control or process control, while on the other hand, both controls are necessary for buyers with a good reputation and demanding customers. Product control and process control are substitutes, in particular with regard to the pressure of residue analysis which may be reduced with increased control over growers' practices. Nonetheless, they are also complementary: from the moment that POs have a good commercial reputation and sell to demanding customers, both controls are necessary and cannot be exclusive.

Appendix 1

Results of the French case study

Type of control	Dependent variables	Independent variables							
		Group size	Customer safety demand	Commercial reputation	IPM technician	Quality manager	Intercept	R^2	Prob > F
Process control	Process control	0.113	−0.055**	0.413***	1.896**	−1.117 (10.9%)	36.362***	0.635	0.008
Product Control	Analysis pressure	−0.451***	0.010***	0.061***	0.100	−0.457***	4.234***	0.840	0.000
	Sanctions	−3.477**	−0.014	0.513***	3.012***	−3.677***	55.218***	0.699	0.002
	Procedures	−0.465	0.001	0.087	1.364*	−0.597	11.953	0.251	0.487

Significant at 1% (***), 5% (**); 10% (*)

Results of the French case study in more details

Appendix: OLS models results

Independent variables		Control over the products					Control procedures				Control over the practices			
		Pressure of analysis	Sanctions Aggregate	Type of penalty	Incentives for grower transparency	Communication of individual residues analysis results at collective level	Aggregate	Grower sampling for residue analysis	At least one analysis per grower per year	Information on the results of analysis and/or association of the IPM technician to control planning adjustments	Aggregate	Crop sheets management	Consultation between quality manager and IPM technician over residues management and prevention	Frequency of greenhouse visits by the QM
Group size		-0.477***	-3.477**	0.874°	-0.993*	0.475	-0.560	-0.128	-1.186*	0.629	1.099	0.005	0.664°	-0.251
Level of customer safety requirements	Aggregate	0.010***	-0.014	0.005	-0.006	0.006	0.0001	-0.100	0.017*	-0.003	-0.055**	-0.011	-0.005	-0.002
	Customer-specific requirements	-0.200***	-0.344	0.097	-0.085	-0.007	-0.429	-0.634**	0.403°	-0.099	-1.490**	-0.273**	-0.229	-0.062
	Share of fast food industry	0.330***	1.178	0.351	-0.156	0.804**	-0.019	0.710*	0.504	-0.617°	-1.530°	-0.382**	-0.018	0.032
	Export of UK customers	0.003	-0.819	0.033	-0.101	-0.174	0.642	-0.135	-0.385	0.528*	0.452	0.175°	-0.030	-0.186
Reputation	Aggregate	0.061***	0.513***	0.184	0.050	0.122**	0.087	-0.048	0.100°	0.178	0.413***	0.044	0.092**	0.054
	Membership in a commercial superstructure	0.346***	2.898***	0.196	0.210	0.825***	0.087	0.069	0.455°	-0.218	1.131*	0.051	0.309°	0.307°
	Level of tomato valuation	0.331°	3.615°	-0.691	0.567	0.735	0.912	0.599	-0.026	0.169	3.485°	0.152	-0.201	0.477
	Tomato segmentation	-0.166°	-0.514	0.105	-0.072	-0.129	0.481	0.119	0.740°	-0.189	0.925	0.245	0.119	-0.294
Type of technician		0.145*	3.012***	-0.025	0.556*	0.198	1.483	-0.022	0.231	0.637*	1.941**	0.149	0.449°	0.447°
Type of quality manager		-0.457***	-3.677***	-0.274	-0.557**	-0.381	-0.597	0.037	-0.335	-0.307	-1.765**	-0.237°	0.767**	0.718**

Significant at 1% (***); 5% (**); 10% (*)

Significant at 20% (°)

Appendix 2

Results of the Chilean case study

MRL management characteristics of clusters 1 and 2

Cluster	Low control of producer MRL management during production process	High control of producer MRL management during production process
N	12	26
%	31.6%	68.4%
Number of tests	$p = 0.000$[a,b]	
Mean	1.6	2.1
Who bears the testing cost	$p = 0.052$[a,b]	
Export firms	58.3%	19.2%
Supplier	33.3%	57.7%
Both	8.3%	23.1%
MRL criterion to decide destination market	$p = 0.036$[a,b]	
First selection criterion	58.3%	50.0%
Second selection criterion	16.7%	30.8%
Third selection criterion	8.3%	15.4%
Fourth selection criterion	16.7%	3.8%
Timing of destination market definition	$p = 0.038$[a,b]	
Before harvest	16.7%	50.0%
At harvest	8.3%	19.2%
In packing	75.0%	30.8%
Timing of testing	$p = 0.000$[a,b]	
Before harvest	0%	100.0%
At harvest	50.0%	0.0%
In packing	50.0%	0.0%

[a]Significance: not significant difference = p > 0.05; significant difference = p ≤ 0.05; very significant difference = p ≤ 0.01
[b]HSD test

Results of the Chilean case study

Main structural and management characteristics of clusters 1 and 2

Cluster	Low control of producer MRL management during production process	High control of producer MRL management during production process
N	12	26
%	31.6	68.4
Export size (in million boxes)	$p = 0.001$[a,b]	
<1	66.4%	42.3%
1–5	33.6%	30.8%
>5	0%	26.9%
Number of suppliers	$p = 0.280$[a,b]	
≤10	30.0%	14.4%
11–60	50.0%	23.9%
61–99	0.0%	19.1%
≥100	20.0%	42.6%
Market destinations (number)	$p = 0.065$[a,b]	
<4	0.0%	0.0%
4–5	25.0%	11.5%
>5	75.0%	88.5%
Species (number)	$p = 0.148$[a,b]	
1–2	41.7%	26.9%
3–7	33.3%	15.4%
≥8	25.0%	57.7%
Concentration degree (%)	$p = 0.575$[a,b]	
Mean	42.0%	33.8%
≤21%	20.0%	28.7%
21–90%	70.0%	66.5%
≥91%	10.0%	4.8%
Certified suppliers (GAP)	$p = 0.159$[a,b]	
Mean	79%	89%
≤60%	18.2%	11.5%
61–80%	27.3%	7.7%
≥81%	54.5%	80.8%
Contract with some or all suppliers	$p = 0.503$[a,c]	
	66.6%	80.8%
BRC certification	$p = 0.503$[a,c]	
	50.0%	61.5%

(continued)

Cluster	Low control of producer MRL management during production process	High control of producer MRL management during production process
ISO certification	$p = 0.632$[a,c]	
	41.7%	61.5%
The export firm provides technical assistance	$p = 0.341$[a,c]	
	69.9%	95.2%
Technical assistance in phytosanitary management	$p = 0.082$[a,c]	
	57.1%	70.0%
The export firm performs training	$p = 0.033$[a,c]	
	50.0%	75.0%
Mean ratio of suppliers per technical adviser	$p = 0.286$[a,b]	
	22.5	11.6

[a]Significance: not significant difference = $p > 0.05$; significant difference = $p \leq 0.05$; very significant difference = $p \leq 0.01$
[b]t-student test
[c]Chi-square test

References

Arrunada B, Garicano L, Vazquez L (2001) Contractual allocation of decision rights and incentives: the case of automobile distribution. J Law Econ Org 17:257–284

Baker G, Gibbons R, Murphy KJ (2002) Relational contracts and the theory of the firm. Q J Econ 117:39–84

Baker G, Gibbons R, Murphy KJ (2008) Strategic alliances: bridges between islands of conscious power. J Jpn Int Econ 22(2):146–163

Barzel YA (1982) Measurement cost and the organization of markets. J Law Econ 25:27–48

Barzel YA (1989) Economic analysis of property rights. Cambridge University Press, New York

Barzel YA (2005) Organizational forms and measurement costs. J Inst Theor Econ 161:357–373

Bijman J, Cechin A, Pascucci S (2013) From governance structure to governance mechanisms: opening the black box of the member-cooperative relationship. EMNet 2013, Agadir, Morocco, 21–23 Nov 2013

Bonnaud L, Bouhsina Z, Codron JM (2012) Tracer les tomates. In: Bonnaud L, Joly L (eds) L'alimentation sous contrôle: tracer, auditer, conseiller. Editions Quae, Paris (FRA), pp 77–90

Codron JM, Giraud Heraud E, Soler LG (2005) Minimum quality standards, premium private labels, and European meat and fresh produce retailing. Food Policy 30:270–283

Codron JM, Bouhsina Z, Bonnaud L (2013) Collective action and allocation of decision rights in pesticide safety risk management: the case of tomato producers' organizations in France. In: 8th research workshop on organizations and institutions, CORS (Center for Organization Studies), Ribeirao Preto (BRA), 7–8 Oct 2013 and 140th EAAE seminar, Perugia (ITA), 12–13 Dec 2013

Eisenhardt KM (1985) Control: organizational and economic approaches. Manag Sci 31:134–149

Eisenhardt KM (1989) Agency theory: assessment and review. Acad Manag Rev 14:57–74

Engler A, Cofré-Bravo G, Codron JM, Adasme C (2016) Sanitary risk management in fresh fruit: what strategies are exporters using? Working Paper, Departamento de Economia Agraria, Universidad de Talca

Fama EF (1980) Agency problems and the theory of the firm. J Polit Econ 88:288–307

Fulponi L (2006) Private voluntary standards in the food system: the perspective of major food retailers in OECD countries. Food Policy 31:1–13

Goldberg V (1980) Relational exchange: economic and complex contracts. Am Behav Sci 23:337–346

Grossman SJ, Hart OD (1986) The costs and benefits of ownership: a theory of vertical and lateral integration. J Polit Econ 94(4):691–719

Gulati R, Singh H (1998) The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. Adm Sci Q 43:781–814

Hart O, Moore J (1990) Property rights and the nature of the firm. J Polit Econ 98:1119–1158

Hobbs JE (1996) A transaction cost approach to supply chain management. Supply Chain Manag Int J 1:15–27

Hu Y, Hendrikse GWJ (2009) Allocation of decision rights in fruit and vegetable contracts in China. Int Stud Manag Organ 39(4):8–30

Hueth B, Ligon E, Wolf S, Wu S (1999) Incentive instruments in fruit and vegetable contracts: input control, monitoring, measuring and price risk. Rev Agric Econ 21(2):374–389

Jensen MC, Meckling WH (1976) Theory of the firm: managerial behavior, agency costs and ownership structure. J Financ Econ 3(4):305–360

Macher JT, Richman BD (2008) Transaction cost economics: an assessment of empirical research in the social sciences. Bus Polit 10:1–63

Mahoney JT (1992) The choice of organizational form: vertical financial ownership versus other methods of vertical integration. Strateg Manag J 13(8):559–584

Malatesta D, Smith CR (2015) Deciding who's in charge: factors driving the choice of decision rights in professional service contracts. J Strateg Contract Negot I(I):65–84

Ménard C (2013) Hybrid modes of organization: alliances, joint ventures, networks, and other 'strange' animals. In: Gibbons R, Roberts J (eds) The handbook of organizational economics. Princeton University Press, Princeton, pp 1066–1108

Ménard C (2014) Embedding organizational arrangements: towards a general model. J Inst Econ 10(4):567–589

Ouchi WG (1979) A conceptual framework for the design of organizational control mechanisms. Manag Sci 25:838–848

Rouvière E, Latouche K (2014) Impact of liability rules on modes of coordination for food safety in supply chains. Eur J Law Econ 37:111–130

Ruben R, Boselie D, Lu H (2007) Vegetables procurement by Asian supermarkets: a transaction cost approach. Supply Chain Manag Int J 12(1):60–68

Shelanski H, Klein P (1995) Empirical research in transaction cost economics: a review and assessment. J Law Econ Org 11(2):335–361

Sykuta M (2008) New institutional econometrics: the case of contracting and organizations research. In: Brousseau E, Glachant JM (eds) New institutional economics: a textbook. Cambridge University Press, Cambridge

Williamson O (1985) The economic institutions of capitalism. Free Press, New York

Williamson OE (1991) Comparative economic organization: the analysis of discrete structural alternatives. Adm Sci Q 36(2):269–296

Windsperger J (2009) Allocation of decision rights in joint ventures. Manag Decis Econ 30:491–501