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CHALLENGES FACING AGRICULTURAL COOPERATIVES: HETEROGENEITY AND CONSOLIDATION

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'If the world fails to meet its food demands in the next half-century, the failure will be at least as much in the area of *institutional innovation* as in the area of *technical change*.'
(RUTTAN, 2002, p. 180)

1 Introduction

Agricultural markets are in flux, with the tendency to become more heterogeneous on the demand as well as the supply side. Consumers demand more variety and higher quality, while producers respond to intensified competition from globalisation and saturated markets by on the one hand consolidation and on the other hand developing and marketing a broader range of new products. An important impetus of innovation is the development and diffusion of genetically modified organisms.

The effect of innovation by, and differentiation between, agricultural producers shows up in the specification of less uniform transaction requirements, cash payments, capital titles, as well as organizational forms. A number of examples illustrate this development. First, different classes of members emerge based on meeting certain transaction requirements, like transaction volume and delivery time. Second, financial innovations in traditional agricultural organizations like cooperatives emerge, like the introduction of upfront member investments and payments partially based on investments levels. Related to this is the introduction of tradable delivery rights. Third, cooperatives with strong incentive structures are characterized by 'individualized' rather than collective capital structures. The introduction of individual member shares and proportional voting are examples. Finally, the trend towards more differentiation has implications for the organisation of grower – wholesaler relationships. Wholesalers who used to purchase at the auction now contract directly with growers, and growers have established new organisations to bargain with wholesalers or retailers (BIJMAN, 2002). There are even cases of forward integration into wholesaling.

Cooperatives are widespread and important in many agricultural markets. For example, the European Union has 132.000 cooperatives with 83.5 million members and 2.3 million employees in 2001 (COMMISSION OF THE EUROPEAN COMMUNITIES, 2001), the United States of America has 47.000 cooperatives with 100 million members in 2001 (USDA, 2002), and China has 94.771 cooperatives with 1.193 million members in 2002 (HU, 2005). In the EU, co-operative firms are responsible for over 60% of the harvest, handling and marketing of agricultural products, with a turnover of approximately 210,000 million euros (GALDEANO, e.a., 2005). PATISSON (2000) claims that one third of world food production passes through co-operatives. In the EU, co-operative firms are responsible for over 60% of the harvest, handling and marketing of agricultural products, with a turnover of approximately 210,000 million euros (GALDEANO, e.a., 2005). In the horticultural sector, 70-80% of the national volume of these products is marketed through co-operatives in countries such as Denmark, Holland or Belgium (40% in Spain).

A producer cooperative is an association of many independent growers (horizontal relationship) who jointly own a downstream processor / retailer (vertical relationship). An association

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is the same as a producer co-operative, except for the vertical relationship. These (collective ownership) governance structures are not listed on stock markets, and have distinguishing features (COMMISSION OF THE EUROPEAN COMMUNITIES, 2001, p. 12) like 'an orientation to provide benefits to members and satisfy their needs, democratic goal setting and decision-making methods, special rules for dealing with capital and profit, and general interest objectives (in some cases)'. A cooperative serves member interests, rather than just Return On Investment at the downstream stage of production. Members are mainly concerned about the ROI in their own farm enterprise.

Collective ownership among many growers requires a method for collective decision-making. Most commonly a democratic decision-making procedure of some sort is employed. Votes in cooperatives and associations are usually weighted by volume of patronage, although some cooperatives adhere to a one-member-one-vote scheme. A problem with collective decision-making procedures is that they may yield decisions that are (collectively) inefficient in the sense that they do not maximize aggregate grower surplus (HART and MOORE, 1996). This application of median voter theory entails that voting power is to a certain extent allocated independent of quantity and / or quality.

A similar observation holds for the feature 'special rules for dealing with capital and profit'. An example is that most cooperatives and associations use a '… pooling arrangement in which members share equitably on a per-unit basis in the revenue stream that has been created…' (COOK and ILIOPOULOS, 1999, p. 526).[1] Cooperatives have usually also a set of quality standards and delivery rules. Again, these features entail, like the collective decision-making procedures, that revenues and costs are to a certain extent allocated independent of quantity and / or (certain aspects of) quality.

The trend towards differentiation and innovation in agricultural and horticultural markets entails an increasing heterogeneity of agricultural producers. This poses a challenge for the traditional grower organizations like co-operatives and associations because various aspects of these governance structures are tailored towards homogeneous members (HANSMANN, 1996). Collective decision making procedures and pooling arrangements are more likely to be efficient in a situation with homogeneous rather than heterogeneous membership. Highly innovative growers demand, or require, a different treatment than the less innovative growers. Increasing heterogeneity seems to undermine the efficiency, and therefore the stability, of cooperatives and associations because it creates tensions between innovative and less innovative growers.

Various implications of the changes in agricultural markets on the internal and external organization of cooperatives will be highlighted in this article. Section 2 describes in more detail the various changes in agricultural markets. Section 3 delineates two aspects of a governance structure. Section 4 highlights a number of changes in decision rights, while section 5 focuses on income rights. Section 6 concludes.

2 Agricultural industrialization

Agricultural and horticultural cooperatives operate nowadays in a rapidly changing environment. Two broad developments can be distinguished. First, many agricultural markets have become more competitive due to their increase in size, e.g. the emergence of the internal market in Europe and the worldwide trend towards globalization. One response to an increase in the competitive intensity is the merging of various enterprises in a particular market (SUTTON, 1991, and DOBSON, et al, 2003), which results in larger enterprises. He rise of supermarkets in the food retail sector is impressive and worldwide (REARDON, et al, 2004). For example, Latin

1 This is also reflected in the definition of a cooperative of the U.S. Department of Agriculture (USDA, 1993): 'A cooperative is a user-owned and controlled business from which the benefits are derived and distributed equitable on the basis of use.'

America shows an increase in the supermarket share from 15% in 1990 to 55% in 2002. Europe has seen a growth of 25% during 1933-1999. The prediction is an increase from 37% in 2004 to 60% in 2010. This change is accompanied with a consolidation of supermarkets, changes in procurement (from decentral/local to central/regional, from wholesaler to specialised wholesaler / priority delivery status, from no/public standards to private standards, contract farming), supermarkets buying and controlling the entire chain (process), and supermarkets acting as intermediary for the consumer. There is also a steady process of consolidation at the farm level. For example, the number of agricultural and horticultural farms in the Netherlands has been reduced by 40% during 1980-2003. Two types of farms seem to be emerging: large scale, specialized farms and country-side enterprises. REARDON ET AL (2004, p. 26) predict that 'Retail concentration will cascade, sooner or later, into supplier concentration.'. However, merging two cooperatives is a slow and cumbersome process, because two downstream enterprises as well as two societies of members have to be integrated (NILSSON and MADSEN, 2005).

Second, there is a trend towards differentiation. A different product assortment is required in order to be successful in a market which has changed from a sellers to a buyers market. The trend towards more differentiation implies that enterprises being responsive to changing customer preferences may experience a higher return on investment. An implication of the trend towards differentiation is therefore increasing member heterogeneity, due to differences in innovativeness, size, growth potential, and regional backgrounds. These developments put subsequently pressure on traditional agricultural organizations like cooperatives with their homogeneous membership.

3 Governance structure

Governance concerns the organization of transactions, whereas a governance structure consists of a collection of rules structuring the transactions between the various stakeholders (HENDRIKSE, 2003). A cooperative is an example of a governance structure, like investor owned enterprises, worker-controlled firms, franchises, mutuals, joint ventures, networks, public enterprises, and trusts.

A standard way of delineating a governance structure is to distinguish decision and income rights. Decision rights in the form of authority and responsibility address the question 'Who has authority or control (regarding the use of assets)?'. The organizational chart describes roughly the formal structure, and can be represented by decision rights. Decision rights concern all rights and rules regarding the deployment and use of assets (HANSMANN, 1996). They specify who directs the firm's activities, i.e. the allocation of authority.[2] Prominent issues are delegation in cooperatives and financing by outside investors. In general, important themes regarding authority are its allocation ('make-or-buy' decision), formal versus real authority, relational contracts, access, decision control (ratification, monitoring), decision management (initiation, implementation), task design, conflict resolution, and enforcement mechanisms. Empirical support for the importance of the allocation of authority in the form of property rights is provided by JOHNSON, et al (2002, p. 1336). Property rights turn out to be fundamental. They conclude '… secure property rights are both necessary and sufficient to induce investment by entrepreneurs.'. Entrepreneurs will not invest if they expect to be unable to keep the fruits of their investment. Weak property rights discourage firms from investing their profits, even when bank loans are available.

2 Decision rights matter because contracts are in general incomplete, due to the complexity of the transaction or the vagueness of language. The incompleteness of contracts is completed by allocating authority to somebody to decide in circumstances not covered by the contract. Incomplete contracting theory addresses decision rights / authority. The starting point is that the design of contracts is costly, which results in incomplete contracts. Incomplete contracts allocate decision power in situations left open by formal (incentive) contracts. The focus is on non-contractible actions.

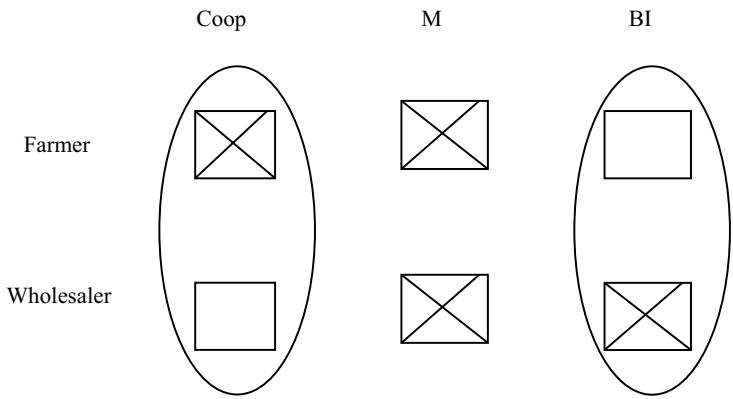
Income rights address the question 'How are benefits and costs allocated?'. Income rights specify the rights to receive the benefits, and obligations to pay the costs, that are associated with the use of an asset, thereby creating the incentive system faced by decision makers. They will be reflected in the composition of costs and payment schemes.[3] Important themes regarding income rights in cooperatives are payment schemes like member benefit programs, cost allocation schemes like pooling arrangements, the compensation package for the CEO and the other members of the board of directors, and the effects of horizontal as well as vertical competition.

The organizational response to increasing heterogeneity may be twofold. First, a different allocation of decision rights may be needed in order to deal effectively and efficiently with the increasing heterogeneity between members. Section 4 presents examples of like the emergence of grower associations and moving decision power closer to the final product markets. Second, cooperatives may restructure their bylaws in order to address the free-rider problem, horizon problem, portfolio problem, the control problem, and the influence problem in an environment of increasing heterogeneity (JENSEN and MECKLING, 1979, and COOK, 1995).

4 Decision rights changes

An important issue in organizing the enterprise is the allocation of control and authority in terms of decision rights. Figure 1 presents three possibilities between an upstream farmer and a downstream wholesaler regarding the allocation of decision rights. Farmers owning the wholesaler is an illustration of a cooperative. If the farmer and the wholesaler are both independent, then there is a market (M) relationship. Finally, backward integration (BI) entails that the wholesaler employs farmers.

Figure 1: Three ownership structures



Standard incomplete contracting indicates that the ownership of assets should be allocated to the party whose relationship specific investments are most important (GROSSMAN and HART,

3 The analysis of income rights / incentives is the realm of complete contracting theory in the form of agency relationships. The working hypothesis is that everything that is known, can and will be incorporated in the design of optimal remuneration schemes / contracts without costs. (Authority has no meaning in a complete contracting setting because everything is covered in the contract.)

1986).[4] The core of an agricultural co-operative is member control over the infrastructure at the downstream stage. In other words, formal ownership by the input suppliers over the downstream assets is the essential feature of a cooperative. However, members as owners of downstream assets are problematic from an efficiency perspective when the relationship specific investments of the employee (or the relationship specific investments at the downstream stage of production in a cooperative) are most important (HENDRIKSE and VEERMAN, 2001a and 2001b and HENDRIKSE and BIJMAN, 2002). The developments in agricultural markets seem to increase the importance of specific assets at the downstream stage of production. This puts pressure on cooperatives in favor of market exchange. The implication seems to be to abandon the cooperative structure. However, there are various possibilities to respond to changing market conditions within the cooperative structure.

This section presents a number of illustrations of changes in decision rights: the emergence of grower associations (4.1), delegation in cooperatives (4.2), and relational contracts. Sections 4.1 and 4.3 are mainly concerned with changes between organizations, while section 4.2 is geared towards intrafirm changes in decision rights.

4.1 The emergence of grower associations

Nine regional fruit and vegetable auction cooperatives merged into the new cooperative Voedingstuinbouw Nederland (VTN) in the Netherlands in December 1996. They combined all their assets and activities into one central marketing firm, called The Greenery BV (BIJMAN, 2002). Cooperative VTN is the 100% shareholder of The Greenery. (The dutch anti-trust authority NMA (Nederlandse Mededingings Authoriteit) started its activities in april 1997 and was officially erected on january 1, 1998.) Subsequently, two fresh produce wholesale companies were acquired in 1998 in order to start direct trade with major food retailers. The Greenery sells about half of all vegetables produced in the Netherlands in 2002 (BIJMAN and HENDRIKSE, 2003, p. 101). There were also growers that left the cooperative and started product-specific bargaining associations. Some large growers left due to '… cross-subsidization of small growers' (BIJMAN and HENDRIKSE, 2003, p. 102). There were also some innovative growers leaving the cooperative in order to form bargaining associations and marketing cooperatives to advance their specific interests. The Greenery is not unique. During a few years 75 grower associations have emerged. Some of them have merged again.

The interplay between authority, access, and countervailing power in the choice of governance structure can be analysed with a model consisting of three parties: grower 1 producing high quality A, grower 2 producing low quality B (<A), and a wholesaler. Figure 1 presents these three parties. The top-left box is grower 1, while the top-right box is grower 2. The wholesaler is depicted with the box at the bottom.

Figure 2: The three parties

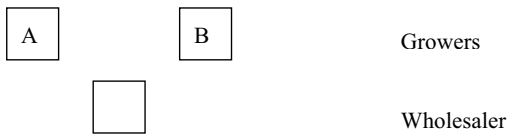
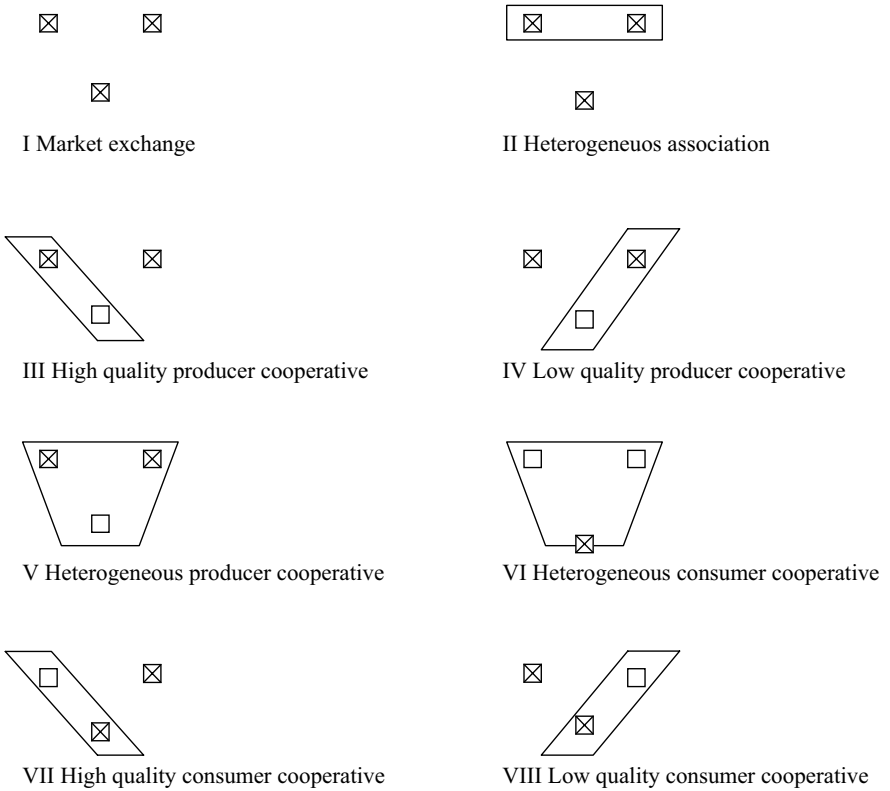


Figure 2 distinguishes eight governance structures. A cross in a box indicates that this party has the residual control / power / authority to decide in unforeseen circumstances (GROSSMAN and HART, 1986 and HART and MOORE, 1990). The distinction between a producer and a con-

4 Asset specificity is one variable which may explain the choice of ownership. Other explanatory variables are uncertainty, frequency, and complexity.

sumer cooperative is that the former is forward integrated into a downstream stage, whereas the latter entails backward integration into an upstream stage.

Figure 3: Eight governance structures



These eight governance structures are again distinguished by their decision and income rights. The decision rights characteristics are ownership of assets and priority access. Priority access of a grower means that the wholesaler is not allowed to reject the produce of this grower. The income rights are determined by the equality principle. It entails that the revenues of the growers in a governance structure have to be shared equally between the growers with joint authority.[5]

The various governance structure changes of The Greenery in terms of the above model are as follows. Building countervailing power (footnote 11 and /or from I to II), as a response to the concentration in the wholesale / retail stage of production, was the driving force behind the merging of the nine regional auctions. Another development in agri-food markets is that consumers ask nowadays more variety and higher quality. Some growers have responded by innovation, i.e. member heterogeneity has increased. Increasing heterogeneity creates problems

5 Notice that the equality principle is always present when both growers have authority, either in one enterprise or in two enterprises. For example, the equality principle is present in governance structure I. There is no averaging of payoffs of different types of growers, because there is not collective ownership of different types of growers. The equality principle in the governance structures II and V entails pooling regarding revenues as well as deliveries of different growers.

in a heterogeneous association because innovative growers are not rewarded (sufficient) for their innovative efforts. One way to increase the reward for the growers is forward integration, i.e. a switch from II to V. The Greenery was able to acquire the wholesalers the Dutch Van Dijk Delft Group and the Fresh Produce Division of Perkins Food plc, a UK based wholesaler, in 1998 (BIJMAN, 2002, p. 101). However, heterogeneous cooperatives are not able to keep the highly innovative growers. The self-selection of innovative growers into grower associations represents the shift from V to IV. Nowadays, many cooperatives spend considerable effort in developing member benefit programs. Different classes of members are distinguished based on meeting certain transaction requirements, e.g. transaction volume, quality of produce, and delivery time. Differentiation occurs regarding cash payments as well as capital titles. Cooperatives with strong incentive structures are characterized by 'individualized' rather than collective capital structures. The introduction of member benefit programs increases the number and extent of quality attributes covered by incentive contracts. The flip side of this argument is that accounting for the heterogeneity of members in payment schemes reduces the heterogeneity between the members in the quality attributes / dimensions which are left unspecified by formal contracts. It implies for the above incomplete contracting model that the introduction of member benefit programs reduces the difference between A and B. This reduces the negative impact of the equality principle for grower 1 in the governance structures II and V. Innovative growers do not leave The Greenery anymore, or even come back to The Greenery. This is the switch from governance structure IV back to governance structure V.

4.2 Delegation

Most rank and file members take a passive position in relation to their cooperative, while the CEO's knowledge concerns primarily the business operation of the coop, not the membership relations. Their orientations also differ. LEVAY (1983, p. 20) '… presumption that most farmers cannot see any further than the farm gate and that directors of agricultural co-operatives, unless the executive or outside expertise are co-opted onto the board, are production, rather than market, orientated.'

One way to respond to changing market conditions within the cooperative structure is to distinguish formal and informal authority (AGHION and TIROLE, 1997 and BAKER et al, 1999). Formal authority resides with the members, but it can be delegated informally. Delegation of control over the operational activities to a professional management may be efficient when it has superior knowledge. So, the efficiency of a cooperative may be enhanced by giving up some control, i.e. giving real authority away, even though the allocation of formal control is not changed (HENDRIKSE, 2005).

4.3 Relational contracts

Decision rights may not matter at all. For example, LEVAY (1983, p. 5) states '… whatever the formal basis of association, co-operatives may behave no differently from other types of enterprises.'. The main idea is that the informal structure determines to a large extent the way things really work. Frequent, informal interactions between the board and the CEO will result in similar choices across governance structures. The claim is therefore that governance structure does not matter much in the daily affairs of enterprises. Cooperatives may therefore behave like investor-owned enterprises.

A relational contracting perspective is put forward to model this claim. Farmers like the processor to take actions that improve the value of the good in the downstream production process, regardless the choice of governance structure. Relational contracts may be helpful in such a setting because the concern for ones reputation may induce the desirable behavior by the processor. When both parties agree on a certain course of action in an informal, self-enforcing

way, then the formal aspect of the relationship does not affect the distribution of bargaining power. Every governance structure induces therefore the same distribution of bargaining power, i.e. the incentive to invest is identical in every governance structure (BAKER, et al, 2002, and HENDRIKSE, 2006).

Governance structure is therefore irrelevant from an investment incentive perspective. However, governance structures differ in their bargaining positions, because the identity of the party tempting to renege is therefore determined by the specific relational governance structure. This is important because a key difference between a cooperative and market exchange is that the processor does not have an outside option available in a cooperative because the farmers own the downstream assets and products. The processor in a cooperative has to take the produce of the owners of his assets as inputs, whereas inputs can be bought somewhere else when he is an independent contractor. The input's value in its alternative use affects the reneging decision under independent contracting or relational outsourcing, but not under a cooperative or relational employment. This has an effect on the choice of (inefficient) actions to improve ones bargaining position.

5 Income rights changes

This section will briefly touch upon a number of topics regarding income rights in and between enterprises. One of the defining features of the traditional cooperative is the equal treatment of members. Examples are the subsidies between different member categories in terms of transportation fees, the principle of one member – one vote, concentration on one single raw product, and equal access to the resources of the cooperative for young as well as old members. These practices are increasingly under pressure in an environment with premiums being paid for innovation and differentiation. The normative implication of the increasing heterogeneity for traditional cooperatives is that the impact of the collective features has to be reduced, e.g. by introducing quantity discounts, quality premiums, service at cost, and so on. The membership will become more individualized. There will be a tendency toward a proportional cooperative model (NILSSON, 1997).

Important income rights issues inside cooperatives are financing, cost allocation schemes, and the transfer price scheme regarding the quantity and quality of the deliveries by the members. Each topic entails a variety of aspects. For example, the design of appropriate financial instruments for cooperatives is special because cooperatives do not have a public listing. A lot of ingenuity is required to raise sufficient capital in the era of consolidation. The number of possibilities in theory and practice is substantial, e.g. preferential shares, member certificates, permanent capital, transferable equity shares, appreciable equity shares, minimal up-front equity investment, voting rights, exit payments, external investors (CHADDAD and COOK, 2004).[6] These issues are part of a tendency towards individualized membership with member benefit programs, open or closed membership, and even outside investors. More generally, new generation cooperatives are mainly geared towards addressing the free-rider problem, horizon problem, portfolio problem, the control problem, and the influence problem (COOK, 1995 and COOK and ILIOPOULOS, 1999).

The relationship between cooperatives and other parties in the chain of production becomes more and more contractual. Auction clocks have been replaced by contracts with retailers in order to fulfill the specific demands of retailers at a premium. This will have its impact on the design of income rights inside the cooperative. Contract farming goes a step further by independent processors or retailers contractually specifying growing instructions for farmers (BOGETOFT and OLESEN, 2004).

6 There are decision as well as income rights associated with financial instruments (HENDRIKSE and VEERMAN, 2001a), and there are often important externalities between decision and income rights (HOLMSTROM and MILGROM, 1994).

Another issue to be classified under the heading of income rights is the impact of competition policy on the design of member benefit programs, delivery rights, and open or closed membership. Cooperatives will in general be treated in the same way as publicly listed enterprises, despite their different legal status.

6 Conclusion

Sustainable and competitive agriculture depend to a large extent on the co-operative sector's ability to adapt to the new market challenges. This requires changes in both the organisation and functioning of co-operatives. This article has positioned the study of these changes at the level of Governance in the classification scheme of WILLIAMSON (2000).[7]

Several aspects of the governance structure Cooperative have been addressed, but many themes have (inevitably) been left out. For example, a cooperative is often characterized as a society of members and an economic entity. The impact of the organization and representation of the society of members in a cooperative as compared to the organization and representation of shareholders in a corporation did not receive detailed attention, but it is important in the consolidation process of the sector (NILSSON and MADSEN, 2005). Another aspect of the membership in cooperatives is that they are owners with a vested interest, taking the entire portfolio of farm activities into account when they exercise their ownership rights in a particular cooperative. Institutional solutions for food safety and quality control have been addressed by MENARD and VALCESCHINI (2005). HENDRIKSE (2003) has outlined a number of governance themes not addressed in this article, like governance and alignment, and governance and cognition. Studying cooperatives is a rich field of governance research because agri-food markets shows a huge variety in governance structures.

References

AGHION, P. and J. TIROLE, Formal versus Real Authority, Journal of Political Economy, 1997, 105(1), 1-29.

BAKER, G., R. GIBBONS and K.J. MURPHY, Informal Authority in Organisations, The Journal of Law, Economics, & Organisation, 1999, 15(1), 56-73.

BAKER, G., R. GIBBONS and K.J. MURPHY, Relational Contracts and the Theory of the Firm, Quarterly Journal of Economics, 2002, 117(1), 39-84.

BIJMAN, W.J.J., Essays on Agricultural Co-operatives; Governance Structure in Fruit and Vegetable Markets, PhD Thesis, Rotterdam School of Management, Erasmus University Rotterdam, The Netherlands, 2002.

BIJMAN, W.J.J. and G.W.J. HENDRIKSE, Co-operatives in Chains: Institutional Restructuring in the Dutch Fruit and Vegetable Industry, Journal of Chain and Network Science, 2003, 3(2), 95-107.

BOGETOFT, P. and H.B. OLESEN, Design of Production Contracts: Lessons from Theory and Agriculture, Copenhagen Business School Press, 2004.

CHADDAD, F. and M.L. COOK, Understanding New Cooperative Models: An Ownership-Control Rights Typology, Review of Agricultural Economics, 2004, 348-360.

COMMISSION OF THE EUROPEAN COMMUNITIES, Co-operatives in Enterprise Europe, Draft Consultation paper, Brussels, 7.12.2001.

7 Embeddedness, Institutional environment, Governance, and Resource allocation are distinguished. Research regarding the relationship between the Institutional environment and cooperatives is actual, given the transition in Eastern Europe and China. The relationship between Resource allocation and cooperatives has always received considerable attention due to the Common Agricultural Policy in Europe, and similar policies elsewhere.

COOK, M.L., The Future of U.S. Agricultural Cooperatives: A Neo-Institutional Approach, American Journal of Agricultural Economics, 1995, 77, 1153-1159.

COOK, M.L. and C. ILIOPOULOS, Beginning to Inform the Theory of the Cooperative Firm: Emergence of the New Generation Cooperative, The Finnish Journal of Business Economics, 1999, 4, 525-535.

DOBSON, P.W., M. WATERSON and S.W. DAVIES, The Pattern and Implications of Increasing Concentration in European Food Retailing, Journal of Agricultural Economics, 2003, 111-125.

GALDEANO, E., J. CESPEDES and M. RODRIGUEZ, Productivity and Quality-Environmental Changes in Marketing Cooperatives: An Analysis of the Horticultural Sector, XI-th Congress of the European Association of Agricultural Economists, Copenhagen, 2005.

GROSSMAN, S.J. and O.D. HART, The Costs and Benefits of Ownership: a Theory of Vertical and Lateral Integration, Journal of Political Economy, 1986, 94(4), 691-719.

HANSMANN, H., The Ownership of Enterprise, The Belknap Press of Harvard University Press, Cambridge, MA/London, 1996.

HART, O.D. and J. Moore, Property Rights and the Nature of the Firm, Journal of Political Economy, 1990, 98, 1119-1158.

HART, O.D. and J. MOORE, The Governance of Exchanges: Members' Cooperatives versus Outside Ownership, Oxford Review of Economic Policy, 1996, 12(4), 53-69.

HENDRIKSE, G.W.J., Governance of Chains and Networks: A Research Agenda, Journal on Chains and Network Sciences, 2003, 3(1), 1-6.

HENDRIKSE, G.W.J., Contingent Control Rights in Agricultural Cooperatives, in T. Theurl and E.C. Meijer (eds.), Strategies for Cooperation, Shaker Verlag, 2005, 385-394.

HENDRIKSE, G.W.J., Boards in Cooperatives versus Corporations: Irrelevance and Incentives, in K. Karantininis and J. Nilsson (eds.), Vertical Markets and Cooperative Hierarchies, Elsevier, 2006.

HENDRIKSE, G.W.J. and W.J.J. BIJMAN, Ownership Structure in Agrifood Chains: The Marketing Cooperative, American Journal of Agricultural Economics, 2002, 84(1), 104-119.

HENDRIKSE, G.W.J. and C. P. VEERMAN, Marketing Cooperatives and Financial Structure: a Transaction Costs Economics Analysis, Agricultural Economics, 2001a, 26, 205-216.

HENDRIKSE G.W.J. and C.P. VEERMAN, Marketing Co-operatives: An Incomplete Contracting Perspective, Journal of Agricultural Economics, 2001b, 52(1), 53-64.

HOLMSTRÖM, B.R. and P. MILGROM, The Firm as an Incentive System, American Economic Review, 1994, 84(4), 972-991.

HU, Y., Cooperatives as Systems of Attributes: a Study on China's Cooperatives, Rotterdam School of Management, 2005.

JENSEN, M.C., and W.H. MECKLING, Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination, Journal of Business, 1979, 52, 469-506.

JOHNSON, S., J. MCMILLAN and C. WOODRUFF, Property Rights and Finance, American Economic Review, 2002, 92(5), 1335-1356.

LEVAY, C., Agricultural Co-operative Theory: A Review, Journal of Agricultural Economics, 1983, 34, 1-44.

MENARD, C. and E. VALCESCHINI, New Institutions for Governing the Agri-food Industry, European Review of Agricultural Economics, 2005, 32(3), 421-440.

NILSSON, J., Inertia in Cooperative Remodeling, Journal of Cooperatives, 1997, 12, 62-73.

NILSSON, J. and O. MADSEN, Cross-Border Mergers between Agricultural Co-operatives –a Governance Perspective, EMNET 2005, Budapest.

PATTISON, D., 2000, Agricultural co-operatives in selected transitional countries, http://www.agricoop.org/resources/resources.htm.

REARDON, T., P. TIMMER, and J. BERDEGUE, The Rapid Rise of Supermarkets in Developing Countries: Induced Organizational, Institutional, and Technological Change in Agrifood Systems, paper presented at International Society for New Institutional economics, Tucson, 2004.

RUTTAN, V.W., Productivity Growth in World Agriculture: Sources and Constraints, Journal of Economic Perspectives, 2002, 16(4), 45-66.

SUTTON, J., Sunk Costs and Market Structure, MIT Press, 1991.

USDA, Agricultural Cooperatives in the 21st Century, Rural Business-Cooperative Service, Cooperative Information Report 60, 2002.

WILLIAMSON, O.E., The New Institutional Economics: Taking Stock, Looking Ahead, Journal of Economic Literature, 2000, 38(3), 595-613.