An Ownership Rights Typology of Cooperative Models

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Abstract: This paper examines agricultural cooperative organizational models from an ownership rights perspective. Building upon property rights and incomplete contracts theories of the firm, the paper adopts a definition of ownership rights comprising both residual claim and control rights. We argue that alternative cooperative organizational models differ in the way ownership rights are defined and assigned to the economic agents tied contractually to the firm – members, patrons, and investors. Based on multiple case study evidence, the paper proposes a typology of discrete organizational models, in which the traditional cooperative structure and the investor-oriented firm (IOF) are characterized as polar forms. Additionally, we identify five non-traditional models that cooperatives may adopt to ameliorate perceived financial constraints. The paper is intended to facilitate a better-informed strategic decision making process among cooperative leaders in choosing among alternative cooperative ownership structures.

Key Words: agricultural cooperatives, ownership rights, capital structure, financial constraints.

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Historically agricultural cooperatives have played an important economic role in market economies as indicated by their substantial asset ownership, sales, and market share in North America and Western Europe (van Bekkum and van Dijk 1997, Fulton and Gibbings 2000, USDA 2000). However, cooperatives increasingly face survival challenges in light of the process of agricultural industrialization.[1] In particular, financial management issues – that is, acquiring and redeeming members' equity capital – are identified in the literature as major constraints to cooperative organization growth and sustainability (Vitaliano 1983, Caves and Petersen 1986, Staatz 1987, Cook 1995, Holmstrom 1999). Financial constraints in agricultural cooperatives result from restrictions in ownership rights and imperfect access to external sources of finance. Empirical studies show that cooperative long-term growth is "low, perhaps even zero" (Fulton et al. 1995) and that cooperative physical capital expenditures are constrained by the availability of finance (Chaddad and Cook 2002). Additionally, the competitive strategies pursued by agricultural cooperatives in response to structural changes in the food system – including value-added processing, brand name development, and entry into international markets – require substantial capital investments (Cook and Iliopoulos 1998). In order to acquire the necessary risk capital to implement these growth related strategies and remain a competitive organizational form, agricultural cooperatives attempt to ameliorate their capital constraints.

Cooperatives in advanced agricultural countries are adapting to agricultural industrialization by means of organizational innovations. This experimenting with alternative institutional arrangements has caught the attention of scholars documenting the emergence of non-traditional cooperative organizational models (Cook 1995, Nilsson 1998, Nilsson 1999,

Chaddad and Cook 2000, van Bekkum 2001, Hanson, 2001). Cooperative models are defined by a set of organizational attributes, including ownership structure, membership policy, voting scheme, governance structure, characteristics of residual claims, distribution of benefits, and competitive strategy.

The objective of this study is to contribute to this burgeoning body of literature by examining cooperative models from an ownership rights perspective. Building upon property rights and incomplete contracts theories of the firm, the paper adopts a broad definition of ownership rights that encompasses both residual claim and control rights. We argue that alternative cooperative models differ in the way ownership rights are defined and assigned to the economic agents tied contractually to the firm – in particular, members, patrons, and investors. Based on multiple case study evidence, the paper proposes a typology of discrete organizational models, in which the traditional cooperative structure and the investor-oriented firm (IOF) are characterized as polar forms. Additionally, we identify five non-traditional cooperative models that user-owned organizations may adopt to ameliorate perceived financial constraints. In the following section, the proposed typology is presented and analyzed.

Typology of Ownership Rights in Alternative Cooperative Models

According to Milgrom and Roberts (1992, p. 288), "the institution of ownership accompanied by secure property rights is the most common and effective institution for providing people with incentives to create, maintain, and improve assets." But what does "ownership" mean? The economic analysis of ownership has heretofore concentrated on two distinct concepts: residual returns (or claims) and residual rights of control.

Economists affiliated with the property rights theory of the firm define residual claims as the rights to the net income generated by the firm. "Net income is conceived of as the residual returns, the amount that is left over after everyone else has been paid" (Milgrom and Roberts 1992, p. 291). As residual claimants "contract to accept the uncertain and possibly negative difference between total revenues and costs," they are also considered the residual risk bearers of the firm (Fama 1980, p. 290). Property rights scholars espouse a legal interpretation of ownership – the "owners" of the firm are the residual claimants. Furthermore, characteristics of residual claim rights distinguish organizational forms from one another (Fama and Jensen 1983a, b).

Residual rights of control are defined as the rights to make any decisions regarding an asset's use that are not explicitly attenuated by law or assigned to other parties by contract (Grossman and Hart 1986). Residual rights of control emerge from the impossibility of crafting, implementing and enforcing complete contracts, especially in the case of complex, dynamic transactions. Since all contracts are unavoidably incomplete, it is the residual right of control over an asset that defines who is the "owner" of that asset (Grossman and Hart 1986, Hart and Moore 1990). According to the incomplete contract theory of the firm, the assignment of control rights (and hence ownership) is dictated by *ex ante* investment incentives of contracting parties. The theory predicts that residual rights of control are assigned to agents making relationship specific investments whose quasi-rents are under risk from hold-up behavior.[2]

For Milgrom and Roberts (1992, p. 291), "ownership of something as complicated as a firm is a tenuous concept" but the notions of residual control and return rights are useful starting points. The authors provide a synthesis of a combined property rights/incomplete contracts theory of the firm. This combined framework focuses on the definition of residual claim and

control rights and the effects of property rights assignment on organizational efficiency. The authors suggest that the asset "owner" will bear all costs and benefits from her decisions if residual claims are coupled with residual control rights. As a result, aligning residual claim and control rights provides the "owner" with proper incentives to make efficient decisions regarding asset use. This point is important because it suggests that ownership structure is a multi-dimensional concept with implications to efficient organizational design.

This paper builds on Milgrom and Roberts' (1992) and proposes a typology of discrete institutional arrangements (i.e., cooperative models) based upon a broad definition of ownership rights comprising both residual return and control rights. Additionally, we argue that cooperative models may be distinguished by the way ownership rights are defined and assigned to economic agents tied contractually to the firm (members, patrons, and investors).[3] The analysis of ownership structure from a property rights/incomplete contracting perspective provides us with both a descriptive and analytical tool. The framework allows us to describe the allocation of return and control rights in alternative cooperative models and analyze ownership structure effects on organizational efficiency. In other words, the framework is amenable to a comparative institutional analysis of discrete structural alternatives in the lines envisioned by Williamson (1991).

This paper focuses on the description and classification of alternative cooperative models and defers the comparative analysis to a companion article. In our proposed typology, the traditional cooperative and the investor-oriented firm (IOF) are polar organizational forms (Figure 1). We define the traditional cooperative structure as having the following organizational attributes: ownership rights are restricted to member-patrons; residual return rights are non-transferable, non-appreciable and redeemable; and benefits are distributed to members in

proportion to patronage. The IOF, in turn, is defined by unrestricted, transferable, non-redeemable residual claims (common stock); stockholders are not required to have any other role in the organization; residual claims are freely alienable in secondary equity capital markets; and residual claims are rights in net cash flows for the life of the organization (Fama and Jensen 1983a).

In addition to these polar forms of organization, Figure 1 identifies five non-traditional cooperative models. In the upward egressing branch of Figure 1, three non-traditional models with ownership rights restricted to member-patrons are described: proportional investment cooperative, member-investor cooperative, and new generation cooperative. In the proportional investment cooperative model, ownership rights are restricted to members, non-transferable, non-appreciable and redeemable, but members are expected to invest in the cooperative in proportion to patronage. Proportional investment cooperatives adopt capital management policies to ensure proportionality of internally generated capital including separate capital pools and base capital plans (Cook 1995). In member-investor cooperatives, returns to members are distributed in proportion to shareholdings in addition to patronage. This is done either with dividend distribution in proportion to shares and/or appreciability of cooperative shares. In the new generation cooperative model, ownership rights are in the form of tradable and appreciable delivery rights restricted to current member-patrons. In addition, member-patrons are required to acquire delivery rights on the basis of expected patronage such that usage and capital investment are perfectly aligned.

In the downward egressing branch of Figure 1, ownership rights are not restricted to member-patrons. Consequently, the cooperative is able to acquire risk capital from non-member sources. However, members may have to share profits and eventually control with outside

investors who are not necessarily patrons of the cooperative and thus may have diverging interests. Conflicting goals between maximizing returns to investors and maximizing returns to member-patrons may occur as a result. The more radical model in this branch – conversion to IOF – is an exit strategy adopted by cooperatives that choose not to continue operating as a user owned and controlled organization (Schrader 1989, Collins 1991, Cook 1995). Alternatively, cooperatives may acquire risk capital from outside investors without converting by means of two models: cooperatives with capital seeking entities and investor-share cooperatives. In the first model, investors acquire ownership rights in a separate legal entity wholly or partly owned by the cooperative. In other words, outside investor capital is not directly introduced in the cooperative firm, but in trust companies, strategic alliances, or subsidiaries. In investor-share cooperatives, investors receive ownership rights in the cooperative in addition to the traditional cooperative ownership rights held by member-patrons. That is, the cooperative issues more than one class of shares to different "owner" groups (e.g., non-voting fixed returns preferred stock, non-voting publicly tradable common stock, among others). Non-traditional cooperative models are analyzed in-depth in the following section.

Case Study Analysis of Alternative Cooperative Models

In this section, the discrete structural alternatives shown in the nodes of Figure 1 are described. Multiple case study evidence is used to ground the proposed typology in real-world examples of non-traditional cooperative models. Case studies were prepared on the basis of primary data collection methods (including semi-structured personal interviews with cooperative leaders and review of company documents and annual reports) and published secondary data.

Proportional Investment Cooperatives

According to Cook (1995), the proportionality strategy of internally generated capital is a capital acquisition option pursued by some traditional cooperatives that choose to continue as such (i.e., not transition or exit). Proportionality strategies discipline cooperative members to contribute equity capital in proportion to usage by means of cooperative policies such as base capital plans, narrowing product scopes, and capital acquisition on a business unit basis.[4]

In this paper we use as an example of a proportional investment cooperative an organization that adopts the base capital plan. The base capital plan is a comprehensive equity management technique, encompassing both acquisition and redemption of equity capital from member-users. The first step when introducing a base capital plan is to determine the cooperative's capital requirements based on future investment opportunities and members' willingness to supply risk capital. Proportional use is then determined by measuring each member's average usage of the cooperative over a base period (e.g., 10 years) and calculating the member's minimum equity capital requirement based on her relative patronage. When a minimum capital contribution per member is computed, some members will be over- and others under-invested in the cooperative. Thus, the next step is to design a plan to increase the equity investment of under-invested members and redeem part of the equity investments of over-invested members. Alternatively, the cooperative may allow under-invested members to buy shares from over-invested members.

The base capital plan is used by numerous well-known U.S. cooperatives, including Riceland, CoBank, Land O' Lakes, and Dairy Farmers of America (DFA). For example, DFA has established a base capital plan in which member-patrons are expected to achieve a target equity investment of $1.75 per hundredweight of milk delivered to the cooperative. In order to

achieve this target, DFA retains 10 cents/cwt from under-funded members until their base capital reaches $1/cwt. After this level, members are entitled to receive 20 percent of patronage refunds in cash and 80 percent as DFA capital account credits until the base capital target is achieved. In addition, DFA allows equity transfers between members as retiring and over-funded members may sell capital account credits to current under-funded members if they do not wish to hold their equity investments at full-face value. That is, capital credits are transferable, but not appreciable.

Member-Investor Cooperatives

In this model, ownership rights are restricted to member-patrons, non-transferable, and redeemable, but the cooperative distributes net earnings in proportion to member shareholdings rather than patronage. In order to do so, the cooperative may distribute cash dividends in proportion to member shares or set a policy allowing the appreciability of residual claims. Bonus share issues and share value appreciation are oft-used mechanisms for residual claim appreciability. When residual claims are appreciable, members have more incentives to invest and retain equity in the cooperative as they are explicitly remunerated for their investment. As examples of the member-investor model, the paper presents case study evidence on participation units (Campina Melkunie, the Netherlands), cooperative capital units (Walgett Special One Cooperative, Australia), and redeemable preference shares (Tatura Milk Industries Ltd., Australia and Fonterra Co-operative Group Ltd., New Zealand).

Participation Units. Campina Melkunie, a dairy cooperative based in the Netherlands with 8,500 members, issued participation units to members on a voluntary basis in 1991. Only active suppliers may own participation units as they are redeemed when a member terminates membership for any reason. In addition to being redeemable, participation shares are non-

transferable, non-voting, and appreciable ownership rights. It is the board's responsibility to set the value of participation shares every year, thereby sharing the growth of the business with member-investors. As of January 2001, investment in participation units became compulsory for all members with a minimum equity contribution tied to milk deliveries. In addition to participation units, Campina Melkunie raises long-term capital from members by means of subordinated bonds and per unit retains.

Cooperative Capital Units (CCUs). CCUs were introduced in the New South Wales Cooperatives Act in 1992 as an instrument enabling cooperatives incorporated in that Australian state to raise risk capital from both members and outside investors. The CCU financial model has been adopted by five NSW cooperatives: Dairy Farmers Group, ABC Taxi Cab, Norco, Namoi Cotton Cooperative and, more recently, Walgett Special One Cooperative (WSOC). WSOC is a grain marketing cooperative formed in 1987. In October 2000, WSOC members approved the board's proposal to introduce CCUs as a means to provide investment returns to members. The CCU designed by WSOC has a hybrid debt-equity financing arrangement because it provides non-cumulative, fixed interest rate ("core interest") and a "bonus interest." Core interest payments are not tied to the declaration of dividends, whereas the bonus interest is paid out of profits with priority over distribution to members. In addition, the board expects to issue bonus CCUs to provide capital growth to CCU holders. WSOC members may subscribe to CCUs on a voluntary basis in proportion to grain tonnage delivered to the cooperative.

Redeemable Preference Shares. Tatura Milk Industries Limited is a dairy cooperative owned by approximately 500 milk producers in the state of Victoria, Australia. After successfully avoiding a hostile takeover attempt in 1987, Tatura issued redeemable preference shares to active members. Preference shares are non-transferable, interest bearing, non-voting

and redeemable upon member retirement ownership rights. Subsequently, the board approved new share issues in 1992, 1996 and 1999. According to Plunkett (2002), the objective of Tatura's structure is to unlock a proportion of the cooperative's asset growth for members. In addition to allowing capital appreciation through regular bonus share issues, Tatura has the philosophy of paying a dividend on preference shares that remunerate for members' opportunity cost of capital. Plunkett (2002) argues that the key incentives for members to invest in redeemable preference shares are regular bonus issues, attractive dividend payments, and full redemption of shares upon exiting the cooperative.

Fonterra Co-operative Group Ltd. is a dairy marketing cooperative based in Auckland, New Zealand. The cooperative is owned and controlled by nearly 14,000 dairy farmer-members. Fonterra cooperative members are required to hold redeemable preference shares in direct proportion to the quantity of milk produced in any given season. Redeemable preference shares are non-tradable, but appreciable. Each year, an independent "valuer" appointed by the shareholders' council, establishes the range of how much a share in the business is worth. The board of directors then sets the "fair value" for Fonterra shares. New members are required to purchase, at a fair value, their proportionate stake in the business. Members with declining milk production, or who exit altogether, are able to take the fair value of their shares in Fonterra with them. As a result, members are able to realize capital gains on their Fonterra investments. The other major component of Fonterra's ownership structure is the peak note. The peak note asks members to contribute extra capital to reflect the milk volume they produce at their season peak. This system provides an incentive for shareholders to flatten out their milk supply through the year.

New Generation Cooperatives

This model is another departure from the traditional cooperative structure as the restriction on residual claim transferability is relaxed. The rationale for equity share transferability is to provide liquidity and appreciation through secondary market valuation. The new generation cooperative model introduces ownership rights in the form of delivery rights that are tradable among a well-defined producer at risk member-patron group. Ownership rights are restricted to member-patrons, membership is closed, members are required to make up-front investment in delivery rights in proportion to patronage, and supply is controlled by means of marketing agreements (Harris et al. 1996, Cook and Tong 1997).

The major advantage of this model is the improvement of members' incentives to contribute risk capital to the cooperative. In particular, defined membership cooperatives with transferable and appreciable residual claims enhance members' incentives to invest (Cook and Iliopoulos 2000). Yet, the necessary condition to mitigate financial constraints is a competitive market for delivery rights (van Wassenaer 1989). Consequently, the success of the new generation cooperative structure is dependent on the demand for delivery rights and the implementation of rules for the proper functioning of a market for delivery rights.

There are many examples of new generation cooperatives, some of them described in published case studies, such as Dakota Growers Pasta Co. (Zeuli et al. 1998a, Cook and Iliopoulos 1999, Boland, 2001), Golden Oval (Buschette 2000), South Dakota Soybean Processors (Zeuli et al. 1998b) and Lyckeby Starkelsen, a potato starch cooperative in Sweden analyzed by Nilsson and Germundsson (2000). Some traditional cooperatives are transitioning to the new generation model while maintaining some features of the traditional cooperative structure. Examples include the Equity Participation Unit program adopted by Harvest States

that has been discontinued by CHS Cooperatives; the Swedish dairy cooperative Skanemejerier, which introduced tradable value-added rights on a voluntary basis to producers (Nilsson and Barnheim 2000); and the Tatua Cooperative Dairy Company Ltd. in New Zealand, which is considering the option of issuing tradable Milksolids Supply Entitlements to members in proportion to milk deliveries (Frampton 2001).

In sum, the aforementioned models relax some of the restrictions on traditional cooperative residual claims but maintain the user-ownership principle. Cooperatives that have exhausted these structural options to ameliorate perceived financial constraints are making a more complex decision – whether to acquire equity capital from non-member sources. Organizational models introducing outside equity are now discussed.

Cooperatives with Capital-Seeking Entities

This model attenuates the restriction that cooperative ownership rights be restricted to member-patrons. The cooperative, however, does not convert to an IOF because outside equity capital is acquired by a separate legal entity. This separate legal entity might be a strategic alliance, a trust company, or a publicly held subsidiary.

Strategic Alliances. In this non-traditional financial model, the cooperative has the option of forming strategic alliances with sundry partners to acquire permanent equity capital from non-member sources. Strategic alliances allow cooperatives to indirectly access external sources of risk capital in return for a portion of net margin and shared return. As an example, Dairy Farmers of America, the largest U.S. dairy cooperative, established a holding company structure to govern strategic alliances in downstream businesses of the milk supply chain. These profit-seeking strategic alliances are structured as non-controlling joint ventures, in which DFA invests in exchange for a share of the profits and the right to be the long-term preferred supplier. As

much as 30 percent of the milk volume handled by DFA is marketed and processed by strategic alliances. In doing so, DFA focuses on ensuring market access and maintaining a competitive milk price for its members.

Trust Companies. In this model, the cooperative establishes a non-operating separate entity (e.g., a trust company) solely for the purpose of acquiring risk capital from non-member sources, in particular from institutional investors. Outside capital may be used to retire old equities and/or for new investment projects. Diamond of California's Cumulative Recourse Offered Preferred Shares (CROPS) program is an example of this structure. Diamond is a marketing cooperative owned by 2,000 walnut growers in California. As a centralized marketing cooperative operating on a pooling basis, Diamond used to depend heavily on per unit retains to finance its operations. A preferred stock financing strategy allowed Diamond to acquire capital from an insurance company through a trust company – the Diamond Walnut Capital Trust. The actual financing instrument is a 12-year, fixed dividend, non-voting preferred stock of the trust. Diamond's objective is to utilize outside capital to redeem members' allocated retains. Per unit retains are expected to be phased out by 2003 (Connors 2000).

Subsidiaries. In 1986, Kerry Cooperative Creameries Ltd., a traditional Irish dairy cooperative, went through a restructuring process to obtain non-member capital. The cooperative established and transferred all its assets to a separate public limited company called Kerry Group plc. In return, the cooperative received a majority equity ownership in the plc. Subsequently, Kerry Group acquired additional risk capital from outside investors with new equity shares issued on the Dublin and London stock exchanges (Kennelly 2000). Kerry's restructuring was followed by five other Irish cooperatives – Avonmore, Waterford, IAWS, Donegal Creameries

and Golden Vale (Jacobson 1992, Harte 1997). Kerry's organizational innovation became known worldwide as the "Irish Model."

The Irish Model has been adapted in other parts of the world. In the U.S., two agricultural cooperatives (Gold Kist and Land O' Lakes) transferred part of their assets and operations to public corporations (Golden Poultry Company and Country Lakes, respectively), which were subsequently bought back by the cooperatives (Schrader 1989, Collins 1991). Another example is Agrilink (formerly called Pro-Fac Cooperative), an agricultural marketing cooperative owned by 600 growers. These grower-owners supply the raw commodities (fruits, vegetables and popcorn) that are processed and marketed by Agrilink Foods, a wholly owned subsidiary of the cooperative. In 2002, Agrilink Foods entered into an exclusive letter of intent with Vestar Capital Partners related to a capital investment of $175 million in the form of preferred and common shares. In Australia, Dairy Farmers Group has unsuccessfully tried to implement the "Equilibrium Model," which would add a long-term supply agreement between the cooperative and a plc subsidiary to the Irish Model structure (Chaddad and Cook 1999). More recently, the French cooperative bank Crédit Agricole established a downstream subsidiary whose shares were floated in the Paris Bourse (Chaddad and Chaddad 2002).

Investor-Share Cooperatives

In this model, the cooperative acquires non-member equity capital without converting to an IOF. Contrasting to the previous model, the investor-share cooperative issues separate classes of equity shares in addition to the traditional cooperative ownership rights held by member-patrons. Investor shares may bundle different ownership rights in terms of returns, risk bearing, control, redeemability, and transferability. Investor shares include preferred stock, non-voting common stock, and participation certificates.

Preferred Stock. CoBank, the Denver-based cooperative bank specializing in financial solutions and leasing services for agribusinesses and rural utilities, completed the private placement of $300 million in cumulative preferred stock in June 2001. CoBank's preferred stock is a non-voting, fixed dividend, non-redeemable ownership right. Also in 2001, CHS Cooperatives, one of the largest producer-owned agricultural cooperatives in the U.S., announced an offering for sale of $50 million in preferred stock. Outside investors may purchase a minimum $1,000 in preferred stock, which carries an 8 percent effective net annual yield. The preferred stock does not carry voting rights in the cooperative.

Non-Voting Common Stock. In 1996 Saskatchewan Wheat Pool (SWP), a Canadian grain marketing and input supply cooperative, converted members' equity to non-voting common stock (B shares). B shares were offered to cooperative members, managers and employees during an "in-house" trading period and were subsequently issued on the Toronto Stock Exchange. Any investor now freely trades B shares. Non-transferable, non-appreciable, voting shares (A shares) were kept in the hands of cooperative members, their spouses and farm organizations. The objective of SWP's financial restructuring was to raise permanent risk capital to pursue an aggressive diversification strategy and invest in value-added food processing while maintaining member control (Ketilson 1997). Public listing of non-voting common stock while maintaining voting stock in the hands of cooperative members is a popular model among agricultural cooperatives in Australia, including Australian Agricultural Co. (the second largest cattle producer) and AWB Ltd. (the former Australian Wheat Board).

Investor Participation Shares. Investor-share cooperatives are also found in France, where legislation passed in 1992 allows for non-member investment in cooperative societies. Outside investors may become members and invest in cooperative societies by means of investor

participation shares, investment certificates, and bonds (van Bekkum and van Dijk 1997). A similar model, known as Farmer Controlled Business (FCB), is found in the UK. FCBs comprise all business organizations, including cooperatives, in which farmers hold both control and the majority of shares and whose primary goal is to serve the economic interests of farmers.

Conversion to Investor-Oriented Firm

Conversion, increasingly known as demutualization (Birchall 2001), refers to changes in the ownership structure of user owned and controlled organizations from a cooperative (or mutual) to a for-profit, proprietary organization. As a result of demutualization, residual claim and control rights are reassigned among the firm's stakeholders with implications to firm behavior and performance. In particular, cooperative membership rights are converted to unrestricted common stock ownership rights in a corporate organization. Most of times, demutualization is followed by public listing, which allows the firm to acquire additional risk capital from investors.

Demutualization has been occurring at a fast rate in many industries since the 1980s. Financial exchanges (Hart and Moore 1996), insurance companies (Mayers and Smith 1988), savings and loan associations (Masulis 1987), and professional services partnerships have converted to publicly listed companies. Contrasting to cooperative and mutual organizations in other industries, there have been a few cases of agricultural cooperatives converting to an IOF structure in the U.S.: Rockingham Poultry Marketing Cooperative, American Rice, Capitol Milk Producers Cooperative and American Cotton Growers (Schrader 1989). More recently, three new generation cooperatives, Calavo Growers, Dakota Growers Pasta and South Dakota Soybean Processors, have started the conversion process to a corporate ownership structure.[5]

Agricultural cooperative conversions appear to be driven by cost-of-equity considerations – that is, "cooperatives will find a way to issue public equity if their equity is extremely attractive to the investing public" (Collins 1991, p. 329). However, alternative hypotheses are not fully discarded: conversions may occur because cooperatives are "easy prey" to corporate takeovers or as a result of liquidity restrictions on members' ownership rights. According to Fama and Jensen (1985), the IOF with unrestricted residual claims is the most efficient form of organization when the firm needs large amounts of organization-specific assets that are difficult to value. Yet, the case study evidence analyzed by Collins (1991) only lend partial support to the hypothesis that conversions are driven by the need to acquire equity capital from investors that cooperative members are unwilling or unable to contribute.

Summary and Conclusions

This paper introduces a typology of cooperative models based on the concept of ownership rights. In this typology, the traditional cooperative structure and the investor-oriented firm (IOF) are seen as polar forms of organization. Additionally, based on multiple case study evidence the typology identifies five non-traditional cooperative models. These models are considered as departures from the traditional cooperative structure because they relax some or, in the limit, all restrictions on traditional cooperative ownership rights.

Departures from the traditional cooperative structure appear to be driven by the need to acquire risk capital from member and non-member sources such that the cooperative is able to pursue profitable investment opportunities and grow. This finding provides support to Fama and Jensen's (1985) "capital value problem" hypothesis as cooperative reorganizations adopting less restricted ownership rights occur as a means to ameliorate perceived financial constraints.

However, only systematic empirical evidence on the causes and consequences of cooperative restructurings may provide a test for Fama and Jensen's hypothesis.

Our case study evidence suggests that in general the solution of perceived financial constraints in cooperatives entails some degree of organizational redesign rather than conversion or demutualization. That is, ownership rights related to residual return and control rights of agents tied contractually to the firm are redefined and reassigned. For example, the cooperative may choose to relax the restriction that ownership rights be restricted to member-patrons or introduce transferable equity shares to build a permanent equity capital structure. However, when restrictions on traditional cooperative ownership rights are attenuated, new organization costs may surface such as agency costs, collective decision making costs, and influence costs. In other words, there are trade-offs involved in organizational redesign that cooperative leaders should be aware of. The comparative institutional analysis of alternative cooperative models is, therefore, an important extension of this paper.

The rapid and fundamental structural changes occurring in the global food system – commonly referred to as agricultural industrialization – exposes agricultural cooperatives to heightened domestic and international competition from other business forms. These changes also suggest that it is important to consider whether the organizational structures that have evolved in the past are likely to remain appropriate for the future. The success of agricultural cooperatives in responding to the challenges brought about by agricultural industrialization will likely depend on both competitive strategy and organizational structure. Yet, it is important for cooperative leaders contemplating organizational change to bear in mind that "the decision of which organizational form to choose depends on the fundamental orientation of the producer-owners" (Royer 1992, p. 96). It is, therefore, crucial that adequate communication exists between

cooperative leaders and members. This paper is intended to contribute to this dialogue in order to facilitate a better informed strategic decision making process between cooperative managers, directors, and members in choosing among alternative cooperative ownership structures.

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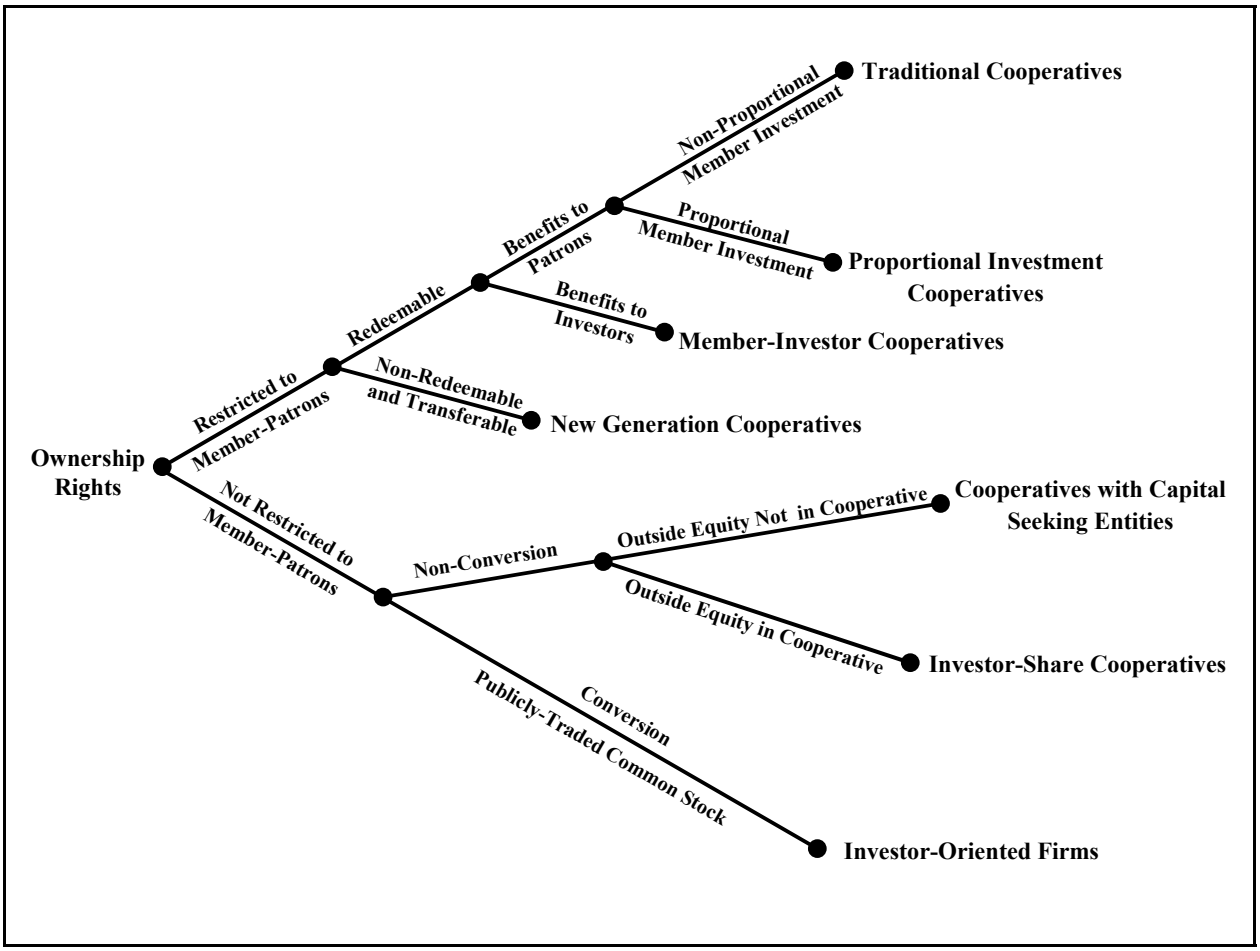
Figure 1. Alternative cooperative models: an ownership rights perspective



Endnotes

[1] Agricultural industrialization is a structural change process leading to a distinctive economic and social system exhibiting four dynamic characteristics: horizontal integration, vertical coordination, organizational change, and increased capital intensity. For details, see Royer and Rogers (1998) and Cook and Chaddad (2000).

[2] Based on the theory of incomplete contracts, Hendrikse and Bijman (2002) analyze the impact of ownership structure on firm investment in the context of agrifood chains and determine the conditions under which the marketing cooperative is the most efficient ownership structure.

[3] This definition of ownership structure is similar to Berglof's (1990, p. 237) definition of capital structure as "the allocation of risk and control among investors."

[4] Royer (1992) makes a strong case for the "equitable treatment of patrons" in cooperatives and advocates proportional financing and voting according to member patronage. He then proposes a theoretical cooperative model, the patron-owned corporation, operating within the cooperative framework.

[5] Instead of conversion or demutualization, the most common exit strategy for U.S. agricultural cooperatives is through mergers and acquisitions. According to a USDA report, there have been 777 cooperative unification activities including mergers (66 percent) and acquisitions (34 percent) between 1989 and 1998 (Wadsworth 1999).