# Western Economics Forum

*A Journal of the Western Agricultural Economics Association*

**Volume 17, Issue 2, Fall 2019**

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Framework for Training and Assessment of the 21st Century Cooperative</td>
<td>5</td>
</tr>
<tr>
<td>John Park, Diane Friend, Greg McKee and Matthew Manley</td>
<td></td>
</tr>
<tr>
<td>The New Role of Agricultural Cooperatives in Pooling and Distributing Tax Deductions</td>
<td>16</td>
</tr>
<tr>
<td>Phil Kenkel, Greg McKee, Mike Boland and Keri Jacobs</td>
<td></td>
</tr>
<tr>
<td>The Emergence of GICL, the Graduate Institute of Cooperative Leadership: Engaged Scholarship, Theory and Practice in Cooperative Education</td>
<td>24</td>
</tr>
<tr>
<td>Michael L. Cook</td>
<td></td>
</tr>
<tr>
<td>Livestock Marketing Cooperative Benefits in the 21st Century</td>
<td>34</td>
</tr>
<tr>
<td>Greg McKee, Jay Parsons and Phil Kenkel</td>
<td></td>
</tr>
<tr>
<td>Governance in Agricultural Cooperatives</td>
<td>42</td>
</tr>
<tr>
<td>Michael Boland</td>
<td></td>
</tr>
<tr>
<td><strong>Featured Paper</strong> Value of Migratory Bird Recreation at the Bosque del Apache National Wildlife Refuge in New Mexico</td>
<td>52</td>
</tr>
<tr>
<td>Christopher Huber and Natalie Sexton</td>
<td></td>
</tr>
</tbody>
</table>

*Publications are reviewed or revised annually by appropriate faculty to reflect current research and practice. Date shown is that of publication or last revision. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Western Economics Forum, Western Economics Forum Journal, Volume 17, Issue 2*
Letter from the Editors:

The agricultural sector is complex due to the interactions of the biological, ecological, economic and institutional systems associated with it. WEF focuses on these issues with relevance and importance to the Western United States. To this end, the WEF provides a forum for economists and other thought leaders to participate in such discussions with articles related to food, farms, ranches, resources, institutions, communities and other related and applicable topic areas.

Guest editors are invited on an issue-by-issue basis. WEF is a semi-annual publication with each issue intended to address a specific topic area. Individuals and groups are encouraged to contact any member of the WEF editorial team with their ideas or proposals for an upcoming issue. If you know a group or want to become a guest editor, please call, email or visit with us at a meeting. We, the editors, are excited to work with you to help you be a guest editor, develop your topic and produce an issue. Topic areas must be relatable and relevant to the Western United States. This does not mean that the research, case study, or work occurred in the region, but that it has applicability and connectivity to Western US agricultural and natural resource issues. For instance, a series of papers about water might include the impact of various water policies throughout the world and how they relate to similar challenges in the Western US.

Individual papers may submitted and are referred to as guest submissions. These guest submissions are welcomed but subject to space availability and the editorial team’s approval. Individual submissions must be accompanied with at least two viable recommendations for potential referees including their contact information.

Authors should generally follow the formatting guidelines for the Journal of Resource and Agricultural Economics, [http://www.waeaonline.org/publications/jare/submission-guidelines](http://www.waeaonline.org/publications/jare/submission-guidelines). Submissions must be in MS WORD with authorship only identified on a cover page. All submissions are subject to double-blind review. Reviewers may receive a PDF version, a cleaned MS WORD document or other format with authorship removed. Guest editors are responsible for making sure the papers authored by their group are peer reviewed.

Articles are normally expected to be approximately 2,500 words (maximum and minimum length is at the discretion of the editors). There is no fee for submissions or publication. Papers and topics may cover any issue related to agriculture and natural resources including but not limited to production, marketing, financial, business, institutional, food and specialty crops, regulatory issues etc. All works of the journal should be created to appeal to a wide audience of many different backgrounds, education and disciplines. As a professional forum, it is implicit that all works are original, professional and defendable based on current scientific standards.
The first two decades of the 21st century have seen a rapid realignment of the food and agriculture sectors with significant implications for cooperatives (co-ops). The pace of these changes are remarkable in terms of their breadth and depth. Consolidation has accelerated at each link in the value chain, from the producer all the way to the retailer; international markets have become the destination for an ever-growing share of U.S. agriculture; and consumer demands are driving change all the way down to the farm gate.

Co-ops have not been immune to any of these trends. As we look toward the 100th anniversary of the Capper-Volstead Act in 2022, co-ops are evolving as rapidly now as at any point in the past century. However, throughout this period, providing value to their producer-owners remains at the core of the co-op model. The essays in this volume put a spotlight on how co-ops are accomplishing this in the 21st century and form a valuable resource to help guide co-ops and their members going forward.
Governance in Agricultural Cooperatives

Michael A. Boland

Abstract
Cooperatives are often thought to require open membership policies, use patronage-based financing, and employ decision-making based on unanimity. The objective is to measure whether large, as measured by dollar volume of assets and sales, cooperatives in the United States utilize practices which are embedded in cooperative principles. Consolidation in production agriculture is occurring in many countries in Western Europe and North America. Agricultural cooperatives, owned by farmers, are increasing in size globally. Governance systems are beginning to evolve as cooperatives get larger in size and compete across a larger geography. Some new cooperative structures are discussed in this article.

Keywords: agribusiness, cooperatives, governance, institutions
JEL codes: D23, L66, P13, Q13
Sexton (2012) describes three key trends in U.S. agricultural markets: greater concentration in many industries; greater degree of product quality and differentiation; and increased vertical coordination through marketing and production contracts, which has led to greater control of suppliers in a vertical supply chain. Cooperatives are involved in all of these activities, which has made them the subject of much research. Cooperatives are often thought to have open membership policies, use patronage-based financing, and employ decision-making based on unanimity. The objective is to measure whether large, as measured by dollar volume of assets and sales, cooperatives in United States utilize practices which are embedded in cooperative principles. A missing piece in the literature on the economic theory of cooperatives is corporate governance. Because corporate governance has not been written about widely in agricultural and applied economics literature, the topic is introduced within the context of the cooperative business model.

**Corporate Governance**

Keasey and Wright (1993) define corporate governance in terms of “structures, process, cultures and systems that engender the successful operation of organizations”. Williamson (2002, 2005) notes that governance is a critical issue in understanding transactions while Coase’s (1937) transactions costs theory helps to understand why agricultural producers have invested in cooperatives. Rogers and Sexton (1994) note that these transactions occur within agricultural industries that often have asset specificity. In particular, three of Williamson’s five types of asset specificity discussed are: specialized physical assets for handling a farmer’s agricultural products; site specificity or located in close proximity to where agricultural production occurs; and dedicated assets which are large discrete investments made in expectation of continuing business with agricultural producers.

Hermalin and Weibach (2003) and Adams, Hermalin, and Weisbach (2010) summarize the literature on corporative governance and conclude “Governance structures arise endogenously because economic actors choose them in response to the governance issues they face” (p.59). The same holds true for cooperatives. Fama and Jensen (1983) show why separation of responsibilities between a principal (board of directors) and agent (CEO) is important. The articles of incorporation dictate which policies are needed in the particular state of incorporation. However, the corporate bylaws dictate the specific purpose, operation, duties and responsibilities of each principal and agent.

As principals representing the owners, boards of directors must monitor the actions of the agent they have hired. An important aspect of monitoring is hiring an external auditor to examine the internal controls and request an independent opinion on internal controls and accounting statements from the auditor. Audits provide detailed information on items such as how income is distributed as patronage or used to create equity (retention of patronage) or destroy equity (through redemption). Additionally, audits provide information regarding percentage of patronage and non-patronage business as well as explanatory notes on determinations and calculations of various accounting data. Corporate audits are not public documents but are typically available for scrutiny by members at the cooperative’s headquarters. Annual reports have less detailed information than these reports. The board of directors have corporate minutes taken at every meeting or any membership meeting, which are the official records of decisions and activities. Such records often

---

2 Boland (2018) describes the history and use of the words supply chains and value chains. In this manuscript, the word vertical supply chain is used.
include the votes made on a decision. Like audits, minute books are not publicly available to researchers, but information on voting outcomes in board meetings and membership meetings are ascertained from interviews with directors.

**Sources of Data**
The U.S. Department of Agriculture Rural Development (2014) reports that 2,106 agricultural cooperatives existed in 2014 with almost two million memberships in the United States. In 2014, the top 100 agricultural cooperatives based on sales volume comprise 72% of the total number of agricultural cooperative sales volume and 67% of all assets. With regard to cooperative memberships, the top 100 have 30% while 38.5% memberships reside in cooperatives with $49 million or less in annual sales. This is misleading because several federated cooperatives in the marketing and farm supply industries such as CHS and Land O’Lakes have independent member cooperatives and direct producer members. For example, in 2014, CHS had 625,000 members with 77,000 being direct members through CHS retail operations and 573,000 being members through their independent cooperatives for whom they serve as a wholesaler. Thus, the top 100 have significantly more memberships than that reported by the U.S. Department of Agriculture.

One obvious way to determine whether cooperatives have open membership policies, use patronage-based financing, and employ decision-making based on unanimity is to analyze each of the 2,106 U.S. agricultural cooperatives. However, due to confidentiality reasons, the U.S. Department of Agriculture cannot disclose the names or addresses of these cooperatives. Although, it does list the top 100 cooperatives which have the majority of cooperative memberships, sales and hence, income which determines patronage, and assets. Thus, an analysis of these cooperatives could be done to determine the extent of whether these three conditions continue to exist. Much of the data needed to analyze the first three conditions lie within corporate governance documents such as articles of incorporation (“articles”), bylaws, minutes, audits, and annual reports or with interviews with directors and managers.

**Description of the Cooperative Data**
Of the U.S. Department of Agriculture’s top 100 cooperatives, complete data is available on 65 to address the three conditions. Six cooperatives which operate as federated models are not used, which yields data on 59 cooperatives. In addition, 142 cooperatives operate in the $200 million to $499 million sales volume. Of these, 113 are not in the top 100 and complete information on 74 of these 113 cooperatives is available to the author. Thus, the data represents cooperatives who comprise 81.1% of the total sales volume in 2014. Of the total 133 (59 of the top 100 plus 74 other) cooperatives, 67 are classified as a having a mixed portfolio of both marketing and purchasing activities and were involved in selling farm inputs such as crop nutrients, chemicals, animal nutrition, energy, capital, crop insurance, and agronomic and energy services. Four were solely farm input purchasing cooperatives and 62 were marketing cooperatives operating in the corn-ethanol,

---

3 The word multipurpose is sometimes used to describe these types of cooperatives. However, in keeping with the definition employed by the USDA, which reflects the broad literature, the word mixed is used.
sugar beet, citrus, fluid milk and related products, tree nuts, figs, dried fruit, stone fruit, tree fruit, rice, cranberries, grapes, cherries, blueberries, and vegetable industries.\footnote{The data are not considered random in the sense that the USDA top 100 is a sample taken from all 2,106 cooperatives in the USDA data for 2014. However, as described, the data clearly are from the largest cooperatives based on sales volume and dollar value of assets and do reflect these types of cooperatives. Given that in some industries such as tree nut, pome fruit, and citrus there may only be one or several cooperatives, it does reflect the many industries that farmers use for their cooperatives.}

Thus, the data used in this research is representative of cooperatives more likely to be making governance decisions that would make them economically viable. Cresswell (2013) suggests that there are five types of qualitative approaches used in research: narrative studies, phenomenology, grounded theory, ethnography, and case study. The analysis used in this study is case studies of individual cooperatives using public data, private data, and interviews. This method is commonly used in social sciences such as law, political science, and psychology. Boland (2019) and Boland and Caķir (2018) describe the use of cases in the agricultural and applied economics literature.

**Overview**

*Open Membership Policies*

Buchanan (1965) writes, “Hence, the theory of clubs is, in one sense, a theory of optimal exclusion, as well as one of inclusion” (p.13). The same is true for cooperatives. A board of directors is elected by the agricultural cooperative’s membership, who are agricultural producers. This board of producers is responsible for drafting and maintaining the cooperative’s membership criteria, which is ratified by the membership and defines the boundaries for inclusion of members. Thus, the criteria resides in the articles and bylaws of the cooperative.

Cooperatives may have multiple classes of members. The broadest membership class, which includes anyone (producer or consumer) who does business with the cooperative as a member-patron. This class of membership allows anyone doing business with the cooperative to receive economic benefits for using the cooperative. A second class of membership, which is more restrictive, are consumers or producers who may patronize (less than some minimum amount) or may not (because they are retired) patronize the cooperative and have equity in the cooperative. A third class might be voting members who patronize the cooperative beyond a minimum amount of business, are active agricultural producers, and have equity in the cooperative. Boland and Kenkel (2016) note that the legal definition of a member is increasingly being linked with their type of business organizational structure (corporation, limited liability company, sole proprietorship, etc.). These producers have the voting rights to elect a board of directors and vote in any other special issues related to the cooperatives such as changing the bylaws, approving a merger, or other activities specified in the bylaws. The neoclassical economic theory of cooperatives makes no distinction in membership classes except to suggest that a cooperative will not have defection among its core members if utilizing marginal cost pricing.

*Use of Patronage-Based Financing*

Cooperative finance principles are well known (Barton et al. 2011). The user-owner principle is a key financial principle in which members must provide the capital needed to finance the cooperative. Most U.S. agricultural cooperatives obtain equity by requiring members to purchase an equity certificate as a condition of membership and by distributing a portion of profits in the form of...
additional equity certificates which were derived from patronage (hence the term, patronage-based financing) proportional to use. The distributed equity is eventually redeemed, subject to board approval, by the cooperative at book value, which is referred to as revolving equity. Historically, cooperatives were permitted to retain a portion of profits in a general reserve fund commonly referred to as unallocated equity or surplus. The members had a collective rather than an individual ownership of the unallocated equity, which was permanent, non-revolving capital. This information can be found in corporate audits.

Decision-Making Based on Unanimity
Unanimous decisions are an important part of governance. Two types of decisions are described in the articles and bylaws. The first type of decisions are those that must be ratified by the voting membership. In general, articles and bylaws require voting members to ratify decisions made by the board that involve a wide array of items: dissolution, mergers, a change in incorporation or change in articles or bylaws, director elections, or actions that can legally happen at a special meeting of the membership, or other decisions identified in the bylaws. All other decisions not listed in the bylaws are left to the discretion of the board of directors without ratification by the voting members. Many typical bylaws require any decision made by the membership of a cooperative to be at least a super-majority (“2/3 + 1”). Cooperative bylaws can and often do, have different quorum requirements for different types of ratification decisions. This data can be found in corporate minutes, bylaws, or in interviews with directors.

Results and Discussion
Sexton (1986a, 1986b) reconciles the various aspects of the neoclassical economic theory of marketing cooperatives and purchasing cooperatives. In doing so, he articulates the theoretical conditions showing why policymakers granted these limited antitrust conditions and other policies favorable to the cooperative business model. He argues that membership size, membership policy, methods of finance (patronage-based financing), and decision-making process built around unanimity are key theoretical elements for a competitive industry. He further notes that these conditions cannot be formally tested due to unobservable data. The results are discussed within the context of each of those three theoretical conditions.

Open Membership Policies
All 71 cooperatives classified as purchasing or mixed cooperatives had open membership policies according to their articles and bylaws with 94% having the three classifications of membership. These mixed cooperatives were supplying farm inputs and marketing crops such as oilseeds, feed or energy grains, and food grains. These types of crops were not perishable and had risk management tools readily available. The membership fee was minimal with only three having a membership fee of more than $25. Nine marketing cooperatives had similar policies.

The other marketing cooperatives had membership policies, which required an upfront investment linked with some form of a marketing agreement or contract. Efficient use of assets and accurate demand forecasting are critical components of profitability because the crops are perishable and have a high degree of asset specificity. The investment could be earned over time with the board
authorizing deductions from patronage. Only nine of these cooperatives did not operate under a pooling basis. These marketing cooperatives must have some form of marketing agreement and investment. In these type of cooperatives, there were generally two membership classes with member-patrons who also had voting rights as long as they were active agricultural producers. Finally, all but six of the 133 cooperatives practice some form of democratic voting with voting members having one vote. There is no discrimination based on size of producer’s operations (number of acres, animals, etc.), gender, ethnic background or other form of discrimination.

**Use of Patronage-Based Financing**

Only two of the 133 cooperatives did not use patronage-based financing due to all of their equity being unallocated and paying 100% patronage in each year. Thus, 131 cooperatives were creating equity each year through retention of patronage and destroying equity by redeeming equity from a previous year. Boland and Kenkel (2016) note that in recent years, for a variety of reasons, mixed cooperatives have significantly increased their use of unallocated equity relative to allocated equity. The ratio of unallocated equity to total equity among all cooperatives has been gradually increasing for decades. Bijman, Hanisch and Sangen (2014) suggest that the same is occurring in the EU. Finally, there is a high degree of business done with patrons with all but 11 cooperatives doing 90% or more of their business with patron members according to the audits and interviews. Clearly, patronage-based financing continues to be used by cooperatives.

**Decision-Making Based on Unanimity**

Every cooperative reports that unanimity on major decisions is universal in that even if a director votes against fellow directors in a decision, the board remains united in communicating that decision. Interviews, surveys, and minutes found very few decisions that were not unanimous. An examination of the articles and bylaws found variability in quorum requirements with annual meetings having the lowest quorum requirements and meetings where the dissolution of the cooperative or a change in structure having the highest quorum requirements. For example, a decision to dissolve a cooperative typically has a higher majority vote requirement such as 80%. Overall, 71% reported having different quorum requirements. Thus, unanimity of decision-making is used by cooperatives.

**Implications**

MacDonald, Hoppe, and Newton (2018) describe the consolidation in agriculture. Risch et al. (2014) describe how this influences cooperatives. For example, corn yields per acre are greater than those of small grains and require much greater volumes of nitrogen fertilizer. In addition, farming changed as new planting and harvesting equipment was needed to produce feed grains such as corn and oilseeds such as soybeans. Technological innovation such as advances in genetics, yield, and planting density have enabled farmers to work faster and operate more acres (Pardey and Wright 2003). Corn and soybeans have much narrower planting and harvest windows that challenge existing facilities and operations (Bechdol et al. 2010; Beddow and Pardey 2015). Boland (2018) describes similar technological improvements that have increased productivity in perennial crops.
Cooperative governance systems are evolving as cooperatives get larger with regard to geographic area and numbers of producers, especially in farm input supply cooperatives. Globally, dairy cooperatives have developed the most sophisticated structures because of the large number of producers and geographic size. Many use a dual or two-tier board system with an “outer board” that is quite large and meets several times a year with committee structures. The outer board handles many of the issues that members face such as quality control systems, producer liquid milk payments and member communications. The “outer board” may have several hundred producers on it especially if the cooperative operates in multiple countries in Western Europe. The “inner board” is much smaller and handles the income distribution decision (with input from the outer board); CEO recruitment, evaluation, retention, and compensation; audit and internal controls; strategy; and other issues common to corporate governance. Depending upon the laws, members of management or employee unions may also serve on this inner board. Both sets of boards are elected, but the inner board may have some outside, independent appointed directors and the producers are chosen from the outer board.

In the United States, several cooperatives have structures such as dairy Farmers of America DFA (regional councils and the DFA corporate board); National Grape Cooperative and its wholly-owned subsidiary Welch Foods (Amanor-Boadu, Boland, and Barton 2006); Organic Valley (Su and Cook 2015); and Agtegra (Miller 2011). Land O’Lakes has an extensive nomination process that uses elected committees. Sugar beet cooperatives have a close relationship between grower boards and their board of directors. Dual boards will likely become more popular as farm consolidation happens and cooperatives get larger in size.
References


