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The Producer Cooperative as Monitored Credit? The Case of West Liberty Foods

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The West Liberty Foods turkey cooperative formed in 1996 to purchase the assets and assume operations of Louis Rich Foods. Based on field interviews with grower members and company management, we describe changes in the economic relationship between growers and the company that resulted from the purchase. We argue that many of the observed changes are consistent with a financial-contracting view of the cooperative firm where the bundling of input-supply and board activities generates a reduction in agency rents that compensates for the organizational deadweight loss traditionally associated with cooperative governance.

Introduction

The principal economic motivation attributed to cooperative activity in agricultural markets rests on some notion of bargaining or pro-competitive effect in an oligopolistic market (e.g., Helmberger & Hoos 1965; Sexton 1990). In markets where cooperatives exist among private firms, and where there is a potential behavioral response of private firms to cooperative activity, the pro-competitive rationale seems compelling. Additionally, however, it is not uncommon for agricultural cooperatives to form to provide “unmet services” (Torgerson, Reynolds, & Gray 1998), and, similarly, to purchase and operate cooperatively the assets of abandoned private firms (Hetherington 1991, pp. 182–186).¹ In these instances, cooperatives emerge not in response to the absence of competition, but rather to the absence of a market.

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Combining this observation with the fact that highly successful cooperatives often “demutualize,” or sellout to a private firm, yields a clear pattern of sustainability in environments that cannot support investor-owned activity, but also susceptibility to transformation when economic conditions are strong.² Note well what typically is not observed—private investors purchasing and maintaining operations of an abandoned cooperative firm, or a group of farmers financing the buyout of a highly successful private firm. Can these observations be reconciled within the existing body of theory on cooperative and private firm governance? Yes and no.

A number of authors (e.g., Miyazaki 1984; Ben-Ner 1984) have studied the cooperative “life cycle,” which is summarized empirically by the stylized facts noted above. These authors argue that the cooperative firm is inherently unstable given the substitutability of non-member for member input. This argument is insightful, but not descriptive of the structural differences between investor-owned and cooperative firms. Ultimately, in these models the cooperative firm is defined in terms of an unobservable objective function, which is to maximize net income per member, rather than aggregate profits. This contrasts with the legal and practical definition of a cooperative firm, which addresses the source of equity capital (no passive shareholders) and the nature of managerial oversight (democratic control by members). Specifying a different objective function, relative to an investor-owned firm, is one reduced-form way to model these underlying structural differences. However, this approach ignores the internal structural features that distinguish cooperative enterprise, treating the cooperative firm as a “black box,” and limits the scope of testable hypotheses to the outcome or external expression of a firm’s decision-making (e.g., survival rates; input and output decisions). A deeper understanding of the cooperative firm can be gained by direct consideration of its internal organization.

In a companion paper (Hueth & Marcoul 2008), we develop a “monitored credit” theory of cooperation (outlined informally below). Our theory is based on a financial-contracting view of the cooperative firm (e.g., Holmström & Tirole 1997; Tirole 2001), where members play two roles—they produce an intermediate output and they monitor management. To the extent that rewards for performing well in either capacity depend on ultimate firm performance, there will be some incentive to perform well in both capacities. In the context of an investor-oriented firm, different types of individuals (e.g., workers and directors) perform these two activities. When market frictions exist, like information frictions and limited liability, satisfactory firm performance is only achieved through the payment of rents to each type of individual. Unlike an investor-oriented firm, a cooperative firm allocates these tasks to a single type of individual, the member. Hence, in the cooperative firm the individual will view these activities as complementary. Put simply, diligence in one activity is not useful if negligence in the other compromises overall firm performance (and the rents attached to it). As shown formally in Hueth and Marcoul

(2008), an intuitive consequence of this complementarity is that rents distributed in the cooperative firm are less than the sum of rents paid in the investor-oriented firm. Overall, a cooperative needs less surplus to operate and thus can still survive in adverse economic conditions. Although investor-oriented firms and cooperatives can both operate in better economic conditions, only investor ownership can realize the benefits due to worker and board specialization. This will naturally incite successful cooperatives to transform into investor ownership if economic conditions are strong.

Our theory generates predictions that are consistent with the characteristic life cycle of cooperative firms. However, other theories have similar predictions, and thus are also consistent with the evidence. The key difference between our view of cooperation and other theories is a focus on contracting between both the firm and its patrons on the one hand, and the firm and its investors on the other. While other theories are silent on these latter dimensions of cooperation, they are the center of discussion in ours. Thus, while there may be more than one theory that can explain organizational transition in response to economic aggregates, we believe that ours is the only theory that also explains changes in structural features of the organizations themselves. In this article, we document these structural changes for a specific transitional event and compare them with the predictions of our theory. Our objective is to provide an illustration of our “monitored credit” view of cooperation and to show how it can account for the organizational changes that have taken place in this particular context.

Briefly, in 1996 Louis Rich Foods announced the imminent closing of its West Liberty, Iowa turkey processing plant. Area growers organized a buyout in response, forming the West Liberty Foods (WLF) of Iowa turkey cooperative. The WLF conversion resulted in three broad changes. First, farmer members pledged many of their farm and personal assets to participate in the cooperative. Second, the production contract with growers became more highly powered. Growers faced far greater price and production risk than they did when contracting with the private firm, and also stood the risk of losing a substantial portion of their personal wealth in the event that the firm failed. Moreover, growers capitalized on their information regarding production possibilities to eliminate opportunities for over-reporting input requirements from the firm. Third, growers assumed responsibility for turkey production activities that were once provided by the firm, and substantially increased their involvement in turkey processing and marketing operations.³ Although we argue that many of the changes at WLF are indeed consistent with our monitored credit theory, the descriptive nature of our data, admittedly, do not permit formal hypothesis testing. Thus, we see our contribution as one of suggesting, based on observations from the WLF transition and from our companion paper, a new hy-

pothesis that seems consistent with empirical observation, and identifying possible avenues for additional empirical work.

The Producer Cooperative as Monitored Credit

A cooperative firm is defined by its restriction on who invests in the firm and how board control is exercised. The restriction on outside ownership implies that members alone must satisfy the firm's capital requirement. In principle, this can occur without members also exercising managerial oversight through control of the board. However, the second defining feature of the cooperative firm is a bundling of input supply and oversight responsibilities. In other words, members of a producer cooperative play two roles in the firm: they provide an intermediate input, and they monitor management. Both activities are costly and require motivation.

In Hueth and Marcoul (2008), we build a model of a generic firm composed of farmers, management, investors, and monitors. Farmers and management provide labor in a stochastic production process and must be motivated either with explicit incentives or costly monitoring. In short, there is a moral hazard problem between the firm and its "workers," who include both farmers and management. Investors provide the capital needed for operations and monitors are hired by investors to ensure that management behaves. Crucially, however, monitoring is costly and unobservable. We view the activities of the board as an important input in the ultimate success of the firm, but without adequate incentive the board will exercise insufficient oversight, leading to an increased chance of firm failure.

In this environment, a cooperative firm is distinguished from an investor-owned firm by allowing farmers to take on the responsibilities of investor and monitor simultaneously. We show that even when farmer capital is costly relative to the capital of private investors, and farmer monitoring is costly relative to private monitoring, this form of cooperation can extend the range of feasible economic activity. The reason comes precisely from the bundling of investor, monitor, and farmer roles in the firm. A farmer whose livelihood depends on a firm's success will be motivated to provide a high-quality input and to monitor managerial performance. In effect, ownership results in a "double dividend" with respect to incentives within the firm. However, if cooperative monitoring is costly relative to its private-firm counterpart, it is always dominated when there is sufficient surplus to pay all parties their respective outside options (or information rents when outside options are sufficiently low). The cooperative firm only emerges when there is insufficient surplus to go around. This can be viewed as a form of organizational "belt tightening." While cooperatives generate less surplus than a comparable investor-owned firm, their specific organizational character reduces the motivation costs that the organization must in-

cur to operate. In effect, this trade-off between feasibility and profitability is central to our story.⁴

We now turn to the description of the formation of the West Liberty Food growers' cooperative, and use these observations as an informal test of our monitored-credit theory.

Turkey Production Contracts

Producing Turkeys: From One-Day-Old Turkeys to Sliced Luncheon Meat

At WLF, it takes approximately 20 weeks to obtain a young adult turkey ready for slaughter. This process is usually carried out in specialized facilities where growers begin feeding turkeys when they are one or two days old. Turkeys are fragile and their growth is constantly monitored to optimize feed-to-meat conversion ratios.

Besides specialized facilities and labor, other essential inputs for growing turkeys include feed, "litter", and liquid propane. The composition of turkey feed is a mix that evolves over the production process. It is composed mainly of corn, soybeans, and a cocktail of vitamins and minerals necessary for bird growth. The turkeys are raised on a floor covered with litter that absorbs turkey excrement. The litter is removed periodically and used as fertilizer in crop production, thus becoming a valuable by-product of turkey growing. Finally, liquid propane is used to heat the facility and dry the feed. When the facility is too cold, the birds burn calories to generate warmth, which reduces the rate of weight gain.

When turkeys arrive at maturity, they are promptly slaughtered and processed. A crucial aspect of processing, and one not unique to turkey production, is having a constant turkey supply at the plant. The plant has high fixed costs and can incur huge losses if supply drops or is not constant over time.

Structure of Procurement Contracts and Bird Ownership Before Buyout

Before the formation of the WLF cooperative, Louis Rich, a subsidiary of Kraft Foods Corporation, operated the West Liberty plant. Louis Rich relied on two different means of procuring turkeys, reflecting two relatively distinct populations of growers: one from southeastern Iowa and the other from the central region of the state.

In the central region of Iowa, contracts were structured to allow for heavy involvement of Louis Rich in growers' operations. Louis Rich contracted for purchase of young turkeys through a third party, who also arranged for delivery to growers. These turkeys remained the property of Louis Rich through the entire growing and harvest period. Aside from providing the facility itself, growers' only responsibility

was to care for the turkeys. Louis Rich was responsible for the other significant inputs, such as food, litter, and veterinary services. The contract usually took the form of a “take-it-or-leave-it” offer to growers, with a flat fee paid at delivery for each turkey, and a bonus/penalty provision contingent on feed-conversion ratios and bird mortality.⁵

In southeastern Iowa, Louis Rich was far less involved in growers’ operations. The number of birds and the unit price were specified beforehand, but growers were in charge of the entire growing process, including acquisition and management of the production inputs. In both regions, contract conditions were uniform across growers.

Central Iowa growers faced much less risk than those in the southeast. Most importantly, central growers were completely insulated against price variation in the cost of feed. Furthermore, Louis Rich provided the litter, although growers were subject to an allowance in relation to the number of birds that they raised. This restriction seems to be explained by the potential for moral hazard in the use of litter, which, as emphasized earlier, generates valuable fertilizer. The central Iowa contract also seems to have been less demanding, for the effort required to source feed and procure veterinary services in the southeast involved significant extra cost.

There are two differences in the characteristics of growers across these regions that may help explain the different types of contracts that were used. First, growers in the southeast operate at a much smaller scale and are more diversified. This latter fact may lower the cost of risk bearing, thereby lowering the cost of using the “lighter” contractual apparatus. Second, growers in the southeast mostly come from a community of Mennonites, and there is anecdotal evidence of informal group risk sharing in these communities.

The Costs and Benefits of Ownership

In the next section, we begin our description of changes that occurred as a result of cooperative formation, including the financial position of growers, the contractual apparatus for turkey procurement, and communication requirements. We start by discussing two ways in which the cooperative organizational structure seems to offer an advantage relative to the prior structure. We then discuss a number of costs that provide a counterweight to these advantages.

Cooperative Formation: “Pledging the Farm”

In mid-1996, Louis Rich officially announced to its contract producers that it would stop turkey processing at the end of the year and close the West Liberty plant. The market for turkey meat was depressed at the time, and Kraft Food eventually decided to withdraw from the processing business. After some initial uncertainty, it

became clear that no private investor was willing to buy out Louis Rich and assume operations of the West Liberty plant.

The growers were conscious that there was no alternative to this plant and that they would have to quit growing turkeys. Therefore, a group of 47 growers formed with the objective of creating a growers cooperative that would own and operate the West Liberty Plant.⁶ Several major problems needed to be solved before the cooperative could be formalized: the group of growers needed money to buy the plant; they needed expertise to run the plant; and they needed customers for the turkey meat.

In November 1996, a management team was formed and hired by the growers. The newly hired CEO was a specialist in turkey processing and had extensive experience working in a cooperative setting. During this time, negotiations with Louis Rich were underway regarding the terms of a buyout.⁷ By continuing operations and not releasing the plant employees, Louis Rich could save severance payments worth several million dollars. In exchange, Louis Rich was willing to commit to purchase no less than 50% of the meat produced by the cooperative during the first years of operations. This initial deal solved part of the problem of finding customers.

The last important problem for the growers was to find the up-front equity necessary to purchase the plant. The cooperative generated much of this capital through private loans extended to growers by local banks.⁸ This financial effort was considerable and resulted in most growers having at least some of their land or other personal assets collateralized. Such loans were especially difficult to obtain for those who had few physical assets.

During the first years of operation, the cooperative went through three consecutive recapitalizations. These recapitalizations were triggered by liquidity shortages due to depressed turkey prices and high input prices.⁹ The processing operations were losing money. In the initial financial set-up, members were asked to add US\$1 in equity for each turkey they would deliver. Then, one year later, the board decided to add another dollar per member for each bird, doubling the initial commitment. Finally, in a third round, members were required to contribute an additional US\$1.50 per turkey. These consecutive demands for cash precipitated the exit of several, mostly older, members.¹⁰

Two results of these recapitalizations bear remark. First, the members who chose to stick with WLF saw much of their wealth transferred from their farms into cooperative equity. Second, more than one interviewee remarked that successive recapitalizations acted like a self-selection mechanism in which only the relatively “good” growers decided to stay within the cooperative structure.

Implementing the Cooperative Contract: Learning and Efficiency

Although the cooperative could have replicated the contractual terms that Louis Rich had with its growers, it seems that this possibility was never seriously considered. The growers were conscious that the financial structure of the cooperative was equivalent to them being residual claimants for the cooperative output. As argued before, nearly all growers had transferred a substantial portion of their wealth into cooperative equity. Thus, failure of the cooperative was simply not an option for most growers.¹¹ As a result, the board set up a contractual structure for all growers that closely resembles the contract used by southeastern growers, which is significantly more “arm’s length” than the central Iowa contract used by Louis Rich.

In the current procurement contract, grower members own the turkeys grown on their farms and the unit delivery price is specified in advance. The contract is thus close to a pure fixed-price contract.¹² In this contractual relationship, the cooperative no longer shares the input costs; the growers have to purchase all the input necessary to grow the turkeys. This contract is a high-powered incentive scheme and is undoubtedly less demanding for the firm in terms of monitoring and administrative costs than the agreement that Louis Rich had with its central Iowa growers. Nevertheless, some members saw this contract as too risky. Ultimately, the cooperative had to introduce risk sharing into the contract by making the delivery price contingent upon the future price of key inputs, such corn and soybeans. This removed some of the risk that members would face as truly independent growers.

The cooperative spent considerable time budgeting costs in order to arrive at a fair price for grower members. Our interview with the chairman of the board revealed that growers’ experience was crucial in evaluating input costs. Growers were asked to organize meetings to study every major component of cost. One interviewee noted that, during these meetings, they discovered that what was budgeted by Louis Rich for inputs, such as litter, was much higher than necessary. This anecdote arguably demonstrates how a private processor had less information about grower costs than the cooperative was able to obtain.

The new contract was not much of a change for the southeast Iowa members, who had similar contractual terms with Louis Rich prior to the buyout. This is in contrast to the growers of central Iowa, who had to adapt themselves to these new contractual conditions. When asked about their perceptions of their situations now and then, central Iowa growers indicated that they unambiguously regard it as “less comfortable” now. They also mentioned that their workload has increased substantially.¹³

The transition between these two contractual relationships has been rough for some growers. However, our inquiry does not show that the cooperative has had major problems with enforcement of the contract. Rather, whenever a member is

struggling to honor his delivery duties, the cooperative always attempts to solve the problem on a one-by-one basis. For instance, to the best of our knowledge no expulsion of a WLF member has ever occurred. Given the lack of a formal written delivery contract, it appears that the WLF cooperative relies on a substantial up-front equity requirement to align growers' interests with those of the cooperative. This demonstrates how a strong financial contract—particularly the large financial penalty that a grower faces in the event the firm fails—complements and allows for the smooth functioning of the procurement contract. This effect is the central feature of our monitored-credit theory of cooperation.

Communication, Oversight, and Decision-making

With all its members having a large financial interest in cooperative success, it is natural that there will be demand by growers to participate in the decision-making processes of the cooperative, something confirmed in our interviews. This demand can be detrimental to the organization if it does not manage information flows effectively. On the one hand, members have a right to be informed and to participate in strategic decisions. On the other hand, however, it can be difficult to respond fully to every demand for communication and involvement made by individual growers. Our analysis reveals that the cooperative board of directors is an essential instrument used to achieve this balance.

In any traditional corporation, the board represents the interest of the firm's capital providers, whereas in a cooperative the board represents the interests of both capital providers and grower members who deliver a key production input. The WLF board makes several types of decisions. Our interviews revealed at least two major potential sources of conflict among members in these decisions. First, there is tension between recent members and senior (or initial) members. As argued above, the early period of cooperative formation was difficult because there were successive recapitalizations in response to market crises. Recent members, on the other hand, have never been exposed to this kind of financial stress. The equity contribution required of new members is nowhere near that made by founding members. The pricing of the turkeys explicitly accounts for this difference, with recent members effectively receiving a lower net price (they earn the same price for their turkeys, but get much smaller unit shares on patronage refunds). This unequal pricing scheme is cause for conflict when turkey prices are low, and our interviews revealed that more recent members have difficulty earning positive margins.

Another source of conflict is the distribution of profit within the cooperative. This tension usually arises between growers of differing cost efficiency. Profits are distributed through two distinct channels. The firm can increase the price offered to members for their turkeys, or raise the level of equity-based refunds. Producers who

are production efficient tend to prefer output-based pricing, while producers that are production inefficient prefer dividend-based pricing (which is divorced from output).

The composition of the WLF board has evolved over time and reflects the evolution and growth of the organization. When the cooperative was created, the board was entirely composed of grower members. The number of votes a member can carry depends on the quantity of delivery rights. In 2005, for instance, Stock A provided one vote for each 100,000 birds. Recently, the cooperative has created Stock B to allow outside sources of equity. Stock B does not carry delivery rights, but allows persons to invest in WLF, such as members' family or institutions (e.g., local banks). Members who do not want to expand their operations, but who do want to invest more in the cooperative can also hold B stock. This stock carries voting rights. The board is currently composed of 13 persons. The CEO is not on the board, although he does attend board meetings. The executive committee, which has full board power and is composed of four persons, with one stock B representative, usually makes decisions.

At the beginning of the cooperative's operation, a crucial design task was to allow for necessary communication between grower members and processing operations management. Our inquiry suggests that the first CEO largely handled this task. In his interview, he told us that a major part of his time was devoted to communication with growers, especially at the beginning of operations. This can be explained partly by his personality, but also due to the growers sitting on the board at that time lacking expertise in processing operations. Over time, however, it seems that the board has played a more important role in communication with growers, especially after the first CEO left in 2004.

A major challenge for the board is to explain concretely to the grower base the consequences of the board's decision for farming operations. As the chairman puts it, "You have to be able to read a financial statement, and put it in total farmer language." The chairman commented to us that to accomplish this objective he needed to be surrounded by experts on the board, and so growers who possess useful expertise are usually suggested as candidates for a board slot. For instance, one of the growers of the executive committee is a certified public accountant. This aspect underlines one of the main differences between a private and cooperative undertaking. The board of a private firm is typically composed of individuals with some degree of expertise, if not in the firm's specific industry then at least in a related industry or in business management issues in general. This contrasts with a cooperative board, whose members can fairly be characterized as amateurs.

Additionally, a private processor cares primarily about firm profits; growers matter only to the extent that they contribute to a firm's profits. In a cooperative setting, growers are the owners of the processing plant and, as such, any decision

concerning processing operations will reflect the interest of growers as both investors and farmers. This additional constraint, which all cooperatives face, is at the core of arguments by Hansmann (1996), who documented the importance of heterogeneity in collective decision-making as an additional cost of cooperative activity.

Another challenge that the board faced was to restrict communication channels between individual growers and operations management. Initial experience showed that such direct communications were a nuisance for the whole organization. To address this problem, the cooperative implemented a strict chain of command that every member has to follow when they have major complaints about processing operations. Complaints between members and operations are now handled exclusively by the board, which tries to solve the problem in collaboration with management. Thus, there is a definite effort from the board to “isolate” operations from grower complaints, although the chairman conceded that members are still permitted to call management directly for “minor” problems.

Finally, the board also needed to put an end to information leaks. Here again, the board decided to restrict the communication of marketing information because, as the chairman emphasized, “too much was going out.” As a result, the amount of strategic information to which members have access is now substantially reduced relative to earlier years.

It is clear that these successive adaptations have caused regular members to feel less in control of their cooperative. To mitigate this effect, a part of the board meetings is opened to the growers, who can come and ask questions about board decisions. Although we lack data on attendance at these meetings, our general feeling is that most growers are satisfied delegating the supervisory role of the board to member directors. One grower revealed to us that he was not going to these meeting as much as he would like because he did not want to give the board the impression that he was constantly looking over their shoulder. Such an attitude suggests both a legitimate desire to know and a trust in the board’s integrity and expertise. This trust is only possible if directors, who are also growers, have well-aligned interests with the grower base, a condition that, we think, is largely met in the WLF case.

Conclusion and Further Discussions

This case study of WLF possesses several interesting features. First, our inquiry contrasts two different organizational modes for arranging turkey production and processing, one in which a privately owned processor contracts with growers, and one in which turkey processing is performed in a cooperative firm owned by turkey growers. Second, our description of the contractual relationships between growers and the processor reveals that, in the cooperative setting, the growers take on greater

responsibility and are subject to more highly powered incentives. Specifically, the farmer retains ownership of the birds, organizes the supply of necessary inputs, and is subject to considerable additional price and production risk. This situation is not typical in the poultry industry.

WLF appears to have been successful in transforming an apparently low-return enterprise into a sustainable cooperative organization. Although part of this success may be the result of luck and skilled management, it also seems that grower ownership of the processing facility fundamentally transformed production incentives at the farm level. Arguably, this transformation is the result of the large cost that each grower would have to bear if the firm failed. However, this risk is costly to bear, and the growers we interviewed clearly indicated that life in the cooperative is “less comfortable.” Growers are working harder and face substantially more risk than when they were producing for a private processor. In other words, although growers may be receiving higher net monetary returns—because they are now receiving a share of processing profits, in addition to a payment for turkey production—it seems that “agency rents” or net returns may have fallen.

This observation is consistent with the monitored credit view of cooperation developed formally in Hueth and Marcoul (2008), where the bundling of input supply and board functions generates higher work effort by growers and a reduction in agency rents. Of course, if this were the only implication of organizing production cooperatively, we would expect to never see a private firm. Thus, there are likely costs from cooperative organization that balance these benefits. Our study is consistent with the view of Hansmann (1996) and others, that the “cost of democracy” (i.e., decision-making with heterogeneous preferences) is one likely source of such cost. Additionally, we note that farmers’ cost of capital is likely high relative to that of private investors, and that training farmers to be board members is costly.

We can think of at least two directions to further explore the nature of the cooperative firm. First, although our monitored credit theory nicely accounts for the bundling of farmer ownership with control rights (in the form of managerial oversight), it is silent on the reason for imposing a restriction on passive ownership. One hypothesis is that such a restriction encourages *ex ante* investment from cooperative members by guaranteeing control *ex post*. Of course, it remains unclear why such guarantees cannot be implemented contractually. Recent efforts to modify the legal definition of a cooperative by relaxing restrictions on outside investment are apparently attempts to implement just such a contractual guarantee (Frederick, 2002).

Second, there is very little formal empirical work on the internal structure of cooperative firms. In this paper, we provide case study evidence that broadly supports a general set of predictions. The obvious next step is more formalized empirics. For example, predictions that distinguish our monitored credit theory of cooperation from other theories include those associated with internal structure. In particular,

differences in board-CEO relations, CEO and board pay, and cost of capital are all potential objects of study (see Hueth and Marcoul 2009 for recent work on CEO pay practices in cooperative firms).

Notes

1. Cooperative activity of this nature is not unique to agriculture. Zeuli and Cropp (2004, p. 32) describe how rural utility cooperatives in the United States were initially established to provide services to rural residents that were not being offered by the private sector. Similarly, Guinnane (2001) demonstrates how credit cooperatives in late nineteenth century Germany were able to service low-quality borrowers who could not obtain funds from private lenders.
2. Recent prominent examples in agriculture include Diamond Foods, Dakota Growers Pasta Company, Calavo, and Goldkist. Although we focus on cooperative activity in agriculture, similar sorts of transitional phenomena are observed in the context of the labor-managed firm. See Bonin, Jones, and Putterman (1993, pp. 1312–15) and Dow (2003, Chapter 10).
3. These observations are based on interviews with key individuals of the cooperative, including the current and former CEO, the chairman and another member of the current board of directors (both growers), and six additional grower members. All interviews lasted between 45 and 120 minutes, and were tape recorded and later transcribed. Each subject was paid US\$50 for participating in our study.
4. To the extent that the firm provides on-going operating credit to the farmer, it may be reasonable to expect a further monitoring advantage in the other direction. The board, which is made up of farmers, is in a better position to evaluate the quality of its member population.
5. This type of contract seems standard in the poultry industry. For instance, see Martinez (2002).
6. There is no evidence that Louis Rich threatened a retreat and intended to negotiate a better contract with growers (e.g., by bargaining for lower turkey prices).
7. Besides the West Liberty plant, the growers also purchased a feed mill in Ellsworth, Iowa and the Louis Rich Company farms located in the state.
8. State and federal governments also provided substantial grant and guaranteed loan support. The USDA guaranteed 70 percent of a US\$7 million loan from a private lender, the Iowa Department of Economic Development contributed a US\$900,000 grant and loan package, and approved US\$875,000 in forgivable loans using the city of West Liberty as a sponsor (Perkins, 1997). In exchange for the latter, the cooperative agreed to pay 425 workers at the plant an average US\$9.66 per hour.

9. Our interviews with senior members revealed that falling prices and the gloomy prospect of the cooperative at the time discouraged potential new members. It also increased the burden on existing members who had already made large initial commitments.
10. The chairman of the board revealed to us that, in the last round, some members decided to borrow against their life insurance because it was their only remaining uncollateralized asset. Some declined to do so and chose instead to exit, thus losing their delivery right. Later on, these former members were given the opportunity to buy back their membership under preferential conditions.
11. In our interview with the chairman of the board, he recognized this aspect by saying that “the cooperative is the grower’s money.” He concluded, “That makes the difference. Your butt is on the line 24-7.” Emphasis in original.
12. The chairman of the board insisted that “there is no contract” and that growers are “independent.” We concur, in the sense that there is no written contract periodically signed by both parties. However, growers have delivery duties that are understood by all. We choose to label this relationship as a contract.
13. The increase in the workload, compared to the Louis Rich period, is also due to the increased involvement of growers in the processing and marketing operations. We will come back to this issue later.

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