

The Horizon Problem and New Generation Cooperatives: Another Look at Minnesota Corn Processors

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In 1986, what was then the Agricultural Cooperative Service commissioned nine papers on cooperative theory to stimulate research and creative thought on the practical aspects and current problems of cooperation. These outstanding papers were published the following year as Cooperative Theory: New Approaches, Jeffrey Royer, ed.

Three of the 9 essays were written by John Staatz of Michigan State University, and were extensions of his award winning Ph.D. dissertation, "A Theoretical Perspective on the Behavior of Farmers' Cooperatives." Staatz' prescient paper, "The Structural Characteristics of Farmer Cooperatives and their Behavioral Consequences," outlined three distinguishing characteristics of farmer marketing cooperatives and developed hypothesis based on these attributes regarding how the behavior of cooperatives is different from that of investor-owned firms (IOFs).

Staatz traced out the implied behavioral consequences of these differences with respect to farmer-member participants in cooperatives. Within this context, the "Horizon Problem" is described and explained as a consequence of the general illiquidity of cooperative stock derived from the fundamental characteristic that shareholders in cooperatives accrue ownership benefits almost exclusively through their current patronage and not equity.

New Generation Cooperatives (NGCs) were designed principally to overcome the shortcomings of the farmer-marketing-cooperative structure and its behavioral consequences while maintaining the principles and derived benefits of collective action. One of the major attributes of the NGC is that the benefits of ownership accrue extensively through members' equity investment along with their patronage. Just as with IOFs, a well-functioning secondary market ensures the liquidity of the cooperative's stock certificates and confers on the bearer the expected present value of the firm's future earnings.

The absence however, of a secondary market for NGC stock reduces ownership benefits to be obtained exclusively, once again, through current patronage. Rationally behaving NGC members subjected to these constraints on equity accrual are expected to pressure the cooperative to increase current earnings at the expense of future investment/earnings; the "horizon problem."

This paper explores the premise that the sale of Minnesota Corn Processors (MCP), among the first of the New Generation Cooperatives, to Archer Daniels Midland in 2002 was motivated principally by the horizon problem that had beset the membership as a consequence of a virtual absence of any secondary market for the cooperative's stock. The sale of MCP to ADM was in fact an extreme case whereby, the tendency of emphasizing current cash flow at the expense of future earnings was executed by a total liquidation of assets.

The Old Co-op Ways

Farmer Co-ops are just “Different”

Farmer cooperatives are different from other businesses, especially with regard to their decision making. And on a more fundamental level, there are structural characteristics, in the way co-ops are organized and the way they operate, that set them apart from other types of firm.

Patron-Stockholder identity

For one thing, the farmer-stockholders of a cooperative are also the major users of the firm’s services. To the extent that stockholder-members influence the firm’s decision making, this adds a messy complication to the firm’s objective function. As Staatz said, it has the effect of “broadening and diffusing the scope of optimization across the entire membership of the cooperative.” (July 1987)

Broader and More Diffuse Scope for Optimization

The scope for optimization is broader in the sense that a profit-maximizing farmer-member will seek to manage the farm and cooperative as an integrated farm/cooperative system. It is more diffuse because cooperative returns are distributed according to patronage. Consequently, the cooperative has not one profit maximizing point, but a separate point for each member of the cooperative.

In a multi-product cooperative this is of particular consequence because stockholder-patrons are especially concerned about the pricing of individual products more so than in the firm’s overall performance. In contrast to the investor-owned-firm (IOF), where the stockholder derives income based on the firm’s bottom line, a cooperative stockholder’s income depends more on the pricing of individual products than on the firm’s overall profitability.

Issues of product pricing, pooling, and cost allocation, are therefore, matters of particular concern among cooperative stockholders because of their income distribution consequences. And when members face financial straights, their interests in these issues grow keener still.

Democratic governance

Voting Limits on Equity Ownership

A second characteristic is that the governance of the cooperative business is structured democratically, as in “one-member, one-vote”, so that voting power is not proportional to the stockholder’s equity investment. The allocation of voting power based NOT on equity ownership is intended to separate the control of the organization from the contribution of capital, the so-called “Principle of Preventing the Domination of Capital” in the cooperative. This diffusion of capital power however, raises the possibility that a majority of small contributing patrons could impose policies that exploit the minority of large contributing members.

Of greater concern is the possibility that the diffusion of political power may reduce the quality of the board of directors’ decision making. When board members believe their reelection is dependent on a majority of patrons each with a relatively small stake in the cooperative, they may regard decisions more cavalierly than when voting rights are proportional to equity investment.

Limits on Non-stockholders Serving on Board

In an effort to insure “member control,” there are strict limitations on the number of nonmembers who may serve on the board of directors.

Board members of a farmer cooperative are users of the firm’s services and therefore, bring concerns to the board from an owner’s standpoint as well as that of a user. An owner’s concern is focused on the security and overall profitability of the stockholder’s investment. A user is concerned with issues which affect the profitability of the cooperative to the individual patron.

User concerns generally are given priority in a marketing cooperative because of the limitation of dividend payments and the inability to accrue capital gains. And as users of the co-op’s services, board members may bring an important technical understanding of the firm’s operations.

However, when cooperative operations are complex and reach well up the marketing chain, a farmer-director is less likely to have the deep skills necessary to make sound business decisions and lead the co-op wisely. This leads us to Helmberger’s dilemma, “To the extent that farmers participate in leadership roles in the board, they may contribute to poor decisions and hamstringing management; to the extent that they do not participate, ownership is separated from control.” (Helmberger)

Return on investment gained through patronage

No secondary market for stock

The stock certificates of an IOF confer to its holders a residual claim in perpetuity on the earnings of that firm. A secondary market values the stock in terms of its expected present value of the firm’s future net earnings. And the capitalized value of those future earnings may be realized any time its holder desires, simply by selling the stock.

In contrast, a stock certificate of a marketing cooperative grants the holder a residual claim on the firm’s earnings only so long as the holder continues patronage in the co-op. That certificate has no secondary market. And the future earnings of the cooperative have little effect on its stock value. Any equity retirement policies confer only a fixed claim to be paid in nominal terms over several years. As a consequence, the benefits of ownership in a marketing cooperative accrue to its shareholders through their current patronage.

Under-financing the Cooperative

Farmer-members therefore, invest in an agricultural cooperative to obtain the right to patronize the firm. And because no real dividend is paid on the amount of equity invested, as long as it is profitable for a farmer to patronize the cooperative, the return on investment can be raised by expanding participation relative to the investment. Left unchecked, members only contribute enough capital to gain entry and then expand patronage only so long as it is more profitable to do so.

To overcome this behavior, cooperatives have developed programs such as: ‘capital retains’, ‘base capital plans’, and other ways of withholding (allocation) patronage refunds. These mechanisms basically force members to align their capital contributions with their patronage in the cooperative.

Limited Pool of Equity Capital

A fundamental consequence of tying stock ownership to patronage is that it severely constrains the potential pool of equity capital for the cooperative. Investor owned firms may raise additional equity capital by selling stock to the general public. But a marketing cooperative can only increase its equity base by conscripting additional capital from its existing shareholders or by recruiting new farmer-members.

Risk Aversion

Existing members of a marketing cooperative resist further subscription of capital for a number of reasons.

First of all, as farmers, marketing cooperative members have a limited amount of investment capital to start with and so must ration their investment first to their own enterprise to continue operations. And even during flush periods, members tend to perceive that the return on investment from their own enterprise is greater than the return from their investment in the cooperative.

Secondly, members invest in the cooperative hoping to strengthen their own farm business. But each additional dollar invested in the cooperative represents a deepening or concentration of that member's financial commitment to the business and not a diversification of the member's portfolio.

Recognizing this deeper financial commitment of their members, cooperatives give greater regard to the fixed costs of their shareholder-patrons than they otherwise might. Therefore, marketing co-ops tend to concentrate their investments in the agribusiness activities that support the farming enterprises of their membership.

This is self preserving behavior. Members would suffer substantial capital losses if their farming activities were inadequately supported. But it also serves to further concentrate the cooperative's financial commitment to immobile assets.

Recognizing that "all their eggs are in one basket," cooperative members tend to pressure management to adopt more conservative, risk averse, business strategies. By way of contrast, IOFs may choose to diversify into completely unrelated investments. And whereas an IOF stockholder is free to liquidate any investment that fails to yield its expected return, a farmer-shareholder's investment in the cooperative is sunk.

Implications for Participant Behavior: The Horizon Problem Explained

These three characteristics: the patron-stockholder identity, democratic governance, and the distribution of ownership benefits through patronage, lead farmer cooperatives to behave differently than other types of firm. And while some of the behavioral differences can benefit the co-op's operations, others are recognized to hinder its performance under certain circumstances. Writings on worker-managed firms (Jensen and Meckling) and later on farmer-marketing cooperatives (Condon and Vitaliano, Furubotn) discuss how the lack of a secondary market in ownership rights leads members to pressure the cooperative's decision makers to increase current earnings even if it means foregoing future revenues. This tendency to emphasize current cash flow at the expense of future earnings is called the "horizon problem."

A marketing cooperative is said to have a horizon problem when its members pressure management to:

- 1) Increase the proportion of cooperative's current payments to members relative to investment, i.e. a larger "cash payout";
- 2) Speed up equity retirement programs and/or increase the dividend paid on capital invested in the organization; or
- 3) Liquidate the cooperative's assets, in whole or in part.

The horizon problem may be mitigated somewhat however, if membership in the cooperative can be sold with the farm. Selling the membership allows the expected future earnings of the cooperative to be capitalized into the farm's sales value. This valuation/capitalization is even more straightforward when the farm is incorporated and the corporation itself is a member of the cooperative.

The horizon problem may also be attenuated if the cooperative provides for an inter-generational transfer of membership within families. Whether retiring members derive satisfaction from bequeathing their heirs a stronger cooperative or gain a higher retirement from the associated, the effect is the same -- Older members are more willing to help finance the long-term investments of the cooperative even though they will not benefit directly from them.

If the cooperative has a completely open membership policy, then the value of the cooperative may also be fully capitalized into a farm's sales value.

In smaller cooperatives, particularly those in which the members are strongly tied to one another, whether by common religious or other social beliefs, the horizon problem may be diminished by older members' moral obligation to their predecessors to leave a stronger cooperative to their heirs.

Conditions for an EXTREME Horizon Problem

We expect then for members to put the most pressure on a cooperative's decision makers to increase current payments at the expense of future earnings when the expected value of the cooperative may not be fully realized.

Under the following circumstances, a cooperative is said to have an Extreme Horizon problem:

- 1) The per-member capital investment in the cooperative is large.
- 2) The cooperative has a closed membership.
- 3) Few of the member firms are legally incorporated.
- 4) The intergenerational transfer of membership within families is prohibited.
- 5) The cooperative has a large, diverse membership.

The "New Wave" Response

The "new generation" cooperatives were intended to offer an alternative structure to overcome some of the fundamental issues confronting the traditional marketing-cooperatives without abandoning the principles of collective action.

New generation co-ops (NGCs) are similar to traditional marketing cooperatives in that:

- Only farmers can be voting members;
 - Governance is on the basis of one-member, one-vote;
 - Stock dividends may not exceed 8 percent per year;
 - The value of products handled for members exceeds that of non-members; and
 - Earnings are allocated to patrons on the basis of patronage.
- But they are also fundamentally different in:

Focus - Traditional agricultural marketing associations usually seek to maximize the VOLUME of product handled. NGCs seek to identify and obtain the volume of farm production that can be processed and sold consistently at a PROFIT.

Membership – Traditional cooperatives have ‘OPEN’ membership and seek to sign up the largest possible number of eligible producers. NGCs have a limited or ‘CLOSED’ membership. Once eligible producers have contracted to deliver the desired level of product, the cooperative no longer solicits membership.

Member equity investment – Traditional cooperatives usually require a MINIMAL, uniform investment and equity is accumulated over time through retained earnings and per-unit retains. NGCs require a SUBSTANTIAL upfront investment with individual investments differing in proportion to the member’s agreement to deliver feedstock to the association each year.

Equity transferability – The upfront investment and member equity in a traditional cooperative can only be redeemed by selling it back to the co-op at FACE VALUE. NGC’s tie equity to the right to deliver product that may be resold to other co-op members or producers eligible to become members. The transfer takes place at whatever PRICE IS NEGOTIATED between the two parties regardless of the price paid by the seller.

The successful traditional marketing cooperative offers two principal benefits: A home at a fair price for the members’ product; and patronage refunds at the end of a successful marketing year. Additional benefits accrue to NGC members: The option of cashing out their equity investment when they want to reduce or cease their dealings with the cooperative; and the opportunity to make capital gains on their equity investment. (Frederick, et al)

The Case of Minnesota Corn Processors

A proud beginning

In the early 1980s, a revival swept across west central plains of Minnesota. Corn and bean farmers found themselves caught up in the fever and excitement of something that was being called a number of things: “New Age,” “New Wave,” “New Generation.” And, while it may have had the earmarks, this was not a religious revival. These ‘highly spirited’ meetings were being held in cafes and coffee shops from Clarkfield to Granite Falls. And the ‘good news’ was being delivered by a state economic development specialist preaching a “gospel” of self-help and collective action. (Powell, Star Tribune)

In Marshall, Minnesota, a group of reasonably successful farmers formed a different kind of cooperative. They saw an opportunity to link themselves to a value chain and intended to use a new type of cooperative to make some serious money for themselves and they set it up accordingly. And they purposed to do a number of things differently this time around.

For starters, they proposed not to undertake this new enterprise on the cheap as may have been done before with traditional marketing co-ops. Every prospective member had to pony up a substantial investment, at least \$10,300 in equity capital to build the plant.

Second, they limited their membership to only those single-minded farmers who bought into the idea and had the wherewithal to make the initial investment.

And for each share of stock the member purchased in that buy-in, he received the right and the obligation to deliver corn to the cooperative and a residual claim on the net returns of the cooperative. Also, their equity was tied to directly to those delivery rights which are transferable and promised to have a secondary market of their own.

And in 1983 Minnesota Corn Processors opened for business, a \$55m corn wet-mill fuel-ethanol plant on the north side of Marshall built with 5,000 bushel investment increments, and a \$1.9 tax increment financial assistance from the city.

The co-op struggled to break even for the first 4 years or so. By their on admission, they were just a bunch of farmers trying to find their way in a new business and for that matter, a new industry. They had to first learn how to manufacture a product to a customer's specifications, and they nearly went broke in the process.

But by 1987 they had ramped up to nameplate capacity, worked the bugs out of their delivery system, and started to turn a profit. And by that time even the state of Minnesota legislature was caught up in the excitement. They saw public investment in farmer-owned fuel-ethanol plants as a positive way of supporting rural communities and developed a scheme to subsidize plants on a per-gallon basis. And the cooperative agreed to add an ethanol still to their process. Over the next 10 years, MCP received approximately \$33m from the state of Minnesota.

A "New Wave" flagship

And so the state of Minnesota's first, and to this day only, corn wet mill was fast becoming a great source of pride to a large number of people. And rightly so, success has many fathers. In an area rich in tradition of collective action, this new generation cooperative, the first of the "New Wave" experiments, was assuming a leadership position in a new industry, in its community and the state of Minnesota, and among farmer cooperatives. And not only that, it was returning to its members some 'real money.'

And make money they did. For the next 7 years or so, and especially from '91 through '95, the cooperative grew in locations, capacity, and prosperity. The Columbus, Nebraska plant was added in '91. Two separate expansions were undertaken in '93 and '95. The '95 expansion required the cooperative to borrow \$124 to add high fructose corn syrup capacity.

The cooperative was becoming a major player in the industry, standing among giants like Cargill and Archer Daniels Midland. The value of their initial investment more than tripled. The stock appreciated from an initial offering price of \$2.06 to \$4.50 in the mid-'90s. And as a result of several stock splits in the mid-'80s, charter members tripled their holdings, as well. There were reports of paper millionaires among initial investors during those halcyon days.

"A fight for our lives"

The flagship was soon buffeted about by some very heavy seas and began take on water. Market shocks, predatory behavior, and a glaring oversight in the cooperative's operations, all combined in '96 to give MCP a very hard lesson on the realities of being a major player in the commodity manufacturing business. In the words of their board chairman, "forget all the warm, fuzzy buzzwords of 'farmer-owned,' 'value-added.' We were in a fight for our lives." (Powell, Star Tribune)

Cost overruns from the '95 expansion surely made for a rough start to '96. But the cooperative's real difficulties began with the winter drought and subsequent rise in corn prices. The drought persisted. Corn prices skyrocketed. And having no hedging strategy to lock in its offering price to members, MCP was especially exposed to the almost doubling of its feed stock costs.

Grain marketers traditionally use the futures market to protect themselves against major price movements. MCP however, believed that because its members were contractually obligated to deliver grain, that the market assurances offered by a hedging operation were, if not a complete redundancy, surely an extravagance. They were wrong on both counts.

"Too many pigs at the same trough"

Were the price of either ethanol or fructose tied to their respective cost of production, the cooperative may have been able to pass a portion of its higher costs on to its customers. However, product prices were, if anything, inversely related to production costs in '96, as MCP and all market participants discovered. And fructose market conditions were not the least bit improved to U.S. sellers, MCP included, when Mexico chose to close its borders HFC imports in order to shore up its own market later that year.

But the worst blows may have come at the hands of one of their own. Corn fructose prices really went into a tailspin with the arrival of another competitor in the already saturated market. It's hard to imagine a more untimely opening of the \$261mil ProGold Corn Sweetener plant in Wahpeton, North Dakota; and by another group of collectively-acting farmers no-less. Just how unfortunate these circumstances were was made clear when ProGold was forced to form an alliance with Cargill, who soon acquired them outright, and fructose prices went into a 2 year depression.

In the words of a board member MCP, "ended '96 with an Upside down balance sheet." The cooperative realized net losses of \$63m, had acquired long term debts in excess of \$410m, and its bankers were demanding payment. (Powell, Star Tribune)

"Too many buzzards sitting on the fence"

By early '97 it was clear that MCP was in need of more than an emotional rescue. The cooperative needed if not a savior, certainly a sympathetic partner to help pay their bills and get them through this very tight spot. There was no shortage of interested parties. A traffic jam of corporate jets carrying "Angels," soon littered the skies above Southwest Minnesota Regional Airport in Marshall. Among the most prominent candidates that came a-courting, Cargill was perceived by the MCP board as wanting too much control and A.E. Staley Mfg. of Illinois, didn't have the cash on hand that MCP needed in pretty short order. However, the MCP board seemed to warm immediately to ADM's chief. Duane Andreas was seen as, "Calm, well-spoken, down-to-earth, and easy to deal with." (Powell, Star Tribune)

Rescued by an Angel?

Mr. Andreas and ADM came to MCP's rescue in '97. The MCP board chose ADM as the best possible suitor because for the \$120m. in cash that the cooperative received to pay its bankers, ADM received 30 percent of MCP's stock and asked for a very limited oversight privilege; ADM wanted to be consulted before any major capital investments were undertaken.

With its bankers appeased, corn prices returning to normal levels, and the modest recovery of the fructose and ethanol markets, MCP began to turn things around in '99 with significant gains in revenue and net returns. And with continued progress in the next two years, MCP was able to report modest net returns and reduce its long debt by 40 percent to \$245m.

Or a dance with the Devil?

Also during its recovery, a significant but relatively unnoticed transformation occurred in the cooperative's legal structure and by-laws. In '00, the New Venture cooperative went through an entanglement of legal procedures to convert from a Minnesota Cooperative to a Colorado Limited Liability Company. The reason given was for "tax purposes." MCP also revalued its stock at \$1.02 per share along the way.

The corporate jets returned on April 22, 2002. They weren't bearing Angels this time however, but teams of legal and financial experts from New York and ADM headquarters. The event was a regularly scheduled board meeting with ethanol and fructose prices on the agenda. But this meeting turned out to be anything but routine. A month earlier, ADM had tendered an offer to purchase MCP outright. And the CEO was now presenting the offer to the board with the following imperative, "Gentlemen, shut your briefcases and please do not take notes of this meeting."

The board was now being asked, absent any involved discussion, to approve the deal. There were implications and vague threats of law suits issued to any director who might publicly voice opposition and "Queer the deal" with slanderous remarks.

Each board member was asked point blank if he had hired representation or discussed any financial details prior to this meeting. But how could they have? The directors had been completely shut out of the loop regarding the offer. By several accounts, the whole atmosphere was one of intimidation and coercion. One director made an issue of expressing that he had a fiduciary responsibility to the stockholders and was told he would be escorted off the premises by the sheriff for trespassing.

More than one member remarked that ADM's intentions in '97 were to buy the plant and that the last 4 years were just an extended use of due-diligence. Andreas' remarks at the time make such intentions hard to refute, "MCP's long suit is 2 well-designed, low-cost, low-emission plants." (Powell, Star Tribune)

MCP "Golden Parachute" Club

Surely the progress of the deal itself or its favor among the principals wasn't hindered by the alleged sweetheart payment to be distributed at the time of sale. A reported \$8.5m, was awarded at sale and the amount was doubled if the sale went through by a specified date. A total of \$20m in accelerated pensions was distributed among the 8 executives, and \$385k paid immediately to the CEO upon merger. (Powell, Star Tribune; Losure, MPC NEWS)

This "New Age" Co-Op has an Age Old Problem

Incentive payments aside, the motivation to sell MCP was more fundamental. Given the cooperative's near-death experience in '97, its heavy debt burden, and struggle to pay returns, it's easy to appreciate that members might be having second thoughts regarding their investment. Moreover, the secondary market in MCP shares, by all evidence was non existent; a detail duly noted among a majority of the stockholders that

were at or approaching retirement age. Members seeking to cash out of the cooperative had to be especially resourceful. First that member had to find another stockholder who was willing to purchase his/her equity at current prices, which meant that the buyer wasn't actively planning his/her own retirement. Or the seller had to seek a non-member seeking membership who also had the wherewithal to do so in these cash-straitened times. Under the economic circumstances of recent years, low corn prices, large indebtedness, finding prospective members both willing and able to buy into the cooperative was difficult at best. Many members had even borrowed the capital to buy into MCP.

Dan Thompson, MCP's CEO, said it this way, "We've got a lot of members that in their 50's invested in this company. They can't sell their stock, *there's no liquidity*. Now they're 75 years old and so forth, they want to cash out. They need cash for retirement purposes and have no way to do it." (Losure, MPC NEWS)

To sum up, stockholder-members of MCP shared these circumstances: their per-member investment was substantial, at least \$10,240, some had invested hundreds of thousands of dollars; they were in a 'cooperative' with a closed-membership policy, very few of the member firms were legally incorporated, there was a large membership, and ownership transfer, either intergenerational or otherwise was relatively prohibited. All conditions for an EXTREME horizon problem were satisfied. How could management not then feel extreme pressure to: Increase cash flow to current payments, either by speeding up equity retirement programs, or liquidating the cooperative's assets in whole or in part?

A Missed Silver Anniversary

The Membership speaks

Either by hook, the felt pressure from their membership, or by crook, the implied coercion from MCP's principals, the Board voted 19-5 in favor of bringing the decision to sell MCP to ADM to the membership for a vote. The terms of the sale were that ADM offered to purchase individual shares of MCP stock for \$2.90/share, a total of \$396m and ADM was to assume MCP's remaining debt of \$240m. The shareholders voted conclusively 3,825 to 736 (84 to 16 percent of voting members) in favor of the sale. (Associated Press)

The enterprise value of the sale was about \$760m, based on the cash amount, the 30 percent equity already owned by ADM, and the agreed upon debt assumption.

The Department of Justice rules

Antitrust concerns were raised by the merger of the No.1 and No.2 producers of ethanol and HFC would lessen competition substantially in their manufacture. (U.S. Department of Justice, Sept. 2002) In July '03 the Department of Justice ruled in favor of sale on the provision that a joint-venture with a competitor was dissolved. (U.S. Department of Justice, Sept. 2003)

And the Minnesota Legislature whines

Some Minnesota lawmakers, frustrated by the state's provision of \$33m in ethanol-producer subsidies to MCP to watch it become acquired by ADM, complained that they wanted a refund. At last account however, no one was sure about what recourse, if any, the state might have. (Powell, Star Tribune)

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