

A Cooperative Life Cycle Framework

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ABSTRACT

Multiple, often conflicting, theories regarding success and failure of collective action exist. We suggest a life cycle framework of patron-owned collective action in the agricultural sector as a systematic method of deciding when to selectively apply relevant theories of collective action. A dynamic framework appears to better inform the cooperative degeneration hypothesis and suggest actions cooperative leaders may take to avoid checkmate. After outlining endogenous reasons for decline, we recast heterogeneity and vaguely defined property right problems as opportunities for gathering information critical to survival. Of the five phases the framework outlines, we choose to focus on phase three: growth, glory and heterogeneity. We propose cooperative decision-makers possessing an intimate understanding of the dynamics of cooperative growth are in a unique position to evade ownership costs by selecting among regenerative solutions when faced with organizational decline.

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The objective of this paper is to advance the concept of the cooperative life cycle. We introduce a framework which informs the dynamics of member-patron heterogeneity and its implications for agricultural and rural cooperative longevity. We utilize Perrow's (1967) concept of framework: a systematic, logical method of deciding when to selectively apply a relevant theory. We treat the agricultural cooperative as a firm jointly controlled by multiple objective-optimizing member patrons who derive user benefits primarily through transacting with the entity. Our approach is primarily micro analytic where the cooperative life cycle is embedded in both a market/product life cycle environment and a global/domestic institutional life cycle.

BACKGROUND

Management and social science academics have been studying organizational life cycles for more than fifty years (1959; Downs, 1967; Tuason, 1973; Whetten, 1980; Kimberly and Miles, 1987; La Porta, et al., 1998). Opinions vary as to the optimal number of stages within an organizational life cycle (varies from 3 to 10), but consensus exists that the stages are 1) sequential in nature, 2) occur as a hierarchical progression, and 3) become increasingly complex over time. In general, organizational life cycle models predict an organization moves from inception to growth, to maturity, to decline or redevelopment.

The inception and early growth stages are usually formed around a single product, single owner-operator which come into existence through technological advances, innovation or entrepreneurship. As the firm grows separation of owner and management functions emerge, multiple product lines are introduced, the debt and risk capital acquisition process is formalized and more formal operating and constitutional rules and practices are established along with more focus on task performance and functional expertise complementing departmentalization. However, the stabilizing impacts of institutionalizing routines, norms and structures adapted in the growth stages commences the process of inhibiting the organization's ability to adapt to changes in the market. This debilitating impact eventually leads to demise, gridlock, conformity, group think, and eventually dissolution. This life cycle scenario has been described, and analyzed through the lens of multiple academic subdisciplines including strategy, structure, environmental analysis, power, entrepreneurship, and corporate culture. Regardless of the descriptive terms we choose to characterize organizational decline, game theorists aptly characterize this pervasive theme as the degeneration hypothesis. This present work seeks a better understanding of the dynamics of degeneration in order to formulate factors relevant to a counter hypothesis.

In reviewing agricultural cooperative literature regarding the life cycle concept, we find sparse references. LeVay (1983) identifies the life cycle concept as one deserving further research attention, proffering little guidance. However, he does conclude that contrary to the dissolution of an investor-owned firm cooperative exits should not always be considered failures. Similar to Helmberger (1964) and Nourse (1922; 1942), LeVay suggests there is a competitive yardstick role for continuance. Consequently, when the need for modifying imperfect market structures no longer exists, exit is the rational option. Harte (1997) analyzes the competitive yardstick decision in the final period of a single life cycle. Royer (1999) in response to life cycle hypotheses developed by Cook and Harte, suggests life cycle hypothesis testing should entail "statistical

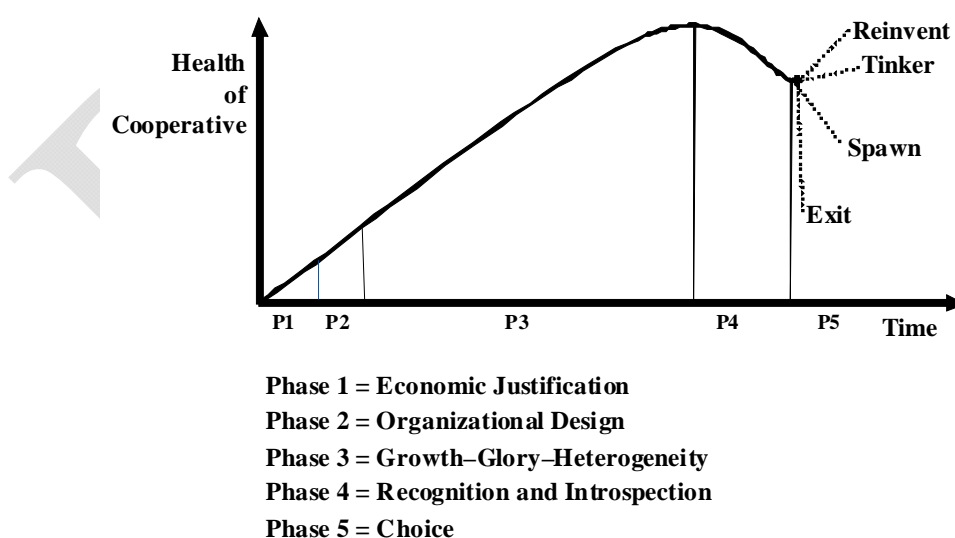
analyses of the comparative efficiency of cooperatives²” and “ex post studies of cooperative conversions”. Hind (1999) assesses change in cooperative goals over time. Her evidence suggests “goal congruence between major stakeholder groups declines as a co-op progresses through the cooperative life cycle...”. Valentinov (2007) concludes a cooperative life cycle is not static nor relegated to a single time cycle. Unfortunately he does not develop the concept further. Finally, Ortmann and King (2007) suggest the future of the cooperative business model may best be analyzed through a life cycle model due to evidence cooperatives may possess an exceptional proclivity for institutional innovation.

Inferring the concept of a life cycle, numerous authors opine as to why a cooperative may or may not continue to exist or in what direction the future of cooperatives are evolving. A sampling includes Helmberger (1966) exit because of industrialization, Abrahamson (1966) continue because of industrialization, Murray (1983) shift toward a more investor-driven structure, Zusman (1992) exiting because of exogenous ethical issues, and Fulton (1995) exiting because of ‘individualism’. These and other scholars imply a dynamic single cycle ‘beginning-success-end life cycle. Missing is a detailed framework that informs a micro analytic discussion of ownership or property rights justification for group decision-making.

THE COOPERATIVE LIFE CYCLE

We propose a dynamic framework to better inform the cooperative degeneration hypothesis and suggest actions cooperative leadership may take to avoid checkmate. Our life cycle framework is relatively simple - it includes five phases; 1) economic justification, 2) organizational design, 3) growth, glory, and heterogeneity, 4) recognition and introspection, and 5) choice (Figure 1). We posit that the “health of a given cooperative” varies over time.

Figure 1. Basic Life Cycle Framework



² Despite the critical importance of analyses of comparative efficiency, our primary goal in developing this micro analytic framework is to inform intra-organizational dynamics. Comparative discussions are predominately reserved for future work.

While successful performance measures may vary among cooperatives and indeed among individual members, for the purposes of this discussion we assume that the cooperative has been able to clearly define appropriate measures of success that correspond to the cooperatives economic justification and organizational design. These measures may include but are not limited to such measures as net margin, member commodity prices, return on equity, and sales growth (LeVay, 1983; Schrader, et al., 1985; Henehan and Pelsue Jr., 1986; Parliament, Lerman and Fulton, 1990; Fulton and King, 1993; King, Trechter and Cobia, 1997; Pritchett and Hine, 2007). We use the term cooperative health to refer to performance in general, as defined by the cooperative. This allows us to be inclusive in light of performance measures specific to the economic justification of the cooperative, the potential for non-financial performance measures, and performance measures which may be difficult to measure at the level of the cooperative enterprise as farm-level benefits are key success measures for many cooperative stakeholders (Jesse, 1978).

In subsequent sections we describe the five phases embedding the theoretical and conceptual reasoning underpinning our argument. Space precludes detailed discussion of each phase – consequently emphasis is placed on phase three: growth, glory and heterogeneity. We propose cooperative decision makers possessing an intimate understanding of the dynamics of cooperative growth are in a unique position to evade ownership costs by selecting among regenerative solutions when faced with organizational decline.

PHASE 1: ECONOMIC JUSTIFICATION

Traditionally agricultural cooperative emergence is defined as producer collaboration attempting to improve their socio-economic position in the absence of a competitive market. Sexton (1988), Hansmann (1996), Schrader (1989) and Miller (1992) identify a multitude of market contracting costs ranging from ‘simple market power, ex-post market power, lock-in, asymmetric information, margin reduction, risk reduction, access to markets, inclusion and participation, and coordination inefficiencies. Valentinov (2007) analyzing the economics of the farm organization and utilizing transaction costs arguments explains the countervailing power and scale and scope economy reasons as to why the cooperative form of organization suits the economic needs of family farm entities found in most Western economies. Cooperative history is filled with stories, case studies, survey results, legal documents and verdicts, theoretical explanations and thought pieces relating the origins of collaborative efforts inspired by the above mentioned forms of market failure. The examination of the lives and activities of cooperative pioneers such as Robert Owens, Charles Fourier, Friedrich Raiffeisen, Herman Schulze-Delitzsch, Rochdale Society and many others document the importance of ‘economic justification’ as a primary driving element in their ability to move patrons toward the purpose of improving a market-clearing collective action. Phase one includes the recognition, understanding, translation, transference and manifestation of patron enjoined collaborative action to ameliorate the socio-economic consequences of the market contracting costs or collective rent seeking opportunities.

PHASE 2: ORGANIZATIONAL DESIGN

Once economic justification motivates principals to collaborate, the organizational design phase commences. Assuming a cooperative organizational form is chosen, we observe most institutional environments embed the cooperative principles in the formal incorporation

regulations or statutes. The cooperative principles impact residual claim and residual control distribution rights through proportional patronage features, limited return on risk capital constraints, equity capital acquisition policies, monitoring mechanisms and representation rules. It is at this phase that differences in member preferences and transaction impact behavior emerge. The process of constructing the cooperative constitution tests the scope and degree of member heterogeneity through formulation of policies and rules affecting principal-agent relationships, collective decision making processes, and risk bearing responsibilities. Clearly understanding these original differences becomes extremely important in understanding phase 3 of the framework. The implications and consequences of the emergent organizational architecture are informed by work from organization theory, property rights theory, population ecology, and mechanism design (Hurwicz, 1987; Gray, 1988; Gray, 1991; Chaddad and Cook, 2004; Hart and Moore, 2005). Achieving constitutional adaptability and flexibility, in voting mechanisms, member qualifications and responsibilities and authority distribution requires considerable input from members at this stage. Developing an organizational design that recognizes the existence of member heterogeneity facilitates the entrance into phase three.

PHASE THREE: GROWTH, GLORY AND HETEROGENEITY

Over time, individual members of a successful cooperative may experience a divergence of interests. This heterogeneity in preferences may threaten the viability of the cooperative organization as competing member-patron interests have the potential to increase collective decision-making costs (Hansmann, 1996). Unaligned preferences are a precursor to fragmented membership, the development of distributional coalitions and institutional sclerosis (Olson, 1982). A cooperative possessing sufficient financial slack has an opportunity to attempt to appease multiple distributional coalitions in the short run. In the long run, however, this strategy can result in specific costs that erode the competitive advantage of the cooperative organization. We categorize these costs as arising due to six basic problems: free-rider, horizon, portfolio, free cash flow, influence and control (Jensen, 1986; Cook, 1995).

In the following sections, we review our understanding of heterogeneity and its impact on the cooperative organization. We then ask whether there is any reason to expect diachronic increases in heterogeneity over the life of a patron-owned organization. Finally, we turn our attention to growth and glory, investigating whether success may come with the potential of additional costs to that warrant future investigation.

Heterogeneity in Preferences: Productive, Unproductive or Destructive³ Consequences of Divergent Interests?

Member heterogeneity has been suggested to undermine organizational processes by affecting investment behavior, collective decision-making costs, member commitment, and the probability of cooperative demise more generally (Hansmann, 1996; Gripsrud, Homb Lenvik and Veflen Olsen, 2000; Schilthuis and van Bakkum, 2000; Fulton and Giannakas, 2001; Chaddad and Cook, 2004; Chaddad and Cook, 2007; Kalogeras, et al., 2009). It is important to note we do not assume a direct correlation 1) between heterogeneity in member preferences and heterogeneity in

³ Baumol, W. "Entrepreneurship: Productive, unproductive, and destructive." *Journal of Political Economy* 98, no. 5 (1990): 893-921.

member circumstances nor 2) between the existence of heterogeneity and organizational outcomes. Research suggests inequality among certain member attributes, including experience, information, wealth, and reputation may stimulate the formation of collective action and the performance of teams (Pelled, 1996; Pelled, Eisenhardt and Xin, 1999; Jones, 2004). Diversity in member circumstances may, in fact, stimulate the development of creative problem-solving and unique proposals. Thus, we use the terminology of heterogeneity in preferences to describe divergent stances among members on decisions related to the allocation of residual claimant and residual control rights. We are interested in heterogeneity primarily because divergence in interests coupled with the existence of vaguely defined property rights (Cook, 1995) have the potential of manifesting as ownership costs which result in debilitating effects on the organization. A thorough investigation of how emerging heterogeneity may result in ownership costs may allow cooperative leaders to preemptively address growing challenges.

We stress a neutral interpretation of heterogeneity in preferences. The existence of member-patron heterogeneity does not strictly correlate with positive or negative organizational outcomes. For our present purposes this would indicate the existence of member heterogeneity is not hypothesized to be the sole predictor of cooperative success or demise. Cooperative organizations may design collective choice arrangements (Ostrom, 1990) that maximize positive externalities related to diversity and minimize heterogeneity that has resulted in a cost to the organization. While we take the opportunity to describe why and how heterogeneity may increase in phase three of this lifecycle framework, phase five reiterates several possible responses the organization may choose in order to minimize or evade ownership costs. Thus, a macroanalytic investigation of cooperative survival is dependent equally upon an understanding of heterogeneity within the organization, how existing organizational arrangements may impact heterogeneity and performance (phase two), and strategic alternatives available to the organization (phase five).

Increases in heterogeneity among members can be seen from an historical perspective and linked to factors external to the cooperative organization such as divergence in farm size, multiple farming strategies, cooperative consolidation through merger and acquisition, and changing consumer demand (Food and Agriculture Organization of the United Nations, 1996; Bogetoft and Olesen, 2003; McKee, 2007). However, the notion that the level of heterogeneity among member preferences increases over the life span of the cooperative has also been suggested as a consequence of internal organizational processes such as divergent proportions of allocated equity and emergent special interest groups arising internally, seeking to pressure management (Staatz, 1987; Rathbone and Davidson, 1995). While exogenous and endogenous factors increasing heterogeneity may lead to similar dilemmas for the cooperative firm, this present work focuses on internal cooperative conditions and questions whether internal heterogeneity has the propensity to increase over the cooperative life cycle.

Diachronic Increases in Heterogeneity

Why might we expect growing heterogeneity among patron-owner preferences over time?

Although detailed analysis of the potential range of factors that influence an increase in heterogeneity of preferences among cooperative members has not yet been undertaken, we offer a few plausible explanations for a diachronic increase in heterogeneity that have been alluded to

in previous research. Over time, heterogeneity may increase in a cooperative organization due to such endogenous factors as equity allocations, patron drift, membership growth, substitution effects, and diversification that exacerbates transactional differences.

Disproportionate Equity Allocations

Patrons with homogeneous investment and risk preferences at the founding of the cooperative may experience a divergence of interests over time as a result of highly disproportionate equity allocations. The simplest example of such a scenario involves member-patrons with homogeneous investment preferences who begin patronizing the cooperative at the same time but for whom the resulting magnitude of a cooperative investment decision differs substantially due to minor discrepancies in the growth rate of allocated equity over time. Farm-level strategy diversification, farm-level productivity, and the fraction of transactions the patron-member chooses to conduct with the cooperative may be considered as possible antecedents to growing discrepancies in member allocated equity. Given relatively minor differences in the growth rate of their patronage, large discrepancies in allocated equity may occur (Rathbone and Davidson, 1995).

Discrepancies in allocated equity may result in producers with somewhat similar preferences facing investment decisions that differ by an order of magnitude with respect to the wealth effects borne by the individual. Individuals bear these wealth effects through slower revolvment periods or through non payment of allocated equity as a result of cooperative bankruptcy. Thus, we have reason to suspect diachronic increases in disproportionality of allocated equity may be an endogenous factor contributing to divergent investment preferences among member patrons.

Patron Drift

While founders may have possessed relatively homogeneous interests, longstanding cooperative institutions may expect the natural exodus of founders as a result of retirement (Food and Agriculture Organization of the United Nations, 1996). It is not clear potential replacement entrants will necessarily possess interests homogeneous with remaining member preferences. The cooperative may be ill-equipped to respond to an influx of members with heterogeneous preferences. Indeed, cooperatives seeking additional members for reasons of productive efficiency and bargaining power volume may exert minimal effort in resolving any negative affects of heterogeneity. Perhaps more damaging, however, is the potential that member-patron entrants may not be conscious of the economic justification for collective action.

For example, new patron-member entrants may not suffer from the market contracting costs which constituted a centripetal force for their predecessors' commitment during organizational founding. While the absence of similar market conditions may be invoked for consideration by patron-members possessing significant organizational memory, discussions of potential market contracting costs may not have as strong of an impact on the homogenization of preferences as personal experience with the grave consequences of market power or opportunism. If formation of the defensive cooperative organization was impacted by a particular market failure, the passage of time may have a centrifugal effect on member-patron cohesion: the longer the time period since formation, the less likely new cooperative entrants are to have suffered the consequence of a particular market failure.

Membership Growth

Although growth in cooperative membership can entail significant gains from efficiency, growth in the number of member-owners may also increase the probability of divergent interests among patron-owners (Hansmann, 1996). Olson (1965) introduces the controversial notion of size in his discussion of privileged and latent groups (Hardin, 1982). While we do not imply that size necessarily has a direct effect on the sustainment of cooperation, its endogenous relationship to several factors affecting cooperative cohesion necessitate its inclusion in our discussion of the lifecycle. It may be reasonable to expect a larger number of members to be involved in the cooperative over time if we consider the following factors: 1) upon formation potential cooperators may adopt a wait and see strategy, preferring to join once the cooperative has made credible steps toward meeting its market objective (Sexton and Iskow, 1988), 2) a cooperative may expand its territory or merge with additional cooperatives 3) member-owners who have ceased transacting with the cooperative may continue to possess allocated equity and voting rights in the cooperative⁴.

For the purposes of our discussion, we recognize an increase in the number of cooperators may lead to a decline in cooperation when an increase in size 1) compounds the cost of gathering and disseminating information among all member patrons, 2) increases the probability that cooperative defectors may successfully avoid sanctions, 3) leads to “diffusion of responsibility” exacerbating the disincentive patron owners experience to monitor managerial agents, or 4) increases diversity with respect to competing investment preferences (Frohlich and Oppenheimer, 1970; Chamberlin, 1974; Oliver and Marwell, 1988; Libecap, 1994; Poteete and Ostrom, 2004). While increases in ownership costs with respect to the gathering and dissemination of information are more closely related to duplicity of effort, the remaining observations regarding the detrimental effects of member-patron growth can be interpreted as being directly related to organizational governance of heterogeneous investment preferences.

The organizational structure of a privileged group creates disincentives suppressing potential defection and shirking of monitoring responsibilities, but growth in the number of members dissipates these incentives. A cooperator may have preferred to defect in the privileged group, but a credible threat of sanction existed due to low monitoring and detection costs. An increase in cooperators that raises the cost of information gathering and lowers the incentive to monitor creates a viable opportunity for expression of heterogeneous preferences through defection. This scenario coupled with a fundamental increase in the probability of each additional member possessing a unique, heterogeneous set of preferences gives credence to the notion that growth in membership can lead to an increase in ownership costs over time.

Given the controversy surrounding arguments that the number of contributors impacts the pursuit of collective action, it is important we provide a few indications with respect to underlying factors that may amplify or dispel concerns regarding size. Group size has been shown, theoretically, to have a greater negative impact on cooperators' provision ability as 1)

⁴ Unactive members may be replaced by active members. However, both sets of members may retain claimant and/or control rights. This contributes to the potential for a larger number of member-owners.

substitutability of privately generated commodities increases⁵, 2) individual utility preferences place greater weight on private good consumption, and 3) the degree of rivalry of the commodity increases (Pecorino, 2009).

In other words, those cooperatives producing rivalrous goods are more likely to experience the negative consequences of growth as the number of member patrons rises. This is particularly true in cases in which the marginal cost of adding another person to the group exceeds marginal efficiency gains. In addition, the availability of close substitutes for the cooperative's products and services as well as utility preferences for privately generated goods will decrease the likelihood of collective good provision. The traditional cooperative which we consider for this preliminary life cycle base case likely generates a bundle of goods ranging from public to private. Therefore, a careful examination of the multiple types of goods the cooperative produces may shed light on the degree to which cooperative size, interpreted here as growth in membership, may lead to negative consequences for the cooperative over time.

More specifically, cooperatives producing normal, purely nonrival goods benefit from a larger potential pool of cooperators and resources available (Oliver and Marwell, 1988). Larger groups facilitate the contribution of a larger amount of resources, heightening the probability of accomplishing collective goals. And, in the case of a purely nonrival goods, the individual payoff does not diminish with group size (Esteban and Ray, 2001; Pecorino, 2009). Although some individuals may decrease their contribution of resources, the overall level of provision of normal, nonrival goods will increase with group size (Frohlich and Oppenheimer, 1970; Chamberlin, 1974; McGuire, 1974). Dichotomous predictions regarding patron-member investment levels in the presence of varying degrees of rivalry is a key factor in understanding whether over-investment or under-investment may occur within the cooperative setting (Colman and Ruben, 2007).

Finally, we would be remiss to exclude the observation that a large number of cooperators may slow rate of cooperative degeneration, even in game theoretic analyses that predict eventual decline in cooperation. Consider as an example degeneration games which utilize principles of conditional cooperation (Schuessler, 1990). Under these conditions, a strategy may be to cooperate unless an adjacent partner defects. Under conditions similar to such an evolutionary cooperative game, we have a basis for maintaining that larger cooperatives, even when suffering from conditions that threaten cooperation, may tend to decline more slowly. Conditional cooperation presents a hopeful case in that if there exists a set of institutional rules that can be adapted to reduce heterogeneity of investment preferences, correct free-rider behavior, or dissolve distributional coalitions, a slow degeneration process in large organizations would allow cooperatives leaders comparatively more time to respond to the organization's challenges.

For the case of agricultural cooperatives, current theory gives scholars several reasons to expect size to have an impact on patron-owners' ability to act collectively. Economic justification and organizational design inform this discussion. Consider, for example, the notion of allocated equity. Whether a cooperative generates purely public goods, private goods or a mix thereof, the

⁵ We explore this related argument in the section below entitled "Substitution Effects."

simple allocation of equity assigns the benefits of collective action as a private good, albeit artificially. Thus, on the condition of rivalry, prevailing organizational allocation mechanisms in agricultural cooperatives hint at a potential for latency.

Substitution Effect

Over time, a successful cooperative having achieved its economic purpose may erode its unique advantage in the marketplace. Depending upon the economic justification selected by the organization in phase one of the life cycle, patron-owners may be more susceptible to substituting goods and services produced by private rather than cooperative entities. LeVay (1983) recognizes this possibility with respect to cooperatives formed to fulfill a pacemaker role, noting the tendency to defect in the absence of external pressure to cooperate. If the threat of market power no longer exists as a result of successful cooperation, private providers of services to patrons may act as acceptable substitutes for the services provided by the cooperative.

Diversification Exacerbating Transactional Differences

Successful cooperatives may look for opportunities to expand or meet additional member needs. Over time, multiple opportunities for expansion are likely to be of interest to member patrons. However, each opportunity for expansion into new products or services also has the potential to exacerbate differences in member heterogeneity, polarizing the membership (Helmberger, 1966; Vilstrup, Cobia and Ingalsbe, 1989; Iliopoulos and Hendrikse, 2008). Divergent opinions in venture screening may stem from distinct farm-level strategy or dissimilar on-farm cost structures, but the underlying antecedent to heterogeneity in preferences is due to the fact that the new product or service may impact each individual member's profitability differently (Hansmann, 1996). Helmsberger stresses "[h]eterogeneity among the operations of members" as a root cause of difficulty in cooperative-level allocation decisions. When cooperative decisions affect different members differently, the cooperative runs the risk of subsidizing the formation of distributional coalitions each time a new product or service is introduced. Thus, the bundle of goods that the cooperative provides may include certain "selective goods" which favor a portion of the membership while having a neutral or negative impact on farm-level profitability of the remaining member patrons.

The tendency of investment preferences to be linked to farm-level operations in the patron-owned organization exacerbates the potential development of distributional coalitions as successive investment decisions are evaluated. If patron-owner profitability were randomly affected by various investment projects, the cooperative would be less likely to experience the development of competing interest groups within the cooperative (Oliver and Marwell, 1988). Nevertheless it is often the case, in practice, that various investment opportunities produce similar profitability results for certain subsets of the membership. In a repeated investment setting with single capital and governance pools, this dynamic can have the effect of pitting crop farmers against animal agriculturalists, small farms against large farms, and Holstein farm against Jersey farms (Gray, 1996).

The Impact of Heterogeneity on Cooperative Longevity

We propose increases in heterogeneity among member preferences over the lifespan of the cooperative organization may decrease cooperative health (Figure 1) if this heterogeneity results

in increases in investment constraints and control costs on the organization⁶ (Cook, 1995). This present lifecycle model also recognizes the possibility of increases in costs arising from free cash flow (Jensen, 1986) in addition to free-rider, horizon, portfolio, control and influence costs. We incorporate the notion of free cash flow into our analysis of the cooperative life cycle to further explain the economics of a transition by which well-performing cooperatives may be forced to recognize the effects of heterogeneity on their organization or risk losing their cooperative advantage.

While costs arising from free cash flow may not receive adequate attention in agricultural cooperative literature, we find discussion of the lifecycle of cooperatives often underscores the transition of organizational control from the members to the agents (Batstone, 1983; Hind, 1999). Given Olson's prediction of institutional sclerosis, the cooperative may begin to rely on management to a greater extent as decision-making costs rise (1982). Thus, our model recognizes the potential for an increase in managerial power as one possible scenario that arises as preferences diverge. However, we utilize the notion of free cash flow more broadly, recognizing that board directors as well as management may struggle with free cash flow considerations.

The Negative Consequences of Glory

Corporate finance literature distinguishes between measures of financial slack and free cash flow (Graham, 2001). Financial slack refers to liquid assets and unused debt capacity beyond what is needed to meet current operating and debt servicing needs (Myers and Majluf, 1984; Bruner, 1988; Smith and Kim, 1994). Slack-rich firms may attain superior performance levels because decision-makers have liquidity available to fund all positive-net-present-value opportunities in a timely manner.

Free cash flow refers to funds in excess of those required to invest in positive-net-present-value projects discounted at the relevant cost of capital (Jensen, 1986). Individuals possessing residual control rights may have an incentive to refrain from paying out excess resources or invest in negative-net-present-value projects. Thus, economic free cash flow can result in substantial agency costs. Free cash flow costs are likely to be more prevalent in firms in declining industries, as free cash flow is a function of the number of positive-new-present-value projects available to the firm (Szewczyk, Tsetsekos and Zantout, 1996). Firms with available liquidity or strong equity positions and fewer investment opportunities are more likely to succumb to funding negative-net-present-value projects. Finally, residual claimants may have difficulty observing projects financed internally or be relatively passive in demanding the firm disgorge excess cash.

Optimally, cooperatives would possess sufficient internal financial reserves to fund positive net-present value projects while avoiding free cash flow problems by disgorging any remaining liquidity to members. However, uncertainty, the unobservable nature of investments opportunity schedules, and difficulties in measuring relevant costs of capital may complicate the

⁶ We emphasize this degenerative hypothesis pertains to the case in which patron members and cooperative leaders neglect to pursue ownership cost evasion strategies in making stage five choices.

determination of optimal liquidity levels. We have a number of reasons to believe cooperatives generating favorable returns may be susceptible to agency costs of free cash flow (Pederson, 1998). This susceptibility stems from the fundamental role of the cooperatives as well as the existence of vaguely defined residual claimant rights. As preliminary, illustrative examples of why we might expect traditional agricultural cooperatives to be susceptible to free cash flow problems “by design,” we briefly discuss the risk management function, cost of capital valuation, and cross subsidization.

Cooperative Risk Management Function

Cooperatives engaging in certain risk management strategies may purposefully engage in hoarding cash flow in excess of funds required to finance all positive-net-present-value strategies. In addition, they may favor more cautious use of leverage (Schrader, 1989). Cooperative risk pooling or the maintenance of reserve funds to act as a savings bank, “saving member returns in ‘good’ times and paying them back in ‘poor’ times” are two examples of cooperative strategies that seek to maintain a slack-rich organization (Peterson and Anderson, 1996). While these legitimate cooperative strategies are well-suited for risk reduction purposes, they may also provide a strong argument for refusing to pay out earnings to members while creating an opportunity for cooperative decision-makers to utilize resources on low-return projects. Cooperatives formed expressly to mitigate member-patron risk may be relatively more susceptible to free cash flow problems, as board and management may come under pressure to utilize savings bank funds as risk capital.

Valuing the Cost of Equity Capital

One factor that might enable decision-makers to distinguish between financial slack and free cash flow is the cost of capital. Simply put, the decision to invest must take into consideration the return equity providers will expect for their investment. The cooperative structure may complicate cost of capital calculations as a result of the vertically integrated nature of patron ownership. Cost of capital may be measured at the level of the cooperative or as an opportunity cost of funds to individual members (Pederson, 1998). Elements complicating cost of capital considerations at the member level include differing tax rates among individual farmers, members who primarily value their return through the value generated through the cooperative investment in their on-farm business, non-transferrable equity participation units, lack of provisions for the payment of interest on retained funds, and lack of provisions for distributing dividends on equity capital (Schrader and Goldberg, 1975; Caves and Petersen, 1986; Schrader, 1989). Lack of appreciability of allocated equity distorts cooperative decision makers’ perception of cost of capital: the effective cost of capital to the cooperative is low, if not zero (Barton, Parcell and Featherstone, 1996). However, members may bear significant costs of capital if the time value of money, individual-level opportunity costs, and relevant interest rates at the member-level are taken into consideration (Gray, 1996).

Cross Subsidization

Managers may have a tendency to cross subsidize weaker divisions as a result of free cash flow (Bernardo, Luo and Wang, 2006)(Jensen, 1989). Cross subsidization of business units may arise in cooperatives that seek to serve a pooling function to reduce risk or stabilize grower revenue streams (Phillips, 1953). While these cooperative functions may be legitimate objectives of the cooperative enterprise, recognizing their potential to contribute to free cash flow problems

encourages decision-makers to be alert to potential increases in ownership costs resulting from these activities. Continual cross subsidization may lead to a distortion of market signals and growing fractionalization of membership (Sexton and Iskow, 1988; Staatz, 1994).

Success Revisited

“Success,” it seems, may create new challenges for the cooperative organization. If a cooperative is able avoid underinvestment by ameliorating vaguely defined property rights problems or through Ricardian rent generation, the reward would tend to be financial slack. However, the cooperative must remain vigilant against the threat of free cash flow problems. Heterogeneous member patron investment preferences and valuations of equity capital complicate the determination of positive-net-present-value opportunities. Careful consideration of cooperative objectives as defined in phase one, or refinement of those objectives, may be necessary. If cooperative success is generated as a result of member allocated equity investments, without reward to this equity capital, members have an incentive to favor measures which force the cooperative to disgorge dividend rewards. If cooperative growth further exacerbates heterogeneous preferences, the cooperative may also find sustainability elusive. Finally, for those cooperatives whose mission involves risk reduction, it is critical to recognize the threat of free cash flow in an economy that accepts much higher levels of leverage and decision-makers who have difficulty accurately assessing the cost of internally generated risk capital.

PHASE 4: RECOGNITION AND INTROSPECTION

By the end of phase three we might observe members falling into one of four categories: apathetic, targets for aggressive rivals, vacillators, and the loyalist. We hypothesize that the first three groups are increasing in number relative to the loyalists. As the once healthy consequences of member heterogeneity diminish and shift to inspiring fragmented coalitions the cooperative purpose and direction become less focused and ill defined thus accelerating a self-reinforcing degenerative spiral. Evans and Guthrie (2006) suggest this might be where allocative inefficiencies based on poor investment decisions originate. Tensions between bipolar factions, one favoring hysteresis and one favoring quasi-rent extraction mount. Recognition and discussion of this phenomenon enters formal discussion very slowly and reluctantly because of inherent conflicts and denial tendencies. Collective decision-making costs, particularly in the form of costly decisions and conflict resolution begin to rise. Recognizing in a transparent manner, analyzing the causes of, and contemplating options to the phenomenon of rising ownership costs is the activity of phase four. The end of this phase draws near when cooperative leadership presents or membership demands explicit action to remedy perceived and real challenges.

PHASE 5: CHOICE

By the end of phase four, the member patron is being asked to inform a decision – a decision that affects organizational survival. If the full range of options is available, the member will choose from the following to tinker, reinvent, spawn or exit. Tinkering redesigns constitutional or operational mechanisms to align preferences and incentives of the membership or a membership subset. In effect, this strategy necessitates diagnosis to align selective incentives. Choosing the

'tinkering' option suggests no significant change in ownership rights. It often entails a change in bylaws, operating practices or policy that reduces friction in a quasi pareto optimal manner.

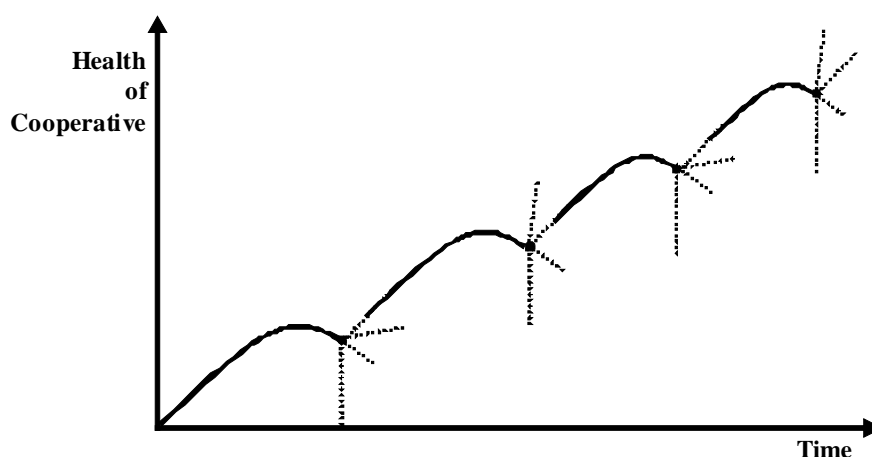
The reinvention choice means ownership rights of the member patron will change. However, most cases of reinvention redistribute claimant and control rights among member patrons. Examples of successful hybrids which assign ownership rights to patrons and non-patrons remain relatively rare on the cooperative landscape. More common are cases of reinvention altering redeemability of shares or reassigning claimant rights to investors rather than patrons. Much of the literature investigating new forms of cooperatives are describe this alternative strategy (Harris, Stefanson and Fulton, 1996; Nilsson, 2001; Brester and Boland., 2004; Cook and Chaddad, 2004).

We utilize the term spawning (Gompers, Lerner and Scharfstein, 2005) to refer to a process where individuals formerly affiliated with a 'parent' cooperative organize a separate entrepreneurial venture. These ventures are often interlocking in nature and utilize joint investor networks cultivated as a result of interaction within the parent organization (Burress and Cook, 2009).

Exit means member patrons change the ownership rights of the entity so that ownership rights are no longer based on patronage. This might mean conversion to an investor rather than patron driven firm, conversion to a hybrid where the member patrons lose majority residual control rights, entrepreneurial harvesting, or total liquidation. Schader (1989) suggests form of exit depends on valuation of cooperative assets. Scholars have been intrigued by this phase for many years. Nourse's suggestion that exit be considered once market failure amelioration succeeded led to numerous thought pieces (Helmberger, 1964; Helmberger, 1966; Fulton, 1995; Nilsson, 1999; Chaddad and Cook, 2004; Ginder, Hueth and Marcoul, 2005; Mathews, 2008).

The form and choice of option is informed by analysis of phases one through three of a cooperative's life cycle. Once a choice is made, the organization may elect to begin a new life cycle. Figure 2 illustrates a cooperative in its fourth life cycle increasingly capable of meeting member needs, experiencing shorter life cycles and exercising different choice options.

Figure 2. Iterative Life Cycle Hypothesis

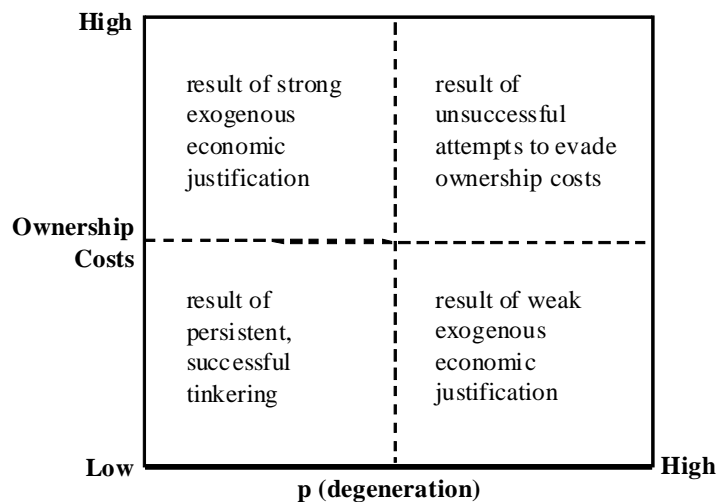


CONCLUSIONS

Consideration of the future of a cooperative entity from the perspective of an intra-organizational lifecycle framework does not result in overarching hypotheses to fit the “widely disparate” (Murray, 1983) population of cooperatives. Instead, this life cycle framework suggests the relevance of theory and observations to a particular cooperative enterprise may vary depending on the cooperative’s economic justification, organizational architecture, bundle of economic goods provided and development phase. Social and institutional processes affecting cooperative sustainability may take years to unfold (Poteete and Ostrom, 2004). Therefore, by understanding cooperative dilemmas in the context of a lifecycle framework, we increase our ability to optimize selective incentives and, in turn, agricultural cooperative performance.

While the prevalence of the degeneration hypothesis leads us to include this central tenet in the present life cycle framework, our results suggests cooperatives may avoid checkmate (Harrigan and Porter, 1983) through ownership cost evasion. We note that the presence of heterogeneity, as an antecedent to ownership costs, presents a unique opportunity to individual cooperative agents. If heterogeneity is recognized, cooperators possess the option of acting to evade ownership costs (Figure 3). Our life cycle framework suggests ownership cost evasion entails the successive design of collective choice arrangements in the search for pareto optimal conditions.

Figure 3. Ownership Costs in Relation to the Degenerative Hypothesis



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