Driving Forces and Success Factors for Mergers, Acquisitions, Joint Ventures, and Strategic Alliances among Local Cooperatives

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Increasingly, local agricultural cooperatives are finding themselves wrestling with challenges resulting from the consolidation of agricultural production. In 1969 there were 2,730,250 farms in the U.S.; by 1997 the number of farms had dropped to 1,911,859, a decrease of 30%. At the same time, the average size of a farm had grown 25% from 389 acres to 487 acres (U.S. Department of Commerce 1974, Census of Agriculture 1997). As the number of farms decreases and the amount of business conducted with each farm grows, each individual farm customer becomes more crucial to a local agricultural supply and grain marketing cooperative.

At the same time that cooperatives are courting fewer customers, each with greater buying power, the competition for the farm dollar grows more aggressive. Both the farm supply (seed, chemical and feed) and grain industries have been experiencing a period of consolidation, leaving fewer players to compete for business from the remaining producers.

In addition, the key firms in these industries are, in many cases, also the local cooperative's suppliers or grain customers. This means fewer choices for the cooperative when it comes to deciding whom to buy from and sell to, reducing the local cooperative's bargaining power.

This environment of consolidation results in the local agricultural supply and grain marketing cooperatives struggling with simultaneous challenges on multiple fronts. As local cooperatives struggle to meet these challenges, many are finding that a response is structural change (Cummins 1993, 1999; Warman). During the course of this research, the managers of local cooperatives were surveyed to identify the types of business arrangements they are using for structural change, including mergers, acquisitions, joint ventures, and strategic alliances with other cooperatives or with investor oriented firms. Cooperative membership is often reluctant to pursue mergers, for fear of

losing the firm's identity and the quality of service to which they are accustomed (Reynolds). Instead, many cooperatives engage in joint ventures and strategic alliances for the advantages of sharing the burden of a project, while retaining the cooperative's identity (Liebrand and Spatz). Reynolds also comments that experience with joint ventures tends to ease the transition during a merger for both members and management.

This paper has three objectives. The first objective is to examine factors that influence whether firms will be involved in mergers, acquisitions, joint ventures, and strategic alliances. The second objective is to examine, for those cooperatives that are involved in mergers, acquisitions, joint ventures and strategic alliances, the relative importance of various driving forces that motivated them to get involved in these activities. The third objective is to examine the relative importance of factors in the success of these new business arrangements.

The following section of this paper describes the data used in this analysis and provides some descriptive statistics of the cooperatives that participated in the survey. In the third section we describe the data analysis and present the results. Conclusions and recommendations for cooperative managers make up the final section of this paper.

Data and Descriptive Statistics

Seventy local agricultural supply and grain marketing cooperatives in Indiana and Colorado, 35 in each state, were surveyed during May and June of 2000. Interviewers conducted in-person interviews with the cooperatives' general managers. Each interview used a standard survey instrument and was conducted by the same interviewer in each state. The survey instrument was sent by fax to each manager prior to the interview to allow time for review. The interviews were usually

ninety minutes in length, although they varied from forty-five minutes to two and half hours in some cases.

The survey instrument had five sections: Descriptive information about the cooperative, including size of market territory, lines of business, and size of the cooperative was collected from a series of questions in the first section. The second section focused on the cooperative's impact on the local economy and contained questions about number of employees and value of business in the local community. In the third section, the managers were asked to rate, using a 5-point Likert scale, the importance of driving forces and success factors for mergers, acquisitions, joint ventures and strategic alliances. The managers were also asked opened-ended questions about business trends and the impact of the changing agribusiness environment on their cooperatives. The fourth section contained a series of questions about the cooperative's financial performance as well as its decision-making process. The final section contained a series of open-ended questions about emerging issues facing cooperatives.

Lines of Business

Local cooperatives in Indiana and Colorado engage in a number of business activities, which fall under the general categories of farm supply, grain marketing and administrative services. Farm supply is, in turn, divided into four main divisions: agronomy, energy, retail farm supply, and feed. Sixty-nine cooperatives (34 in Indiana, 35 in Colorado) responded to a question tallying the lines of business in which they were engaged. Table 1 shows the number of cooperatives in each state that engages in a particular business activity and then the corresponding percentage of respondents.

Line of Business	Colorado		Indiana	
	Number of Firms	Percent	Number of Firms	Percent
Farm Supply				
Agronomy Division				
Seed Sales	24	69%	34	100%
Chemical Sales	25	71%	34	100%
Fertilizer Sales	24	69%	34	100%
Agronomic Consulting	16	46%	31	91%
GPS Mapping	4	11%	30	88%
Variable Rate Fertilizer/Chemical Application	8	23%	30	88%
Energy Division				
Petroleum Supply (Bulk Fuel)	24	69%	28	82%
Gas at the Pump	23	66%	21	62%
C-Store	15	43%	15	44%
Liquid Propane Supply	20	57%	25	74%
Retail Farm Supply Store	22	63%	27	79%
Feed Division				
Feed Sales	22	63%	28	82%
Toll Milling	10	29%	12	35%
Livestock Nutrition Consulting	13	37%	25	74%
Animal Health Products	19	54%	26	76%
Grain Marketing				
Grain Division				
Grain Handling	19	54%	30	88%
Commodity Brokerage Services	15	43%	7	21%
Identity-Preserved Grain Contracts	18	51%	15	44%
Administrative Services				
Financing				
Crop Input Loans	8	23%	24	71%
Operating Loans	5	14%	16	47%
Livestock Production Loans	6	17%	8	24%
Feed Loans	5	14%	10	29%
Crop Insurance	2	6%	5	15%
Electronic Ordering	3	9%	7	21%

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[2]35 responding in Colorado, 34 responding in Indiana

Some of the Colorado cooperatives are more specialized and focused in their product offering than the Indiana cooperatives. Examples include cooperatives that focus on a specific division, such as being only a grain marketing cooperative, or offering products and services aimed at customers that grow a specific crop, such as onions or potatoes. Other Colorado cooperatives have a wider offering in the major divisions, although there is a tendency among Colorado cooperatives to not maintain all five major divisions.

The Indiana cooperatives, in contrast, are more consistent among themselves with regard to products and services offered. In general, these cooperatives offer a wide range of products and services, with 59% of the responding Indiana cooperatives engaging in each of the five major divisions compared to only 40% of the responding Colorado Cooperatives.

This difference between the products and services offered by local cooperatives in Colorado and Indiana is due to two factors. One difference is the types of agricultural production in each state. Colorado's agriculture is more diverse due to topography, and its associated climatic differences, that range from high plains to mountain regions. This results in a greater range of crops, including wheat, corn, sorghum, fresh fruits and vegetables, potatoes, cattle, sheep and hogs. Indiana's climate and terrain is relatively homogeneous, favoring traditional Corn Belt crops such as corn, soybeans, wheat, and hogs.

A second factor is the manner in which cooperatives were established. Indiana Farm Bureau organized many of the cooperatives in Indiana within a 5-year period in the late 1920s and early 1930s[3]. More diverse groups of producers established the cooperatives in Colorado over a wider period of time and many of these cooperatives are relatively small in size serving a local segment of the county's population.

Cooperative size

Figures 1 and 2 illustrate how the membership is divided amongst the cooperatives in the sample. In each figure five size categories, sorted according to number of members, are reported. Figure 1 shows the percentage of responding cooperatives that fall into each of the five groups. In contrast Figure 2 shows the percentage of total membership from all cooperatives that is accounted for by each size category. In constructing Figure 2 the total number of members across all cooperatives was calculated. Then the number of members from the cooperatives in each different size category was calculated as a percentage of total membership. While almost half of all responding cooperatives (47%) had less than 1000 members, firms in this category only accounted for only 13% of the total cooperative membership. Likewise, the largest cooperatives (4000 or more members each) represent only 12% of the responding firms, but account for 51% of the total cooperative membership.

Figure 1:   Percentage of Responding Cooperatives in Each Size Category
                   (Size Category by Number of Members)

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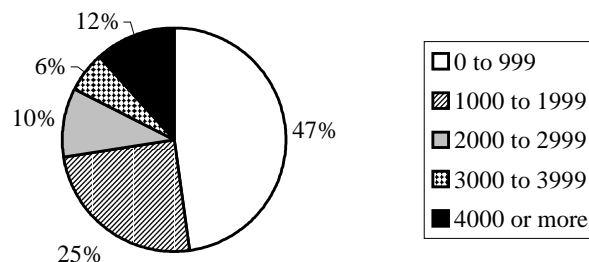
[3] Many still include Indiana Farm Bureau Cooperative in their firm name.

Figure 2: Percentage of Responding Cooperatives' Membership in Each Size Category
(Size Category by Number of Members)

Legend:
- 0 to 999
- 1000 to 1999
- 2000 to 2999
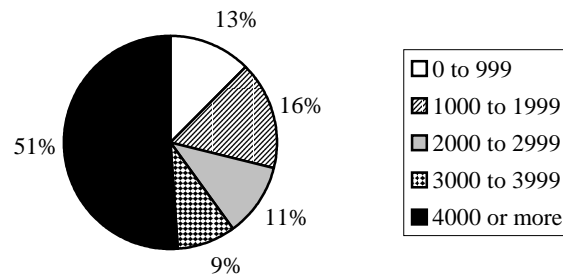- 3000 to 3999
- 4000 or more

Figure 3 describes cooperative size according to 1999 fiscal year sales levels. In this case, the percentage of responding cooperatives that fall into five categories are grouped by level of total sales for fiscal year 1999. Even though these firms are locally owned, they are not necessarily small firms. Total sales in fiscal year 1999 for local cooperatives in Colorado and Indiana ranged from less than $15 million to more than $60 million. Over half (52%) had sales in excess of $15 million for fiscal 1999. Thirty percent of the responding cooperatives had sales in excess of $30 million.

Figure 3: Percentage of Responding Cooperatives in Each Size Category
(Size Category by 1999 Fiscal Year Sales)

Legend:
- $15 million or less
- $15.1 to $30 million
- $30.1 to $45 million
- $45.1 to $60 million
- More than $60 million
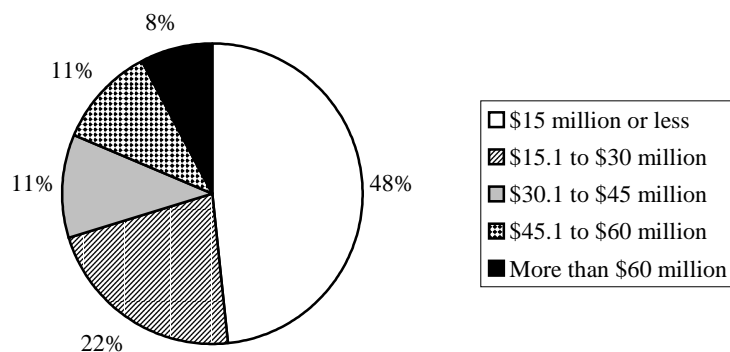
Source of Business

All the cooperatives in this sample are open cooperatives, allowing business to be conducted with non-members. When asked, 56% of the respondents indicated that more than 30% of their business volume is conducted with non-members (Figure 4). Nearly a third (32%) of the respondents indicated that non-members accounted for more than 40% of their business volume. For many cooperatives, non-members have become an important source of business.

Figure 4:   Percentage of Responding Cooperatives in Each Volume of Business Category
(Category by Percent of Business Attributed to Non–Members)
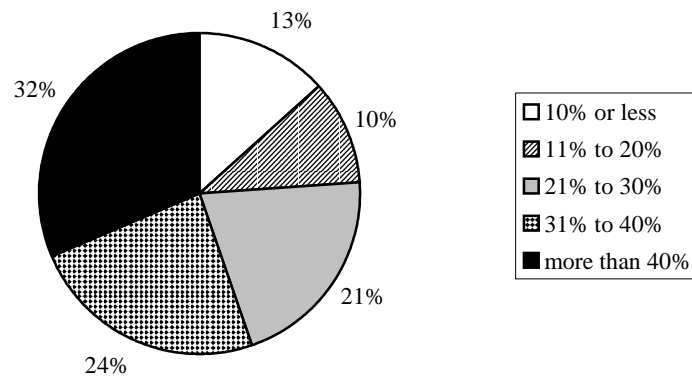
Technological Adoption

Local cooperatives are bringing information technologies into their operations, particularly for internal and business-to-business applications. Figure 5 shows the percentage of respondents that have adopted specific information technology applications. Information management applications for internal use are the most prevalent, with over 90% of respondents using computerized billing and accounting systems. Computerized plant operations, which include equipment such as inventory computers for delivery trucks and GPS monitored herbicide tanks, were used by 63% of the responding cooperatives. Both e-mail and web-based ordering is more commonly used with

suppliers, in a business-to-business environment, than with customers. Thirty-seven percent of the

cooperatives maintain their own web pages, and just over one-third of those (14% of all respondents)

offer web-based ordering to their own customers.

<u>Figure 5</u>:   Use of Computerized and Automated Operations by Sample Cooperatives

Technological Adoption by cooperatives

Category	Percentage
Computerized billing	94%
Computerized accounting system	96%
Plant operations	63%
Cardtrol fuel pumps	59%
GPS monitored fuel tanks	13%
E-mail with input suppliers and end users	70%
Orders to suppliers placed via web	33%
E-mail with farmer customers	46%
Informational web page	37%
Orders received via web page	14%
Electronic newsletter	16%

Percentage of respondents

<u>Analysis of Restructuring Activities</u>

Data on Restructuring

Local agricultural cooperatives are engaging in restructuring activities in order to meet the

challenges presented by the trend toward consolidation in agribusiness. In order to gain insight on

how local agricultural cooperatives are managing mergers, acquisitions, joint ventures and strategic

alliances, managers were asked a series of questions about their restructuring activities. Managers

were first asked whether their cooperative had participated in a merger or acquisition in the last five

years. If the reply was affirmative, they were then asked to describe the nature of the mergers and/or

acquisitions. In addition, based on their experience with these business arrangements, they were

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asked to rate the importance of eight driving forces that might motivate a merger or acquisition. This question used a Likert scale, with a score of 5 being most important and a score of 1 being least important. They were also asked to rate the importance of a set of ten factors that could contribute to the success of a merger or acquisition, again using a Likert scale. The managers were asked a similar set of questions relating to their cooperative's involvement in joint ventures and strategic alliances, then asked to rate the importance of eight driving forces and twelve success factors for joint ventures and strategic alliances. Managers were then asked whether their cooperative had considered, but not pursued, a joint venture or strategic alliance. If the reply was affirmative, they were asked to rate the importance of a set of factors that might contribute to such a decision.

Factors Influencing Involvement in Mergers, Acquisitions, Joint Ventures and Strategic Alliances

Logit analysis was performed to identify factors that influenced the likelihood of a local cooperative engaging in a merger or acquisition. The results of this analysis are described in Table 2. The dependent variable is a dummy variable equal to 1 if that the cooperative had been involved in a merger or acquisition in the last five years, and 0 otherwise. The independent variables that were considered included a dummy variable for the state the cooperative operated in, the number of lines of business the cooperative is involved in, the number of information technologies the cooperative had adopted, the percentage of nonmember business the cooperative conducts, the cooperative's level of sales, the cooperative's level of assets and the cooperative's level of profits. Different combinations of independent variables were considered and reported as alternative models in Table 2. The variables for sales, assets and profits are not reported in Table 2 due to lack of statistical significance. The independent variables, as reported in Table 2, are:

State: A dummy variable equal to 1 if the cooperative is from Colorado and 0 if the cooperative is from Indiana;

NLBus   Total number of lines of business in which the cooperative is involved, as reported by the cooperative manager, with a maximum of 36 possible;

Tech   Total number of information technology adoptions by the cooperatives, as reported by the cooperative manager, with a maximum of 12;

NonMBus   Percentage of business conducted with non-members, as reported by the cooperative manager.

In a similar fashion, Table 3 presents the results of logit analysis conducted to identify the factors affecting whether a local cooperative engaged in a joint venture or strategic alliance. Again, the dependent variable is a dummy variable with 1 indicating that the cooperative had engaged in a joint venture or strategic alliance in the last five years, and 0 otherwise. Different combinations of independent variables are considered and reported as different models in Table 3. The independent variables are as described above.

The variable for State has a negative coefficient (Table 2), indicating that a cooperative in Colorado is less likely to have been involved in a merger or acquisition than a cooperative in Indiana. The coefficients for State are statistically significant in the first and third models. The coefficients for NLBus are positive and statistically significant, indicating that cooperatives that engaged in a greater number of lines of business are more likely to have been involved in a merger or acquisition. The Tech variable also has a positive coefficient, indicating that cooperatives that have adopted more information technologies are more likely to have been involved in a merger or acquisition. The coefficient for Tech is statistically significant in only the third model. NonMBus has a negative coefficient but is not statistically significant. The lack of statistical significance for some of the variables in some of the models may be due to multicollinearity among the variables. The chi-squared values of 27.586, 32.964, and 22.981 indicate that the set of coefficients for each model as a

group is statistically significant. All three of these models correctly predict at least 73% of the actual outcomes.

Table 2: Logit Analysis of Factors Affecting the Likelihood of Mergers and Acquisitions

Variable		Model 1	Model 2	Model 3
Constant	Coefficient	-2.009*	-3.642***	-0.907
	(Standard Error)	(1.046)	(1.358)	(0.822)
State	Coefficient	-1.487**	-0.978	-1.759***
	(Standard Error)	(0.598)	(0.652)	(0.572)
NLBus	Coefficient	0.086**	0.167***	
	(Standard Error)	(0.043)	(0.060)	
Tech	Coefficient	0.178	0.228	0.324***
	(Standard Error)	(0.140)	(0.152)	(0.125)
NonMBus	Coefficient		-0.023	
	(Standard Error)		(0.020)	
	Chi Squared	27.586***	32.964***	22.981***
	Degrees of Freedom	3	4	2
	Percent Correctly Predicted	73%	76%	73%

*Statistically significant at 90%
**Statistically significant at 95%
***Statistically significant at 99%

The negative and statistically significant coefficient on the State variable suggests that there are differences between the Eastern Corn Belt and the Great Plains, that are resulting in different levels of merger and acquisition activity. In addition, the positive and statistically significant coefficients on the NLBus and Tech variables suggest that cooperatives with a more aggressive business philosophy (those with a larger number of business activities and those who have a higher information technology adoption rate) are more likely to be involved in mergers and acquisitions.

As shown in Table 3, the State variable has a negative coefficient, indicating that a cooperative in Colorado is less likely to have been involved in a joint venture or strategic alliance than a cooperative in Indiana. The coefficient for State is only statistically significant in the third reported model where fewer independent variables are included. NLBus has a positive and

statistically significant coefficient, indicating that a cooperative engaged in a greater number of lines

of business is more likely to have been involved in a joint venture or strategic alliance. The Tech

variable also has a positive and statistically significant coefficient, indicating that cooperatives that

have adopted more information technologies are more likely to have been involved in a merger or

acquisition. NonMBus has a positive coefficient but is not statistically significant. Once again, the

lack of statistical significance of some of the variables in some of the models suggests the existence

of multicollinearity. The chi-squared values of 22.440, 25.447, and 17.326 indicate that the set of

coefficients for each model, as a group, is statistically significant. All three of these models correctly

predict at least 70% of the actual outcomes.

Table 3: Logit Analysis of Factors Affecting the Likelihood of Joint Ventures and Strategic Alliances

Variable		Model 1	Model 2	Model 3
Constant	Coefficient	-2.059*	-2.973**	-0.929
	(Standard Error)	(1.061)	(1.244)	(0.843)
State	Coefficient	-0.593	-0.371	-1.012*
	(Standard Error)	(0.641)	(0.704)	(0.591)
NLBus	Coefficient	0.086**	0.096*	
	(Standard Error)	(0.040)	(0.050)	
Tech	Coefficient	0.259*	0.354**	0.397***
	(Standard Error)	(0.146)	(0.160)	(.134)
NonMBus	Coefficient		0.0019	
	(Standard Error)		(0.020)	
	Chi Squared	22.440***	25.447***	17.326***
	Degrees of Freedom	3	4	2
	Percent Correctly Predicted	73%	79%	70%

*Statistically significant at 90%
**Statistically significant at 95%
***Statistically significant at 99%

The results for this analysis are very similar to those for mergers and acquisitions. More

aggressive cooperatives (those with a larger number of business activities and those with a higher

information technology adoption rate) are more likely to have been involved in joint ventures and strategic alliances.

Driving Forces and Success Factors

In this section, we focus on the driving forces and success factors, from the perspective of managers, for mergers/acquisitions and joint ventures/strategic alliances. As mentioned above, managers were asked to rate a set of driving forces and success factors on a 5-point Likert scale. From these ratings a weighted mean rating for each factor was calculated (Tables 4 through 8). In each of these tables the weighted means are sorted from the highest to the lowest. These mean values were then evaluated to determine if they were statistically different from each other.

The results are presented in Tables 4 through 8. Mergers and acquisitions are examined in Tables 4 and 5 with the importance of different driving forces considered in Table 4 and the importance of different success factors reported in Table 5. Joint ventures and strategic alliances are then considered in Tables 6 through 8. The importance of different driving forces are considered first in Table 6, followed by the importance of different success factors in Table 7. Finally, in Table 8 we report the importance of various factors that caused firms to drop a joint venture or strategic alliance that they started to negotiate.

In order to test whether the mean responses of different factors were statistically different from each other, a modified version of the Newman-Keuls step-down procedure (Hochberg and Tamhane, p. 205-6) was used. As in the original Newman-Keuls (NK) test, the modified version uses the Studentized range statistics to identify homogeneous (maximally nonsignificant) subsets among the full set of questions. The modified NK procedure includes Welch's correction to degrees of freedom to account for potential differences in variance among the responses. In addition, the null

distribution of the NK test statistics is not known, and the critical values are based on the Bonferroni inequality to control the overall size of the multiple test procedure.

To identify the relative importance of the different driving forces and success factors the weighted means were compared is a pairwise manner, using the NK test. The factors were then organized into different sets, or groupings, such that all factors within one set are not statistically different from each other. The sets or groupings can be identified in Tables 4 through 8 by the shaded bars. Group A contains the factors with the highest weighted mean values, followed by Group B and additional groups as appropriate. The mean values for the factors in any one of the groups are not statistically different from each other. Given that the testing of statistical difference involved pairwise testing of all factors, there is overlapping of the groups, which creates some ambiguity concerning those factors that end up in two different groups.

Table 4 Weighted Mean Rating for Driving Forces for Mergers and Acquisitions

Driving Force	Weighted Mean	Groupings*		
		A	B	C
Decreasing Number of Farms	3.794	▓		
Increased Costs	3.788	▓		
Decreased Profits	3.281	▓	▓	
Increased Competition	3.235	▓	▓	
Industrialization of Agriculture	3.176	▓	▓	
Decreased Sales	2.484			▓
Government Regulations	2.394			▓
Needing Cash	2.219			▓

*Each of the shadings represents a group of means such that the values are not statistically different.

Table 4 reports the mean ratings that managers assigned to each of the driving forces behind mergers and acquisitions. Group A, with the highest mean values, includes decreasing number of farms, increased costs, decreased profits, increased competition and the industrialization of agriculture. Group B, with mean values in the middle range, includes decreased profits, increased

competition, the industrialization of agriculture, and decreased sales. Group C, with the lowest mean

values, includes decreased sales, government regulations, and needing cash.

Group A consists of factors directly related to consolidation of production agriculture and

agribusiness, and the industrialization of agriculture. Group B also is heavily influenced by these

trends in the business environment. Government regulations and needing cash appear only in Group

C and are less important, from a statistical perspective, than the factors that fell into Group A.

Table 5 reports the mean ratings that managers assigned to factors that contribute to the

success of mergers and acquisitions for local cooperatives. Managers felt that all of these ten factors

are important to the success of a merger or acquisition as noted by the fact that all of the weighted

means are greater than 3.6. This set of success factors sorted into only two groups after applying the

NK test. Group A, with the higher mean values, includes communication, trust, achieving overall

synergies, and managers working well together. Group B, with mean values in the lower range,

includes trust, achieving overall synergies, managers working well together, keeping egos in check,

decreased costs, having common goals, the financial stability of the firms, and increased sales.

Table 5 Weighted Mean Rating for Success Factors for Mergers and Acquisitions

Success Factor	Weighted Mean	Groupings*	
		A	B
Communication	4.514	▓	
Trust	4.286	▓	▓
Achieving Overall Synergies	4.242	▓	▓
Managers Working Well Together	4.200	▓	▓
More Efficient Use of Employees	4.086		▓
Keeping Egos in Check	3.970		▓
Decreased Costs	3.943		▓
Having Common Goals	3.848		▓
Financial Stability of Firms	3.743		▓
Increased Sales	3.686		▓

*Each of the shadings represents a group of means such that the values are not statistically different.

Of key interest from this set of results is that Group A consists of factors directly related to interpersonal dynamics among the personnel involved in the merger or acquisition. Interpersonal dynamics also influence Group B, but more tangible factors, such as decreased costs, financial stability of the firms involved, and increased sales now also enter the group.

Table 6 reports the mean ratings that managers assigned to driving forces for joint ventures and strategic alliances for local cooperatives. Even though the mean values ranged from 2.488 to 3.568 these driving forces are not very different, from the perspective of statistical significance, with Group A containing seven of the eight forces. Group A, with the higher mean values, includes decreasing number of farms, increased costs, the industrialization of agriculture, increased competition, decreased profits, decreased sales, and government regulations. Group B, with mean values in the lower range, includes decreased sales, government regulations, and needing cash. Again, Group A is heavily influenced by factors directly related to consolidation and industrialization, with Group B consisting of factors not related to these two trends in agribusiness.

Table 6 Weighted Mean Rating for Driving Forces for Joint Ventures and Strategic Alliances

Driving Force	Weighted Mean	Groupings*	
		A	B
Decreasing Number of Farms	3.568	▓	
Increased Costs	3.535	▓	
Industrialization of Agriculture	3.465	▓	
Increased Competition	3.333	▓	
Decreased Profits	3.214	▓	
Decreased Sales	2.864	▓	▓
Government Regulations	2.860	▓	▓
Needing Cash	2.488		▓

*Each of the shadings represents a group of means such that the values are not statistically different.

Table 7 reports the mean ratings that managers assigned to factors that contribute to the success of joint ventures and strategic alliances for local cooperatives. Managers rated all of these

factors as important as noted by the fact that the mean values range from 3.244 to 4.542. This set of factors is sorted into five groups. Group A, with the highest mean values, includes commitment to the project, communication, trust, and managers working well together. Group B, with mean values in the next highest range, includes managers working well together, having common goals, having benefits visible to those involved, the financial stability of the firms, keeping egos in check, and each partner contributing a significant component to the agreement. Group C, with mean value in the middle range, includes having benefits visible to those involved, the financial stability of the firms, keeping egos in check, each partner contributing a significant component to the agreement, and a written contract. Group D, with next to lowest mean values, includes keeping egos in check, each partner contributing a significant component to the agreement, a written contract, and respecting the territory of the other partner(s). Finally, Group E, with the lowest mean values, includes having a written contract, respecting the territory of the other partner(s), and a penalty for reneging on the agreement.

Table 7: Weighted Mean Rating for Success Factors for Joint Ventures and Strategic Alliances

Success Factor	Weighted Mean	Groupings*				
		A	B	C	D	E
Commitment to the Project	4.542	▓				
Communication	4.521	▓				
Trust	4.521	▓				
Managers Working Well Together	4.271	▓	▓			
Having Common Goals	4.250		▓			
Benefits Visible to All	4.063		▓	▓		
Financial Stability of Firms	4.000		▓	▓		
Keeping Egos in Check	3.872		▓	▓	▓	
Each Partner Contributing a Significant Component	3.851		▓	▓	▓	
Written Contract	3.660			▓	▓	▓
Respecting the Territory of Others	3.435				▓	▓
Penalty for Reneging on the Agreement	3.244					▓

*Each of the shadings represents a group of means such that the values are not statistically different.

Again, as with mergers and acquisitions, the group with the highest means is greatly influenced by success factors related to the interpersonal dynamics of joint ventures and strategic alliances, particularly commitment, communication and trust. Group B is also heavily populated with factors related to interpersonal dynamics, such as having common goals and keeping egos in check. Group C starts to show greater influence of more tangible factors, such as financial stability of the firms involved and having a written contract for the arrangement.

The managers were also asked whether they had considered any joint ventures or strategic alliances in the last five years that had not been pursued. Those that had were asked to rate factors contributing to their decision to not enter into the agreement(s) in question. Table 8 shows a list of these factors and their means. The mean values range from 2.375 to 3.438. In spite of the relatively large range of the mean values none of these weighted means were found to be significantly different from the others and therefore fall into only one group. This is due to high standard deviation values and suggests that different managers have different reasons for not pursuing joint ventures and strategic alliances.

Table 8: Weighted Mean Rating for Reasons for Not Entering into Joint Ventures and Strategic Alliances

Factor for Not Entering a Joint Venture or Strategic Alliance	Weighted Mean	Grouping* A
Non-Progressive Board Members	3.438	
Lack of Trust	3.429	
Lack of Commitment	3.389	
Egos Got in the Way	3.306	
Could Not Set Up and Adequate Contract	3.241	
Other Firm(s) Not Financially Stable	2.974	
Project Was Not Beneficial	2.886	
Poor Communication	2.806	
Conflict Among Managers	2.694	
Lack of Funds	2.400	
Membership Inertia	2.375	

*The shading represents a group of means such that the values are not statistically different.

Conclusions

Local agricultural cooperatives are facing the challenge of remaining competitive in a business environment characterized by consolidation—of customers, competitors and suppliers, plus other cooperatives. In order to remain competitive in this arena, many cooperatives are participating in mergers, acquisitions, joint ventures and strategic alliances.

Local cooperatives are a varied group. Sizes range from less than 1000 members to more than 4000 and from less than $15 million in sales to more than $60 million. Non-member business is also an important source for sales for many local cooperatives. Local cooperatives are adopting information technologies in varying degrees, favoring those applications related to operations management and electronic communication with suppliers and end users.

Cooperatives in the Eastern Corn Belt are more likely that those in the Great Plains to be involved in mergers/acquisitions and joint ventures/strategic alliances. Those cooperatives with greater numbers of business activities and higher levels of information technology adoption are also more likely to be involved in these business arrangements. These factors might be indicative of a difference in business culture or environment that is more open to change. In addition, a greater number of business activities may offer the cooperative management more opportunities to find possible projects and partners, particularly for joint ventures and strategic alliances.

The most important driving forces behind mergers, acquisitions, joint ventures and strategic alliances (decreasing number of farms, increased costs, the industrialization of agriculture, increased competition, decreased profits) are directly related to consolidation of agribusiness and the industrialization of agriculture. Cooperatives appear to be turning to these business arrangements to deal with the challenges presented by this trend toward consolidation in production agriculture and agribusiness.

The results of the statistical analysis, of the relative importance of different success factors relating to mergers, acquisitions, joint ventures and strategic alliances, support previous agribusiness research by Fulton et. al and van Duren et. al. The important success factors are those factors related to interpersonal dynamics: trust, communication, commitment, and having managers that can work together as a team. It is interesting to note that these results are also consistent with observations from non-agricultural business sectors. A recent *Harvard Business Review* (Carey) reported on a roundtable discussion involving chief executive officers (known as the M&A Group[4]) from leading businesses across a wide range of sectors[5]. In discussing business strategy specific to mergers and acquisitions these CEOs identified communication as one of the most important factors.

These conclusions about the factors that are most important to the success of mergers, acquisitions, joint ventures and strategic alliances suggest that training for cooperative managers and board members needs to include communication skills, trust building, and team building exercises. A member of the M&A Group pointed out that the most important investment by a firm is in its personnel (Carey). It is the managers and other personnel who are key to the success of a merger, acquisition, joint venture or strategic alliance.

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[4] The M&A Group is a forum for chief executive officers to discuss business strategy specific to mergers and acquisitions.
[5] The sectors included: Information Technology, Financial, Accounting, Pharmaceuticals, Aerospace, Chemicals and Manufacturing.

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