

Characteristics of membership in agricultural cooperatives

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Abstract

It is often said that cooperative ideology has historically been a major driving force behind cooperative formation. In addition to this solidarity also other motives for cooperative membership are developing. While other farmers think that loyalty plays an important role, others do not see any problems in selling to private companies, especially if they pay a better price. It is also a common belief that cooperative ideology plays a more important role among smaller and older farmers while larger and younger ones are less loyal to cooperative enterprises.

This study investigates farmers' motives for being cooperative members. These motives are expressed in types of social capital. Bonding capital embraces traditional driving forces like trust, loyalty and solidarity. Bridging capital exists when farmers regard the cooperative as a countervailing power on a market with skewed power relations. Linking capital implies that farmers assess the cooperative only in its role as business partner. It is often said that older and smaller farmers are more ideologically oriented while younger and larger farmers look mainly to the economy. The empirical basis for the study stems from a mail survey to almost 1300 Finnish farmer, mostly cooperative members. The findings indicate that there are two distinctly separated groups, one with predominantly ideological motives and the other one with economic motives. There are, however, weak signs that the different motives are related to neither age nor farm size.

1. Introduction

Loyalty based on ideology has been regarded as the major motivation for membership and patronage in cooperatives (Craig, 1993). Mutual trust between the membership and their cooperatives has through history enabled both members and cooperatives to survive financially difficult times.

The importance of loyalty may, however, shrink as both the cooperatives and the farmers are subject to increasing competitive pressure as a consequence of the internationalization of the economies. Both the cooperative processing firms and the individual farmers are subject to intensifying competition. Many cooperatives' response to the increasing competition is strategies of

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vertical as well as horizontal integration (Guillouzo and Ruffio, 2005; Van der Krogt, Nilsson and Høst, 2009), i.e. moving downstream or upstream in the value chain, and expanding the size of operations, respectively. Large cooperatives with complex business operations tend, however, to treat their members in a similar fashion as investor-owned firms act in relation to their suppliers. In large and anonymous memberships members may lose their sense of belongingness (Borgen 2001; Nilsson, Kihlén and Norell, 200). The social capital that cooperatives have in the memberships as well as the social capital among members is thus weakened. Social capital is an expression of trust, for example the members' trust in the cooperatives, in the leaderships and in one another.

The present study focuses on the social capital that cooperatives have within their memberships. It investigates how this social capital is affected as the cooperatives and the farmers face intensified competition. They may remain as members, either due to loyalty or satisfaction with the cooperatives' business, or they may exit from the cooperative if dissatisfied, eventually after having tried to make the cooperatives change its policies (Hirschmann, 1970). The study investigates members' degree of cooperative loyalty, related to their age and the size of their farm operations) as well as to the cooperatives' attributes (size, industry, internationalization, etc.).

The aim of this paper is to explore the members' motivation for their cooperative membership in terms of different categories of social capital. Some members may be loyal, while others may patronize their cooperatives purely for business reasons, and there may be different explanations to these differences.

The root of this study is the often held opinion that larger farmers are less cooperatively minded than those with smaller farm operations and that younger farmers are less attracted by cooperatives. If these opinions are correct the future of cooperatives is threatened as the average farm sizes tend to increase in most countries.

All members are not equally important for cooperatives' successful operation and, thus, different members have different bargaining powers. Kuhn (1972) pointed out that small members do not plan to exit because they are afraid of competition outside the cooperative. It is possible that the small members' loyalty to their cooperatives is determined by cooperative ideology. Large members, on the other hand, are more often considering exiting, because of their high threat potential (Ollila, 1985).

The aim of this paper is to examine the nature of cooperative membership using social capital paradigm as theoretical framework.

2. The social capital paradigm

Robison et al. (2002) define social capital as a person's or a group's sympathetic feelings for another person or group. Sympathetic feelings may include admiration, caring or empathy. These feelings may develop into trust for another person or group as well as loyalty. When there is much trust within a group, i.e. there is social capital, the group members' risk-taking behavior should be greater (Davis and Bartkus, 2010: 321). This indicates that social capital can be measured as the level of organizational trust.

Social capital is incepted, developed and used through interaction between individuals and groups. The one who creates sympathetic feelings through interaction can use this capital for e.g. asking for a favor. However, if requests for favors continue, the social capital vanishes successively as the other party may feel that the interaction turns into exploitation. If the relationship continues, the

sense of trust may be strengthened, leading to continued reciprocal support. When something unexpected and negative happens, social capital facilitates a solution (Stickel et al. 2010: 304).

For example, loyal members may accept that their cooperative pays a poor product price for a limited period of time. They work for (the voice option) a better price in the future, but if the price level remains low for an extended time, the members will lose their trust in the cooperative and will consider exiting.

Adam Smith (1759: 6) defined sympathy as “our fellow feeling with any passion whatever” and calls sympathy as “social capital coefficient”. He further says that humans can sympathize more readily with friends than with acquaintances, and more easily yet than with strangers. “We sympathize more with persons continuous to us, than with persons remote from us: With our acquaintance, than with strangers” (Hume 1978: 581).

Researchers have seen the decline of social capital (Robison et al., 2002). Putnam (2000) has raised the question of why people do not invest in social capital as much as they used to. One explanation may be that relations, not least in business, have become increasingly impersonal. Business relations that were earlier based on human interaction have been replaced with impersonal market relations. A similar development can be observed in cooperative enterprises. As cooperatives expand and many of them operate in several countries, their growth strategies become similar to those of Investor-Owned Firms (Nilsson and Ollila 2008). Former assumed cooperatives’ competitive strengths such as sense of community, mutual trust, loyalty and long-range exchange relationship are decreasing in large cooperatives.

On the other hand the decline of social capital in society may be only an illusion. New social interaction is continually established which is to say that the total amount of social capital in society is not necessarily declining (Nilsson and Hendrikse, 2011).

Robison et al. (2002) distinguish between three kinds of social capital, namely bonding, linking and bridging capital.

- *Bonding social capital* exists in socially close relationships. Bonding capital is based on feelings such as between family members, committed couples, long-term business partners as well as members of religious communities, political parties and other ideologically strong groups. Bonding capital is to a great extent emotionally based.
- *Bridging social capital* connects two or more asymmetric bodies together. Asymmetric feelings such as between an employer and an employee, or a teacher and a student are examples about bridging capital. Relations between cooperative members and cooperative management can be regarded as bridging social capital. The parties are mutually dependent upon each other, though one party is stronger than the other one.
- *Linking capital* is related to semi-socially close relationships. It may be characterized by moderate-term commitments. Linking capital can include trust, collegiality e.g. with co-workers or performs performing similar tasks. Linking capital can be characterized as normal business relationships. In a cooperative context, linking capital exists when the members deliver their products and get payment in return.

The distinction between bonding, bridging and linking social capital is related to many concepts in classical sociological theory. For example, in 1887, Ferdinand Tönnies (1957) coined the concepts

of *Gemeinschaft* and *Gesellschaft* (Nilsson and Hendrikse, 2011). The former one stands for close and warm relationships, characterized by trust, while the latter one expresses formal, short-term relationships with anonymous others, i.e. there is no trust. Many sociologists have launched concepts, which have similarities to the different kinds of trust, for example Durkheim with organic solidarity versus mechanic solidarity, Maine with status society versus contract society, Parsons with affectivity versus neutrality, and von Gierke with brotherhood versus authority (Sorokin, 1966: 504-506).

The three types of social capital are used in this study. Relations between a cooperative and its members can be analyzed through examining how the different types of capital changes (Robison et al. 2002), for example how ideology changes into a business relation. Bridging capital describes the role of a cooperative as social organization or a means of maintaining market power. Available data does not allow a dynamic analysis but will give a possibility to see what kinds of characteristics describe various kinds of social capital relations.

3. Empirical study

The investigation described above requires primary data from a large number of farmers. In this study the farmers are Finnish. The number of agricultural enterprises in Finland is about 65,000.

Data was collected via a mail survey to a representative sample among Finnish farmers, both members of cooperatives and non-members. Only data from cooperative members are used in this study. The data collection was conducted via Gallup Finland who has omnibus surveys every month to farmers, i.e. a number of questions for this study were included in Gallup Finland's questionnaire during the summer of 2010.

The sample consisted of 1296 farmers. A response rate of 47,3 % was recorded. The number of usable questionnaires was also reduced as many respondents had not filled-in all questions.

Six questions in the questionnaire covered motivation for the respondents' membership in terms of loyalty, cooperative ideology and similar social capital issues. Furthermore a few socioeconomic variables as well as the respondents' choice of buying firms (cooperative or investor-owned firms) were included in the questionnaire.

The questionnaire comprises six statements related to the three forms of social capital described above. The respondents were asked to choose between five options along a Likert scale, ranging from 1 (totally disagree) to 5 (totally agree). The three types of social capital were operationalized into statements as follows:

Bonding capital is measured with two statements:

1. Cooperative ideology keeps me as member in my cooperative.
2. Experiences from a long-time cooperation keep me as member in this cooperative.

Bridging capital is measured with two statements:

3. A possibility to use power and to advance my own interests through the cooperative keeps me as member in this cooperative.
4. Membership gives a shelter against large buyers' market power.

Linking capital is measured with two statements:

5. The membership in the cooperative is a pure business relation to me.
6. If I get the same advantages through delivering my products to another buyer, I do not have any problem for switching the buyer.

The farmers' motives to engage in cooperatives could be ideology, trust and solidarity or a consequence of the cooperative offering the best trade conditions. The difference between these two patterns might be related to the intensity of competition that the farmers experience. Hence, the questionnaire included five statements about the respondents' opinions about who are their competitors. The statements were to be answered according to a five-digit Likert scale, ranging from 1 (no competition) to 5 (intense competition). The alternative competitors were as follows:

- Neighbors with the same production orientation
- Members of the same cooperative
- Farmers selling to investor-owned firms
- Farmers with the same production orientation in neighboring countries
- Farmers in other countries, selling to the Finnish cooperatives' foreign subsidiaries

Background data is obtained of two kinds. The respondents were asked to state their age as well as the acreage of their farm enterprise. Furthermore, they stated which cooperatives they were members of.

4. Data analysis

With the use of principal component factor analysis the six variables were reduced into factor dimensions, which correspond to the three forms of social capital. The result shows that that factor loadings variables 1-4 describing both bonding capital and bridging capital concentrated on the factor 1, whereas the two variables describing linking capital had greatest loadings on factors 2 and 3. The situation can also be seen in figure 1. Variables 1-4 are very close to each other. Variables 5 and 6 were close to each other but far away from the former ones.

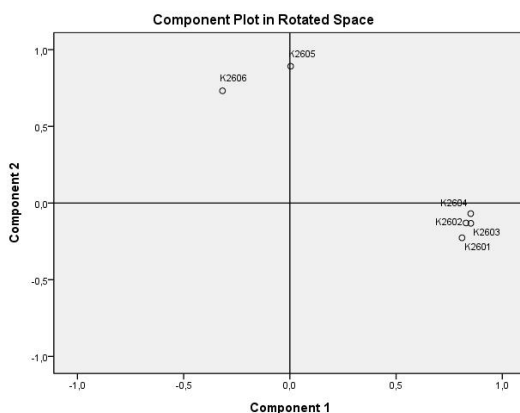


Figure 1: Component plot of two-factor solution

The result indicates that bonding capital (interpreted as cooperative ideology and long-term relationship) and bridging capital (interpreted as cooperatives' internal and external power relations) belong to the same "cooperative package", as it has been traditionally.

Because of the structure of factor solutions, the number of dimensions was reduced into two. Component 2's eigenvalue is 1,147 the third being 0,594. Thus, also Cattell's Scree Test (Hair et al. 1995) conditions are met. The two factors explain 72 per cent of the variance.

Varimax rotated component matrix is presented in table 1. The loadings of variables 1-4 concentrate on the first factor dimension and variables 4-5 on the second factor dimension.

Table 1: Rotated component matrix^a.

	Component	
	1	2
1. Cooperative ideology keeps me as member in my cooperative	.810	-.227
2. Experiences from a long-time cooperation keep me as member in this cooperative	.829	-.130
3. A possibility to use power and to advance my own interests through the cooperative keeps me as member in this cooperative	.852	-.132
4. Membership gives a shelter against large buyers' market power	.851	-.069
5. The membership in the cooperative is a pure business relation to me	.003	.892
6. <i>If I get the same advantages through delivering my products to another buyer, I do not have any problem for switching the buyer</i>	-.317	.732

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

^a Rotation converged in three iterations

Factor dimension 1 can be named "traditional cooperative values" factor. The dimension 2 is called "business relation" factor. The former factor includes both bonding and bridging capital when the business relation factor consists of variables indicating linking capital. Component plot in Figure 1 describes graphically the nature of two-factor solution.

Cluster analysis was conducted by using factor scores of the two-factor solution. As data are relatively large and as factor scores can be regarded as standardized variables, K-Means Cluster method was chosen (Hair et al., 1995, Karhunen et al., 2010). This method also allows the definition of the number of clusters in advance. The result of ANOVA indicates high difference between these two clusters.

Two-cluster analysis produced a solution where cluster 1 has 484 observations and cluster 2 has 440 observations (Table 2). Missing cases are either incompletely filled-in questionnaires or farmers that do not belong to any cooperatives.

Table 2: Number of cases in each cluster

Cluster 1	484
Cluster 2	440
Valid observations	924
Missing	372
<i>Total</i>	1296

Other variables of the dataset are used to describe the two clusters. Most significant variables explaining characteristics of clusters are described below. The results of cluster analysis are cross-tabulated with background variables and the variables concerning the members' experience competition.

Farmers in *cluster 1* ("*Traditional cooperative values*") are more often members of dairy cooperative ($\chi^2 45.852$; $p \leq .01$)⁵. They consider more often that their competitors are farmers that sell to investor-owned firms ($\chi^2 9.965$; $p \leq .01$) or who are producers in the same field but in other countries than where the cooperative locates ($\chi^2 3.252$; $p \leq .05$). Farmers in this cluster also think that all producer-deliverers should be cooperative members ($\chi^2 48.060$; $p \leq .01$), also foreign producers delivering to the same cooperative ($F 10.145$; $p \leq .02$). Farmers in this cluster agree that their cooperative gives reliable information to them ($F 78.227$; $p \leq .01$)

Farmers belonging to *cluster 2* ("*Business relation*") think that their competitors are neighbouring farmers ($\chi^2 7.815$; $p \leq .05$). Farmers in this cluster complain more often ($F = 15,781$; $p \leq .01$) and also switch more often the buyer for their products ($F = 11.649$; $p \leq .01$).

5. Results and conclusions

The aim of this paper was to describe characteristics of cooperative membership. The analysis was based on different types of social capital, namely bonding capital, bridging capital and linking capital. The presumption was that the three types of social capital could be demonstrated by constructing three factor dimensions, one describing each type of social capital.

The first finding was that, at least in this data, Variables describing bonding capital (cooperative ideology and long tradition) and bridging capital (internal and external power relations) turned out to be so close to the same factor dimension that they are not possible to separate. This may indicate that those characteristics are indeed so interrelated that they cannot be separated. That is why it was decided to combine those variables under one dimension in the analysis as well

However, business-like relations and easy exit according to changed market conditions seemed to concentrate on the same dimension and quite far apart from the above-described dimension.

It was expected that farmers in cluster 1 would have included smaller and of older age while cluster 2 would consist of larger farms owned by younger farmers. Statistical evidence for those expectations became relatively limited.

Farmers in cluster 1 whose membership is supposed to base on bonding or bridging capital were typically dairy farmers. Perhaps the ideology explains that they see farmers doing business with non-cooperatives as their competitors. Cooperative ideology may also explain that farmers in this group would like to see all the deliverers, including the foreign ones, as members. Trust plays an important role in their relation with the cooperative.

One could expect that members whose membership is based on bonding and bridging capital (cluster 1) could use more voice when they want improvements in their cooperatives. Instead

⁵ χ^2 test was used when variables have been in nominal scale. Means were tested with ANOVA.

it seems that farmers belonging to cluster 2 use more both voice combining it with the tread and actual exit (Hirschman 1970) when demanding better conditions for themselves. A more business-like relation may explain that farmers belonging to cluster 2 see more often their neighbour-producers as their competitors.

The findings of this study were expected to reveal changes within the structure of the agro-food industries. If, for example, it had turned out that mainly older members have cooperative ideology as motive for their cooperative membership, such cooperatives would have been in trouble in the future. Similarly, if the ideologically motivated members predominantly are members of weak cooperatives, these cooperatives' future seems bleak. The analysis did not give support to this expectation.

According to this study, social capital keeping producers as patron-members in their cooperatives seems to be a more complex phenomenon than what can be explained with chosen categories of social capital, and with six variables. Nearly 40 per cent of respondents say that cooperative ideology and 60 per cent that long-term experiences keep them as members. At the same time almost 50 per cent state that the cooperative membership is a pure business relation. 60 per cent more or less agree with the statement that they have no difficulty to leave the cooperative if they get the same advantages elsewhere. Either the answers are controversial or producers' membership is really based on a competitive market alternative.

References

- Borgen, S.O. (2001). Identification as a trust-generating mechanism in cooperatives. *Annals of Public and Cooperative Economics*, 72 (2): 208–228.
- Craig, J.G., 1993, The nature of co-operation. Montréal: Black Rose Books.
- Davis, J. and Bartkus, V. (2010). Organizational trust and social capital. Pp. 319-356 in Bartkus, V. and Davis, J. eds. *Social Capital – Reaching Out, Reaching In*, Edward Elgar.
- Guillouzo, R. and Ruffio, P. (2005). Internationalisation of the Uropean diary co-operatives. *International Journal of Co-operative Management*, 2 (2), 25-32.
- Hair, J.F. et al. 1995, Multivariate data analysis, New York, MacMillan.
- Hirschman, A.O. (1970). *Voice, Exit and Loyalty*. Harward University Press. Boston.
- Hume, D. (1978). *A Treatise of Human Nature*. Oxford, Oxford University Press (originally published in 1740).
- Karhunen, V., Rasi, I. and Kanninen, A. (2010). IBM SPSS Statistics – Menetelmiä, University of Oulu, Tietohallinta.
- Kuhn, A. (1972). Theorie und Praxis der Kooperation, Schriften zur Kooperationsforschung, A. Studien Band 3.
- Nilsson, J. and Ollila, P. (2008). Can Members Follow the Dairy Cooperatives' Growth? "The Role of Co-operatives in the European Agro-Food System" Bologna on May 28th–30th, 2008.
- Nilsson, J., A. Kihlén and L. Norell (2009). Are Traditional Cooperatives an Endangered Species? About Shrinking Satisfaction, Involvement and Trust. *International Food and Agribusiness Management Review*, 12 (4): 103-123.
- Nilsson, J. and Hendrikse, G. (2011) "Gemeinschaft and Gesellschaft in Cooperatives", in *New Institutional Developments in the Theory of Networks, Franchising, Alliances and Cooperatives* (ed. by M. Tuunanen, J. Windsperger, G. Cliquet and G. Hendrikse). Heidelberg: Physica-Verlag.
- Ollila, P. (1985). Member Influence in Cooperatives, *Journal of Agricultural Science in Finland*, Vol. 56:101-129.
- Putnam, R.D. (2000). *Bowling alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Robison, L., Siles, M. and Schmid, A.A. (2002). Social Capital and Poverty Reduction: Toward a Mature Paradigm, Agricultural Economics Report N:o 614, Michigan State University.
- Smith, A. (1759). *The Theory of Moral Sentiments*, printed for A. Millar in the Strand; and A. Kincaid and J. Bell in Edinburgh.
- Sorokin, P.A. (1966), *Sociological Theoreis of Today*: New York: Harper.
- Stickel, D., Mayer, R. and Sitkin, S. (2010). Understanding social capital: in whom we trust? Pp. 304-318 in Bartkus, V. and Davis, J. eds. *Social Capital _ Reaching Out, Reaching In*, Edward Elgar.
- Tönnies F (1957[1887]) *Community and society*. New York: Harper & Row
- Van der Krogt, D., Nilsson, J., and Høst, V. (2007). The impact of cooperatives' risk aversion and equity capital constraints on their inter-firm consolidation and collaboration strategies – with an empirical study of the European dairy industry. *Agribusiness. An International Journal* 23 (4), 452–472.
- Watkins, W.P. (1986) *Co-operative Principles. Today and Tomorrow*. Manchester: Holyoake Books.

Österberg, P. and J. Nilsson (2009). Members' Perception of their Participation in the Governance of Cooperatives: The Key to Trust and Commitment in Agricultural Cooperatives. *Agribusiness. An International Journal* 25 (2): 181-197.