THE DIMENSION OF COOPERATIVISM AND DAIRY CATTLE FARMING IN GETASAN VILLAGE, SEMARANG REGENCY, CENTRAL JAVA PROVINCE, INDONESIA

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ABSTRACT

The study was aimed to explore the role of cooperativism in dairy cattle farming in Getasan village, Semarang Regency, Central Java Province. Spearman Rank Correlation test was used to determine the relationship between cooperativism and the performance of dairy cattle farming. Based on the results of the Spearman Rank correlation test, feeds and feeding practices were significantly correlated with sharing of knowledge and information and sharing of resources. However, no significant relationship was found between participation in decision making and feeds and feeding practices. Meanwhile, there were significant relationships amog sharing of knowledge and information, sharing of resources, and participation in decision making and milk production in Getasan Village. The dairy health as performance indicator of dairy cattle farming, sharing of knowledge and information was the only significant factor. Sharing of resources and participation in decision making had no significant relationship with dairy health. As regards marketing, the test showed that sharing of knowledge and information, sharing of resources, and participation in decision making were significantly related factors. This study indicated that cooperativism may provide opportunities for farmers to access services, information and resources that will allow them to improve their capacities in these areas. This study also proposed some recommendations that the cooperatives should promote activities encouraging greater cooperation and mutual understanding among the members. Skills trainings and education for empowerment should be conducted to encourage participation in decision making.

Keywords : cooperativism, cooperative, dairy cattle farming, social capital

INTRODUCTION

Cox (2007) explained cooperativism as the feature of social organization such as civic participation that helps facilitate cooperation for mutual benefit. Cooperativism in social capital in this sense is a resource of a group of people working together in order to achieve collective goals that could not be accomplished by individuals themselves. In addition, cooperativism can be embodied in the smallest and most basic of groups, the family, as well as the largest of all groups, the nation. Cox (2007) defined cooperativism as the capacity of the individuals to command scarce resources by virtue of their membership in networks or broader social structures. Cox (2007) also made a useful distinction between cooperativism, and social networks and support. Whereas social capital is part of a social structure, social networks and support refer to the social embeddedness of individuals.

Generally speaking, there are three different ways in which social capital is integrated in the individual performance. First, social capital is pictured as a preference in utility functions. Second, it is perceived as an individual resource, owned by individuals or firms. Third, social capital is regarded as in instrument to reduce risks. It assumes that social capital may substitute for public goods and government regulation simply by stimulating individuals to engage in members' organization, associations and other forms of engaging with each other (Van Staveren and Knorringa, 2007).

Farr (2004) stated that one of the roles of social capital is providing access to resources that can be activated for cooperative action. If groups

work together easily and productively, have the capacity to manage conflict and tensions arised, and are open to criticism, new ideas and new entrants, then these could be seen to be manifesting much higher levels of social capital. The household is just one of the many settings in which individuals face the characteristic dilemmas of cooperation and conflict, investment of resources, and distribution of rewards which are always required in cooperative actions (Faure, 2003). In addition, several positive effects of cooperativism of social capital are: network development, identity and sense of belonging, increased knowledge/understanding, increased confidence in community, capacity to achieve goals, community resilience, satisfactory locus of control, and conflict resolution.

Moreover, cooperativism allows individuals to manage the foundation of all relationships (Ramos-Pinto, 2006). All relationships are based on constant negotiation of boundaries by using respectful, honest, and direct communication in order to bring a clear understanding to all of interactions among member organizations. Each person involved in a relationship should always look for a balance and equilibrium in order to create a cooperative action without losing a sense of self. There must be a sense of mutual trust and respect. According to Cox (2007) cooperativism has three components: legitimacy of alternatives for decision making, resource mobilization, and quality of networks. These elements represent dynamic and interactive dimensions of the social context for the ideas, resources, and relationships that transform social capital into successful cooperative action which in turn has created further social capital by providing forums for creative problem solving and conflict negotiation, mobilizing individual and collective resources for community development, and extending social networks. Some of these elements, for instance, diversity and personal resources, are properties of the community; the partnership mobilizes these, capitalizing to create forums, civic norms, and a spirit of cooperation (i.e.: social capital) in the community.

Social capital has been variously defined from being a resource embedded in social relations that permits individuals and communities to achieve desired goals (Mitchell and Bossert, 2007) to "features of social life—networks, norms, and trust—that enable participants to act together more effectively to pursue shared objectives". Meanwhile, the development of cooperativism results from the interplay of the components of social capital, namely: network and membership of dairy cattle farmers, social trust, and collective action. Cooperativism as a community value will directly affect the performance of dairy cattle farmers in terms of sharing of knowledge and information, sharing of resouces, and participation in decision making on the aspects of feeds and feeding, milk production, maintaining dairy health and marketing of dairy products.

The role of cooperativism in dairy cattle farming is not documented in Central Java Province, Indonesia. No information is used for cooperativism analysis and is rarely used for development planning in Central Java Province. The study aimed to explore the role of cooperativism in dairy cattle farming in Semarang Regency, Central Java Province. Specifically, the study sought to describe the socio-demographic characteristics of the Getasan dairy cattle farmers, determine the status of cooperativism among the Getasan dairy cattle farmers, assess the performance of dairy cattle farming, analyze the relationship between cooperativism and performance of dairy cattle farming in Semarang Regency, Central Java.

MATERIALS AND METHODS

The study was conducted in Getasan Village in Getasan District, Semarang Regency, Central Java, Indonesia. The research method used descriptive-correlation. Data collection was conducted among the farmers of the Getasan Village in the Getasan District, Semarang Regency. Of the 13 villages in the Getasan District, Getasan Village was chosen purposively since it has the largest population of dairy cattle. The household respondents from Getasan Village were chosen randomly from 683 households using simple random sampling based on Slovin's formula (Gerber and Finn, 2003) : $n = \frac{N}{1 + Ne^2}$

where

n = sample size
N = Total population
e = Confidence interval

$$n = \frac{683}{1 + 683(10\%)^2} = 96$$

Based on the formula, the sample size in this study was 96.

Primary data were collected by interviewing

dairy cattle farmers. Additional data were gathered through focus group discussions (FGDs) with the participant groups using guide questions, community baseline information, and field observations. In the study, cooperativism is defined in terms of sharing of knowledge and information, sharing of resouces, and participation in decision making. The study determined how cooperativism relates to the dairy cattle performance using four indicators, namely, feeds and feeding practices, milk production, dairy health, and marketing of dairy products.

The information gathered from the respondent's interview were coded and processed using the Statistical Package for Social Science (SPSS) and were analyzed quantitatively to the possible extent by using descriptive statistics and inferential statistic such as frequency distribution, mean score, weighted mean, and percentage. Spearman Rank Order Correlation test was used to determine the relationship between two or more ordinal variables using 5% level of significance. If the p-value is less than the significance level (5%), the null hypothesis is rejected (Gerber and Finn, 2003).

RESULTS AND DISCUSSION

Socio-demographic Characteristics of the Respondents

In terms of gender, 95.8 percent of the total respondents were males while only 4.2% were females. Out of the 96 respondents, most of the respondents were in their active stage. The youngest respondent was aged 25 while the oldest was 74 years old. Almost all of the respondents (96.9%) were married and only 3.1% were single. In the case of the respondents, 94.8% had formal education and a small percentage (5.2%) did not have any formal education. Moreover, the family size of the respondents ranged from two to 11 members. Among the respondents, about three-fourths (74%) were generally nuclear families while only 26% had an extended type of household. About 41.7% of the respondents had incomes ranging from $50 to $100; 49 percent had income of more than $100 while 9.4% had income below $100 per month.

The respondents' perception on cooperativism and performance of dairy cattle farming among the Getasan dairy cattle farmers

In general, the respondents have a higly favorable attitude towards sharing of knowledge and information (Table 1). More than two-thirds of the respondents agreed that there was a need to share their knowledge and information to their co-farmers. It was increasingly clear that successful development of sustainable agriculture, particularly in dairy cattle farming, depended on the effective interaction and sharing of knowledge and experiences among the farmer communities. The sharing of knowledge and information is an important part of the development process. Dairy cattle farmers were encouraged to share their knowledge in order to promote knowledge sharing and program improvement. This helped in building mutual understanding and trust which often led to collaboration and joint actions (Ji-

Table 1. The Respondents' Perception on Cooperativism and Performance of Dairy Cattle Farming

Variables	Weighted Mean*	Adjectival Rating
Cooperativism		
1. Sharing of knowledge and information	2.3	High
2. Sharing of resources	2.5	High
3. Participation in decision making	2.5	High
Performance of dairy cattle farming		
1. Feeds and feeding practices	2.9	High
2. Milk production	2.8	High
3. Dairy health	2.7	High
4. Marketing	2.6	High

*1.00 – 1.66 Low (L)
1.67 – 2.32 Moderate (M)
2.33 – 3.00 High (H)

Young Kim, 2005).

The emphasis of cooperatives in the Getasan Village was on support for individual farmers instead of groups because this would provide better opportunities in using limited resources more effectively and efficiently. As a whole, the respondents have a higly favorable perception of sharing of resources. More than half of the respondents believed that sharing of resources was one of the benefits they gained as cooperative members (Table 1). To enchance willingness among the farmers to share resources with one another, the cooperatives organized the dairy cattle farmers and helped in improving communications among them. Ideally, farmers should be able to have the skills to plan and implement activities in the dairy cattle management that should be sustainable and independent, create market, contribute to poverty reduction, and produce and earn higher returns. All these could become a reality if the dairy cattle farming sector is resilient. Such conditions can only be achieved if the farmers are able to access the necessary resources such as land, labour, and capital.

As a whole, the respondents have a higly favorable perception on participation in decision making (Table 1). Results showed that 91.7% of the dairy cattle farmers in Getasan Village participated in decision making that affected the dairy cattle farming in particular. About 70% agreed that every member of the cooperative were consulted on important matters regarding dairy cattle farming. Almost all of the respondents (95.8%) believed that their participation in decision making will facilitate their access to the government's dairy cattle programs. Nearly two-thirds of the respondents (61.5%) said they should be the ones to make important decisions about the organizations instead of the officers of the cooperatives. Providing dairy cattle farmers the opportunity for access and control resulted to the creation of better decision making processes. It is in conection with Pretty and Ward (2001), enhancing the decision making processes in community was a potential tool of poverty reduction strategies.

Relationships Between Cooperativism and Performance Indicators of Dairy Cattle Farming

Based on the results of the Spearman Rank correlation test, feeds and feeding practices were significantly correlated with sharing of knowledge and information ($r = 0.780^*$, $p = 0.034$) and sharing of resources ($r = 0.679^*$, $p = 0.032$). Since the p-values are less than the significance level (5%), the null hypothesis is rejected. However, no significant relationship was found between participation in decision making and feeds and feeding practices ($r = 0.190$, $p = 0.134$) (Table 2). The p-value is more than the significance level (5%), hence, the null hypothesis is accepted. Social capital which facilitates coordination and cooperativism for mutually beneficial collective action was seen as an important asset upon which the dairy cattle farmers relied to manage the performance in terms of feeds and feeding practices.

Meanwhile, there were significant relationships between sharing of knowledge and information ($r = 0.123^*$, $p = 0.045$), sharing of

Table 2. Relationship between Cooperativism and Performance of Dairy Cattle Farming using Spearman Rank Correlation Test

Variables	Feeds and Feeding Practices		Milk Production		Dairy Health		Marketing	
	r	p	r	p	r	p	r	p
Sharing of knowledge and information	0.780*	0.034	0.123*	0.045	0.684*	0.037	0.785*	0.028
Sharing of resources	0.679*	0.032	0.567*	0.031	0.243	0.059	0.712*	0.029
Participation in decision making	0.190	0.134	0.765*	0.037	0.063	0.293	0.595*	0.045

* Significant at .05 level; r = correlation coefficient, p = asymptote significance

resources (r = 0.567*, p = 0.031), and participation in decision making (r = 0.765*, p = 0.037) and milk production in Getasan Village (Table 2). The p-values are less than the significance level (5%), hence, the null hypothesis is rejected. This indicates that because of these three variables of cooperativism, the farmers were able to improve the performance of milk production. A thorough understanding of milk quality is an essential component of the knowledge base needed by dairy cattle farmers in order to evaluate, plan, implement and monitor the performance of milk production.

When it comes to dairy health as performance indicator of dairy cattle farming, sharing of knowledge and information (r = 0.684*, p = 0.037) were the only significant factor. The p-value is less than the significance level (5%), hence, the null hypothesis is rejected. Sharing of resources (r = 0.243, p = 0.059) and participation in decision making (r = 0.063, p = 0.293) had no significant relationship with dairy health. The p-values are greater than the significance level (5%), hence, the null hypothesis is accepted. This indicates that the spread of knowledge in relation to dairy health can be defined as a strategy of management practices to control and prevent animal and public health-related losses. Sharing of knowledge and information among farmers about dairy health should be an important focus in management strategies to help control the spread of infectious diseases of cattle (Setiani, 2004).

As regards marketing, the test showed that sharing of knowledge and information (r = 0.785*, p = 0.028), sharing of resources (r = 0.712*, p = 0.029), and participation in decision making (r = 0.595*, p = 0.045) were significantly related factors (Table 2). The p-values are less than the significance level (5%), hence the null hypothesis is rejected. This indicates that these three indicators of cooperativism facilitated marketing. Cooperatives in Getasan Village promoted collaboration with market chain actors. It helped farmers establish social networks with individuals and private organizations who can play a useful role in marketing processes in dairy cattle farming. Smallholder farmers generally faced higher marketing costs because of their small volume of marketable surplus, lack of business skills, and lack of access to information and technology.

Participation in groups can benefit members' association like sharing information to improve individual performance and income. In addition, it can have a leveling-down effect on people's aspirations, providing disincentives for individuals in a group to save and invest. Moreover, it makes part of the creation, distribution and effectiveness of social capital. Social capital can be seen as "the set of social relations that enable actors to gain, maintain or expand access to economic resources that may lead to the reinforcement of the productivity of these economic resources" (Van Staveren and Knorringa, 2007).

Dairy cattle was found to be the important source of income among the group members in Getasan Village. The cooperatives in Getasan Village provided marketing support while the group's main activity was related to cattle production and productivity. The cooperatives were found to increase farmers' welfare in Getasan village. It is in connection with Subejo report (2004) that found the existence of a community-empowerment program was associated with poverty reduction. There was an evidence that enhancing the farmers' participation was a potential tool of poverty reduction strategies, especially as a component of other investments and as a part of broader empowerment strategies. Moreover, the cooperatives were found to have access to a greater number of government assistance programs and had formal structures. This study indicated that generalized cooperativism is important factors of social capital that can help develop and improve dairy cattle farming. Cooperatives can enhance social capital by creating activities for members to behave in a cooperativism manner. This could be an important way for developing social capital to support dairy cattle farming.

CONCLUSION

This study indicates that cooperativism may provide opportunities for farmers to access services, information and resources that will allow them to improve their capacities in these areas. Cooperatives were able to provide dairy cattle farmers with the opportunity to identify their roles, solutions to conflicts, and take part in decision making. Overall, decision making played a major role in the overall success of the cooperativism process. However, cooperativism is not only a collective resource but also individuals benefit directly from their own social networks.

Therefore, the performance of dairy cattle farming in Getasan Village was influenced by cooperativism. This cooperativism tended to have members who were focused on group dynamics and trust and who had the ability and desire to participate in decision making. The contribution of this study was to build on this work and evaluate the role that cooperativism plays in facilitating cattle smallholders' access to improve their farm.

This study also proposed some recommendation. The government should consider cooperativism as a part of social capital in the design and implementation of rural development projects. Moreover, the cooperatives should promote activities that will encourage/inspire greater cooperation and mutual understanding among the members. Skills trainings and education for empowerment should be conducted to encourage participation in decision making. Lastly, the government should improve ways in disseminating knowledge and information about dairy cattle management.

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