

Group Interaction, Participation and Leadership: Comparison between Successful and Unsuccessful Rubber Sheet Improvement and Sales Groups in Southern Thailand

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ABSTRACT

The study aimed to examine group interaction in giving group information to rubber group members, investigate group operations and members' participation, identify opinion leaders by using the sociometry in different farmer success levels, and compare some differences between groups. Sixty-seven farmers, 32 from an unsuccessful group (low level of performance) and 35 from a successful group (high level of performance) were interviewed without sampling.

The findings revealed that in group interaction for giving information about the group, members interacted with each other in the group and also across the group boundary. With reference to group participation, most members attended group meetings, however, they preferred to be listeners rather than opinion givers. Most helped support group activities. They accessed group information by various sources and were satisfied with the group's operation. For leadership identification, the sociometry showed that each group had two opinion leaders, which was classified as polymorphic leadership. In testing the hypotheses, statistical differences between groups were observed for group interaction in giving information. The unsuccessful groups had more group interaction in giving information than the successful ones.

Key words: Social network, Sociometry, Participation, Leadership, Rubber farmer's association

INTRODUCTION

In southern Thailand rubber plantations are widespread, both small and big depending on the socioeconomic status of the farmer. On the small farms the rubber grower manages the farm alone, whereas on the bigger farms the owner hires labour to manage the farm. Farmers make use of new technology (as recommended by government agricultural agents) differently, according to their personal beliefs, knowledge and skills. This results in a variety of quality of rubber sheets ranging from good to poor. Those who follow the government recommendations make higher quality rubber sheets and receive a higher price for their sale.

Individual farmers with only small plots to farm always face problems with selling their small number of rubber sheets. When they sell to local merchants, they receive a lower price without an option to bargain. To help improve this imbalance, farmer associations

developed that could bargain for a higher price. In addition, those associations could somewhat control their members by the imposition of group norms to follow the recommendations for better standards of rubber sheets produced.

In these groups, success varied according to external and internal factors. As the groups developed, group norms were often imposed to maintain the disciplines of members.

Rogers and Burdge (1972) classified the farmer's groups into three categories: neighbour or local groups, relative or kinship groups, and friendship or clique groups. The groups in this study would most easily be classified as locality groups.

Lionberger (1960) developed five models for group interaction, of which two would be of concern here. Model 1 group interaction took place within the group boundary and information seekers and information givers were members of the group. Model 2 group interaction took place both within the group and across the group boundary, and information seekers and information givers were often members of different groups.

Bass (1976) postulated that group interaction would be greater under certain conditions, i.e. if they were topographically and socially close, and were similar in ways of living, ability and attitudes.

As no research about comparison and differentiation of rubber groups has been undertaken in southern Thailand, the relevance of the above studies to the situation here is uncertain. One purpose of the present study was to determine if works such as the above could be usefully applied to the evaluation of rubber group success. Related research previously undertaken is discussed following.

Theron and Duvel (1979) found that the effectiveness of groups was associated with group solidarity, member participation, communication, leadership, and human relations.

The Department of Community Development (1986) found that key factors to group success were group access to information, and ability of the group to fulfill the needs of its members.

Humphreys (1981) found that about one-half of the opinions identified by using sociometry indicated polymorphic leadership and the remainder indicated monomorphic leadership.

Pattamarakha (1986) developed a social network for leadership identification. It was found that the village headmen were usually perceived as the best person to consult about agricultural matters, although in certain situations the abbot of the local temple was so perceived, partly due to his overall standing and respect in the community.

Pattamarakha (1987) found that farmers who were members of agricultural cooperatives, or member clientele groups of the Bank for Agriculture and Agricultural Cooperatives (BAAC) had a higher socio-economic status and used more technology in agriculture than individual farmers.

Pattamarakha et al., (1995) found farmers using different channels in selling posed different characteristics. In general, those who sold rubber sheets at the central market had a

larger farm size, better standard of living and were more financially independent than those who sold at local markets, who normally produced poorer quality rubber, received a lower price for it, and generally had a lower standard of living.

Pattamarakha et al., (1996) found that farmers who raised goats in different social structures (more developed/less developed villages) also posed different characteristics. Those who lived in a more developed village had more income and a better living standard than those who lived in a less developed village.

The proposition of this study is that different social systems or organizations will lead to different characteristics of the respondents. The more diverse the social system the more the characteristics of the inhabitants will vary. To compare between groups, hypotheses were postulated as follows:

Hypothesis 1 : Members in the successful group would interact in sharing information about their group much more than those in the unsuccessful group.

Hypothesis 2 : Members in the successful group would participate in group activities more than those in the unsuccessful group.

Hypothesis 3 : The successful group would have more opinion leaders than the unsuccessful group.

Hypothesis 4 : Members in the successful group would have a higher socioeconomic status than those in the unsuccessful group.

Hypothesis 5 : Members in the successful group would access group information more than those in the unsuccessful group.

Hypothesis 6 : Members in the successful group would have adopted the recommended rubber practices more than those in the unsuccessful group.

The study aimed to investigate group interaction in giving information, member participation, and leadership identification, and to compare some characteristics between the unsuccessful and successful groups.

METHODOLOGY

Selection of the Study Area

The Klong Hae subdistrict of Hat Yai district, Songkhla province was selected as the study area, as there are many rubber-farmer's groups with different levels of group success. One group in village 6 was classified as good (above average) and two groups in villages 3 and 4 as poor (below average) (this classification was undertaken by the Department of Agricultural Extension (DOAE) using five indicators: (1) frequent transfer of technology to the members, (2) amount of purchasing and marketing, (3) amount of funding, (4) number of members, and (5) coordination (amount of public support). The group in village 6 was then selected as a "successful" group, and the "unsuccessful" group in village 3 was randomly selected.

Background of the Groups

The unsuccessful and successful groups were started in 1988 and 1983 respectively. At present the two groups have 34 and 41 members, respectively.

The groups collect rubber sheets from their members and then classify them into different grades (1 to 5, with 1 the best). Most farmers produced grade 3 sheets. Lower standard rubber sheets are sold to merchants at lower prices, and better grades are sold to the central market with higher prices. After selling, one baht per kg of rubber sold is collected for the common pool, which members can access in a time of need. The most obvious difference between the two groups was that the successful group mixed fertilizers to sell to the members at a reduced price, while the unsuccessful group did not do this. In addition, in the village of the successful group there has been a village bank, which anybody in the village can use to deposit money or borrow with less restrictions than commercial banks.

Population and Sample Selection

The unsuccessful and the successful rubber groups had 34 and 41 members, respectively. Due to the limited population, all members in both groups were used without sampling.

Data Collection and Analysis

Data collection was through personal interviews, which ran from February - March 2000. Of the 34 and 41 members in the unsuccessful and successful groups, 31 and 35 were interviewed, respectively. This represented 94.1 and 85.4%, respectively, of the total population in each group. Some members in each group could not be met as they had temporarily migrated to another area to look for work. Thus, most but not all members of both groups were interviewed.

When the field survey was finished, all the questionnaires were then checked and found to be completed correctly. Coding and a code book were then prepared. The analysis of data was undertaken with a personal computer using the Statistical Package for the Social Sciences (SPSS). The analysis was undertaken at the Faculty of Natural Resources, Prince of Songkla University.

Term Definitions

Unsuccessful group refers to the group in village 3 which was classified as a low level group operation (below average).

Successful group refers to the group in village 6 which was classified as a high level of group operation (above average).

RESULTS AND DISCUSSION

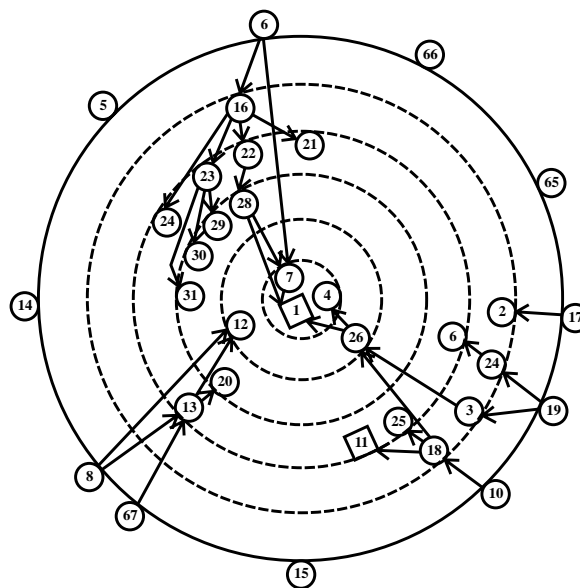
Characteristics of the Respondents

Most of the respondents were male and married, with an average age of 49.5 years. They had received formal education of Grade 4-6 and were literate. Rubber growing could be regarded as their major occupation, and rice farming a secondary occupation. Most owned their land, although a few (less than 10%) rented. The farm size was small, averaging 15.8 rai

(1 ha = 6.25 rai). About one-third accessed loans from their groups and about one-half opened a savings account with the group. A few participated socially with group members, or had personal contact with the public officers. Most of them joined the groups to get a better bargaining process for selling their rubber sheets.

Interaction in Giving/Receiving Information about the Group

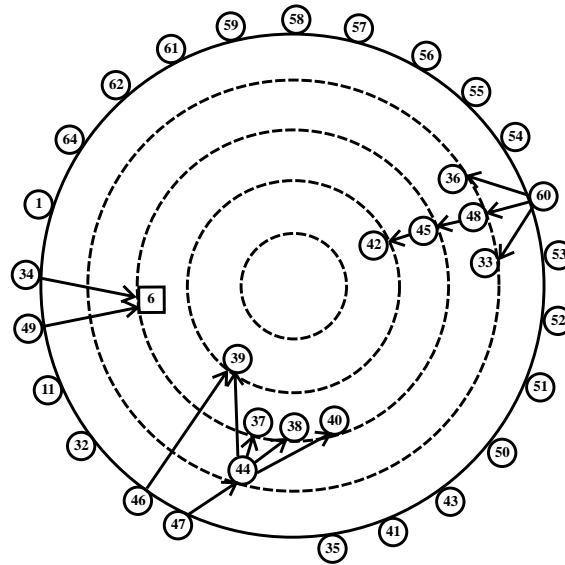
To examine the interaction of group members, participants were asked to note the name of persons they had interacted with recently in giving/receiving group information. Figure 1 shows the social network thus revealed of the unsuccessful group. Three clusters of social networking are identified. Cluster 1- farmers 8 and 67 played a very important role in giving information about the group to other members. Cluster 2- farmers 10 and 19 appear much the same way. Cluster 3 - only farmer 9 was an important dispenser of group information. Clusters 2 and 3 had a very complicated interaction of members, and also had close links, as farmer 1 was the end of information dissemination of both groups. In addition, farmers 1 and 11 were members of opposite groups. Dissemination of information was normally undertaken within the group, however this was across the group boundary (Figure 1). This information across the group boundary might have been due to a close relationship between the members concerned, although they lived in different villages, with information shared though their personal contact. When compared, group interaction in giving farm information of the unsuccessful group was much more than that of the successful group.



□ - Members in the opposite group.

Figure 1. Social network for giving group information of the unsuccessful group.

In the successful group three clusters of social networking were identified, and in general the group was much less complicated in terms of relationships compared to the unsuccessful group. Quite a few members had interaction. Similar to the unsuccessful group, farmer 9 was mentioned as receiving information in the successful group, indicating group interactions across the group border (Figure 2).



□ - Members in the opposite group.

Figure 2. Social network for giving group information of the successful group.

When looked into in detail, it was found that 27 of 32 members in the unsuccessful group and 14 of 35 members in the successful group indicated group interaction between members. A statistical difference was observed ($\chi^2 = 13.86$, $p < 0.01$). The unsuccessful group had more interaction of the members than the successful group, which was contrary to Hypothesis 1. In the actual situation members in the successful group should have had more interaction than the unsuccessful group. This situation might be explained by the fact that the chairman of the unsuccessful group was sub-district head, a powerful position through which he contacts and receives respect from the members.

Participation in Group Activities

Most members in both groups had attended the latest group meeting (Table 1), although they usually preferred to be listeners rather than information givers. This might be due to the fact that they did not want to be the dominant person, and some might have been shy, not wanting to show off in public. About one-third of the members were assigned group tasks to run group activities. Any time when the group needed the member's support, most gave it willingly. When asked about their group's performance compared to other groups most felt that there was no difference. They were satisfied with the group operation and outcomes. Most used many channels to access group information, with group chairman, members and letters being most popular.

Table 1. Participation in group meeting.

Attribute	Group type			
	Unsuccessful		Successful	
	Number (n=32)	Percentage	Number (n=35)	Percentage
Attendance at the latest meeting				
Did not attend	7	21.9	13	37.1
Attended	25	78.1	22	62.9
Expression in group meeting				
Initiate rather than listen	2	6.3	2	5.7
Listen rather than initiate	26	81.2	28	80.0
Initiate and listen equal	4	12.5	5	14.3
Tasks assigned from group				
Received	11	34.4	11	31.4
Never received	21	65.6	24	68.6
Offer support when needed by group				
Always	30	93.7	32	91.4
Not always	2	6.3	3	8.6
Group performance compared with other groups				
Worse	1	3.1	2	5.7
No difference	20	62.5	27	77.1
Better	11	34.4	6	17.2
Group success				
Little	1	3.1	2	5.7
Moderate	21	65.6	22	62.9
Most	10	31.3	11	31.4
Satisfaction with group				
Little	-	-	2	5.7
Moderate	13	40.6	18	51.4
High	19	59.4	15	42.9
Source of group information*				
Group chairman	14	43.7	21	60.0
Members	5	15.6	8	22.8
Letter	6	18.7	2	5.7
Group secretary	2	6.3	3	8.6
Telephone	1	3.1	-	-
Office contact	4	12.5	1	2.9

*Quoted from more than one source.

Members in each group participated in group activities at effectively the same level. When comparison was made of group participation it was found that the average scores of the unsuccessful and successful groups were 1.75 and 2.20 respectively, which was not

statistically significant ($t = 1.21$, $p = 0.115$), which invalidated Hypothesis 2. Members in both groups were similar in terms of standard of living and occupation.

Leadership Identification

Sociometry was employed as an indicator for social acceptance. Four levels of success were perceived by farmers: best problem solving, best rubber sheets made, best dedication in group operation and best access to market. Farmers were asked to indicate the most successful person in these areas. With reference to the unsuccessful group, members 17 and 26 received the best rating in most cases. In addition, members in the opposite group (successful group) numbers 40 and 48 also received high recognition as having the best market access (Figure 3). This was across the group boundary.

Rank	Situation			
	Problem solving	Rubber sheet made	Dedication	Market access
1	17(7)	26(15)	17, 26(6)	40 (16)*
2	26 (2)	17, 67 (3)	12 (2)	48 (4)
3	-	9 (2)	-	17 (2)

*Figures in brackets indicate the number of voters.

□ - Members in the opposite group.

Figure 3. Social acceptance using sociometry in different situations of the unsuccessful group.

In the successful group, two members, 40 and 48, were accorded social acceptance in all cases (Figure 4). However, in consideration of best access to market, they received lower scores than scores received by members in opposite group (Figure 3). This might be due to that most members in the successful group could easily access the market so most of them thought that no one stood out in their group.

Rank	Situation			
	Problem solving	Rubber sheet made	Dedication	Market access
1	40 (26)	40 (20)	40 (24)	40 (2)*
2	48 (9)	48 (7)	48 (6)	48 (1)
3	-	1, 37 (2)	-	-

*Figures in brackets indicate the number of voters.

Figure 4. Social acceptance using sociometry in different situations of the successful group.

According to sociometry, members 17 and 26 in the unsuccessful group, and 40 and 48 in the successful group, were regarded as opinion leaders. These leaders posed polymorphic leadership, in contrast to Humphreys (1981) finding that about one-half of a similar group of leaders posed monomorphic leadership and the other half polymorphic leadership.

The sociometry also showed that the two groups each had two opinion leaders. When Chi-square was employed, no statistical difference was observed ($\chi^2 = .944$, $p = .331$), which invalidated Hypothesis 3, which proposed that the successful group would have more opinion leaders than the unsuccessful group. This might be due to the fact that the members in the two groups had a standard of living very similar to each other. In addition, opinion leaders in both groups were also regarded as innovators when use of recommendations in rubber practices was examined. Furthermore, when the key informants method was employed all four leaders were mentioned as influential and accepted by most public officers concerned.

Farmers’ Adoption of Recommended Rubber Practices

It was found that most members of both groups followed the recommended practices except for use of cover plants, shaping, and equipment for kneading the rubber (Table 2). The number of adopters of each practice in both groups was very similar. Those who did not grow legumes as cover plants indicated that they grew intercrops to gain additional income. Those who did not shape young rubber trees said that they felt it was not necessary, that they did not know how to perform this operation, and that since the rubber trees were in good shape there was no need to do it anyway. Most farmers used their feet for kneading the rubber instead of available equipment, giving as reasons that the resulting quality of the rubber sheets was not different, that they did not want to spend much money for the equipment, and that it was not necessary.

Table 2. Farmers’ adoption of recommended rubber practices.

Attribute	Group type			
	Unsuccessful		Successful	
	Number (n=32)	Percentage	Number (n=35)	Percentage
Cover plant	9	28.1	12	34.3
Shaping	12	37.5	12	34.3
Pruning	25	78.1	23	65.7
Clay cup for resin collection	27	84.4	31	88.6
Metal sieve as resin filter	28	87.5	33	94.3
Stirring and sweeping floating Bubbles	26	81.3	32	91.4
Formic acid for coagulation	28	87.5	29	82.9
Equipment for knead	2	6.3	7	20.0
Sheet watering	26	81.3	28	80.0
Sheet drying in sunlight	23	71.9	30	85.7

Comparing Some Factors Between the Unsuccessful and Successful Groups

As is shown in Table 3, there are no differences in socio-economic status, access to group information, or adoption of recommended rubber practices between the two groups, which thus invalidates Hypotheses 4, 5 and 6. This indicates that the criteria to classify

rubber groups might not be appropriate when internal factors are disclosed. According to the adoption theory of Rogers and Shoemaker (1971), socio-economic status of the individual was the most important factor for behavioral changes. In their study it was also found that socio-economic status had a positive correlation with group participation ($r = .1986$, $p = .054$), access to group information ($r = .2430$, $p = .024$) and the adoption of recommended rubber practices ($r = .3028$, $p = .006$). As there was no statistical difference in socio-economic status, other factors such as social participation, access to group information, and adoption of recommended rubber practices were also similar. It was clear that some internal factors as mentioned between the unsuccessful and successful group were proven to be really the same. This would indicate that criteria for classification of groups should be explored in more detail to provide guidelines for more precise measurement, rather than depending on external factors.

Table 3. Comparing some factors between the unsuccessful and successful group.

Factor	Group average score		t	p
	Number (n=32)	Percentage (n=35)		
Socio-economic status	33.68	36.52	-1.15	0.128
Access to group information	3.06	2.82	0.80	0.213
Adoption of recommended rubber practices	7.18	7.20	-0.03	0.488

CONCLUSIONS AND RECOMMENDATIONS

Farmer members in both groups had group interaction both within their own group and across the group boundary for giving and receiving information about the group. The unsuccessful group had more group interaction and more complex steps of networking than that of the successful group. Most participated in group activities. They encouraged and helped support group tasks as much as possible. With regard to leadership, two opinion leaders in each group were identified, who posed polymorphic leadership and were regarded as innovators when recommendations of rubber practices were examined. In addition, those opinion leaders were regarded as influential, as identified by the key informants method.

The following steps are strongly recommended:

1. Formation of a social network between the two groups should be undertaken to revitalize the running of the group business. The group chairmen should have closer contact, as their knowledge and experience in running the group business could be shared and they could learn from each other.

2. Both groups have a very limited number of members, approximately 30, thus membership expansion would increase the support available for running the group business. Alternatively, if the membership cannot be increased locally, perhaps the group boundary could be expanded to cover more than one village.

3. Opinion leaders of both groups should be encouraged to play a leading role in information dissemination to members in the group, as they are accepted by the members and

regarded as the innovators.

4. During the group meetings most preferred to be listeners rather than information givers, and usually only a few were assigned to support the activities of the group. If the group wanted to develop its effectiveness and efficiency, more members should be encouraged to express themselves as information givers rather than simply listeners, and more members should offer to do some tasks when needed.

5. Most farmers followed some recommended rubber practices, but a few such as shaping, use of cover plants and use of equipment for kneading were ignored. These practices should be more encouraged.

6. Criteria for group classification should be reviewed by the agency concerned. Internal factors should be given more weight as indicators.

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REFERENCES

- Bass, Bernard M. 1976. Some observations about a general theory of interpersonal behavior. P. 64-79. In *Leadership and Social Change*. W. R. Lassay and R. R. Fernandez (eds.). California : University Associates.
- Department of Community Development. 1986. A research report on factors affecting the success of occupational groups. Bangkok. (in Thai)
- Humphreys, Richard J. 1981. Dairy Farmers - Social Networks, Attitudes and Practice Adoption. Master's thesis, Department of Agriculture, University of Queensland. (Unpublished)
- Lionberger, Herbert F. 1960. Adoption of new ideas and practices. Iowa : The Iowa State University Press.
- Pattamarakha, K. 1986. Differential characteristics of adopters and non-adopters in the adoption of High-yield Varieties of Rice. *Songklanakarin Journal of Science and Technology* 8 (2) : 145-153. (in Thai)
- Pattamarakha, K. 1987. Socio-economic Status of Farmer Members of the Agricultural Cooperatives, the Bank for Agriculture and Agricultural Cooperatives (BAAC) and Individual Farmers. *Kasetsart Journal of Social Sciences* 8 (1) : 59-72. (in Thai)
- Pattamarakha, K., A. Masae, J. Petchrat and C. Poolsiri. 1995. Factors Affecting Differences in Marketing Channels of Rubber Sheets Between Central and Local Markets in Changwat Phuket. *Kasetsart Journal of Social Sciences* 16 (1) : 28-42. (in Thai)
- Pattamarakha, K., J. Tanapanyarachwong and S. Saithanoo. 1996. Influences of Social Structure on the Diffusion and Adoption of Recommended Goat Husbandry Practices. *Kasetsart Journal of Social Sciences* 17 (2) : 196-206.
- Rogers, E.M., and R.J. Burdge. 1972. *Social Change in Rural Society*. New Jersey : Prentice Hall.

Rogers, E.M., and F.F. Shoemaker. 1971. *Communication of innovations*. New York : The Free Press.

Theron, C.H.B. and G.H. Duvel. 1979. Role of internal dynamics factors in the functioning of soil conservation committees. *South African Journal of Agricultural Extension* 8(1) : 3-11.