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Influence of Leaders' Personal Attributes on Group Cohesiveness in Sustainability of the Goat Project by the Dairy Goat Farmers' Association in Central and Eastern Provinces of Kenya

S. Muthoni Kamuru

Department of Applied Community Development Studies, Egerton University, Egerton, Kenya

J. Gowland Mwangi

Department of Agricultural Education and Extension, Egerton University, Egerton, Kenya

Maurice A. Udoto

Department of Agricultural Education and Extension, Egerton University, Egerton, Kenya

Abstract:

Among the many agricultural projects that development agencies have introduced to farmers in Kenya, the Dairy Goat Association in Central and Eastern Provinces of Kenya is a success story in sustaining the Dairy Goat project introduced in 1992, in terms of outputs, capacity growth and stability of the member groups. These dimensions of organisational growth have been attributed partly to member groups' leadership effectiveness. Although factors that contribute to effectiveness of leadership as a role, position or interaction process are generally known, not all factors can be generalised to specific circumstances due to the situational nature of leadership. This study examined influence of leader personal attributes on leadership effectiveness in member groups of the Dairy Goat Association of Kenya. Out of 106 farmers' groups and 2199 members, 47 group leaders and 251 of their followers were selected through stratified random sampling. Structured interview schedules were used to obtain data from the group chairpersons and their followers. Chi-square was used to test the validity of the set hypothesis, at $\alpha = 0.05$ level of statistical significance. Leader attributes that significantly influenced group cohesiveness were professional training and legitimacy at $p \leq 0.05$. There is therefore, need to encourage leadership to evolve from the groups to ensure legitimacy, and select leaders with some professional training.

Keywords: Leadership effectiveness, Leader traits, farmers' group, livestock project

1. Introduction

The German Agency for Technical Co-operation (GTZ) in collaboration with the Government of Kenya introduced the Dairy Goat project among farmers' groups in the highlands of Central and Eastern Kenya in 1992. The project was based on the premise that these areas have a generally high population density (450 people / Km²) with up to 700 people in some Counties like Kiambu, upper parts Embu and Meru (Kariuki & Place, 2005). The increasing population density has forced the expansion of arable cropping into lower arid areas and higher altitudes, suitable for dairy, tea, pyrethrum and/or forestry. Significant modifications within the agricultural systems in the highlands include shorter or no fallow periods, cropping on steep slopes and in the swamps during the dry seasons. The evolution of such an intensive agricultural system has progressively resulted into shrinking of grazing areas to the extent of not being able to sustain one dairy cow. Therefore, promotion of crossbred goats and particularly dairy crossbreds in the Kenyan highlands, where the population density and pressure on land is increasing is a better livestock development option. A particular emphasis has been given to dual-purpose (meat and milk) goats obtained by crossing Alpine and Toggenburg with the East African goat (Maigua, 2006).

2. Project Design

A notable feature in the design of the dairy goat project in Central and Eastern provinces of Kenya was that it was community-based and farmer-led. Farmers and farmer group members were rigorously trained on breeding programme, management and husbandry, including primary healthcare. (Ahuya, Okeyo, Njuru & Peacock, 2005). The project focuses on upgrading the indigenous goat breeds by use of exotic bucks of German Alpine breeds. The operation involves sharing of one exotic buck by a group of about 20 farmers (Dairy Goat Association of Kenya [DGAK], 2001). To facilitate participatory management of the project, an association comprising of 106 farmers' groups involved in the dairy goat keeping. Dairy Goat Association of Kenya was registered in 1994, with the ultimate objective of poverty alleviation among the members. Members of DGAK's management

committee were drawn from the member groups. The latter sustain the association and its functions in the following ways: - Participation in the various forums of the association through their representatives; financial support by paying registration, membership, and annual subscription fees; payment of sales tax by selling their goats in the sales and auctions organised by the association; and utilising the services provided by the association, (DGAK, 2001).

3. Project Outcome

Since its registration in April 1994, DGAK had not only grown to become established as an economically viable national farmers' association but its capacity as a service provider, in the field of extension, marketing and quality control, and input supply had been enhanced. However, in 1998, GTZ, the major funding agency, withdrew part of its financial and logistical support from the project. In 2001, all components of the project except the secretariat were handed over to DGAK. Despite this organisational change, the association's networks extended to Coast and Western Provinces of Kenya, and by 2013 DGAK membership had risen to 16,000 farmers (DGAK, 2013). This credible growth in capacity of DGAK and sustainability of the dairy goat by the member groups is attributed partly to leadership effectiveness in the member groups (DED, 2006).

4. Concept of Leadership and Leader Attributes

The term 'leadership' is variously viewed as a process, an outcome and as a collection of personal attributes or prescribed roles. Tannenbaum, Weschler and Massarik (1961) defined leadership as an interpersonal influence exercised in a situation and directed through the communication process towards attainment of a specified goal or goals. This implies that leadership involves attempts on the part of a leader to influence the behaviour of a follower in a given situation. Leadership is applicable to all interpersonal relationships in which influence attempts are involved. Influence is therefore, key to leadership process, and refers to the effect of one party on another (Bono, Shen & Yoon, 2014). The influence may be over followers' attitudes, perceptions, behaviour or a combination of these outcomes (Yukl, 2002). Three major outcomes of influence attempts are commitment, compliance and resistance (Feldman, 1998). However, effective leadership stimulates commitment and attracts membership by its appeal (Forsyth, 1990). Such an outcome depends on the manner in which a leader organises and directs the group processes under various conditions, and determines group performance and effectiveness (Fleener, 2011).

5. Trait Theory of Leadership

Various theories have attempted to explain why some group members manage to influence followers' actions and to control their behaviour. Important to this study is the *Trait Theory of Leadership*. The theory proposes that certain traits of an individual personality lead that individual to rise naturally to a position of leadership and become influential (Kreitner & Kinicki, 2012). Studies based on this theory attempt to identify physical and personality traits that differentiate leaders from their followers, those that are common to effective leaders and those which can be used in predicting leader effectiveness. Personality traits that have been proposed to be linked to effective leadership include: intelligence; higher achievement motivation; emotional stability and composure; technical and cognitive skills; power motivation; interpersonal skills; defensiveness; need for affiliation; responsibility-taking, creativity and creation of a charismatic vision (Feldman, 1998; Taylor, Peplau & Sears, 1997). However, these traits have been identified from studies based on highly structured organizations, unlike farmers' groups that have a low organizational structure. Therefore, the researchers restructured the traits to the level of groups under study, based on recurring themes of leadership traits in the groups' bylaws. The traits included gender, marital status, age, leadership tenure, years of formal schooling, current occupation, income, professional training, previous leadership experience, current leadership positions and level of legitimacy. These attributes are assumed to give a group member advantage over the others and promote leadership competency, which is a determinant of a leader's effectiveness.

6. Evaluation Criteria for Leadership Effectiveness

Measures commonly used are based on followers and observers' perceptions on the leader's contribution to group processes. One of the major outcomes of this contribution is group cohesiveness which reflect the social dimension of leadership (Yukl 2002; Forsyth, 1990) Cohesiveness is the degree to which group members feel attracted to the group, a primary factor in keeping a group in existence and forms the working climate within which a group functions. The greater the attractiveness, the higher the cohesiveness. The latter varies between groups, between situations and across time (Hogg & Vaughan, 1995). High group cohesiveness produces unity of the members, member satisfaction and membership stability (Taylor, Peplau & Sears 1997).

Cohesive groups given their tendency to maintain membership and influence members, present an ideal means to maintain a constant increase in productivity in work related groups. The more a group is able to attain its goals, the higher will be the cohesiveness (Katz & Khan, 1978)

Whereas an individual's personality attributes that contribute to leadership effectiveness as role, position and interaction process are generally known, not all of them may be generalised to specific circumstances due to the situational nature of leadership. This study was designed to determine empirically, how the leaders' personal attributes, enshrined in their respective group's bylaws, influence leadership effectiveness in the sustainability of the member groups and dairy goat project by the dairy goat Association of Kenya in Central and Eastern provinces.

7. Purpose of the Study

The main purpose of the study was to determine leader personal attributes, important to leadership effectiveness in the Dairy Goat Association of Kenya member groups, with the aim of identifying those that have outstanding influence on group cohesiveness.

The information obtained may be helpful in guiding existing and emerging DGAK farmers' groups to choose leaders who are likely promote group cohesiveness and consequently, higher agricultural productivity.

8. Objectives of the Study

The study sought to determine:

- Leaders' personal attributes
- Leaders' level of effectiveness in terms of group cohesiveness as perceived by group members.
- The extent to which leaders' attributes influence the level of leaders' effectiveness in terms of group cohesiveness

The hypothesis tested was that there is no statistically significant relationship between leader personal attributes and level of group cohesiveness.

9. Methodology

9.1. Research design

The research design was a cross-sectional field survey, with the data collected at one point in time to determine the extent to which leaders' personal attributes were related to level of cohesiveness in the Dairy goat association of Kenya groups. The design was appropriate for the study because the researcher could not manipulate the independent and dependent variables but measured them at the same point in time (Bhattacharjee, 2012). The independent variables of the study were gender, marital status, age, leadership tenure, years of formal schooling, current occupation, income, professional training, previous leadership experience, current leadership positions and level of legitimacy. The Dependent variable was group cohesiveness

9.2. Study population

The population of the study consisted of 106 farmers' groups with a membership of 2199, which existed before or were formed during the initiation of the project. These were distributed within Embu County in Eastern province, and Nyeri, Murang'a, Kirinyaga and Kiambu counties in Central province. The target population which was also the accessible population was the group chairpersons and their followers in Embu and Murang'a counties.

9.3. Population and sampling

Cluster sampling was used to select two counties: Embu in Eastern Province and Murang'a in Central Province. The two study sites had a population of 47 dairy goat groups with a membership of 865. The entire population of the 47 groups' chairpersons was studied while a sample of 251 chairpersons' followers was selected through proportional stratified random sampling. A further randomly selected sample size of 69 group bylaws covering members' conduct and project operations was also obtained from the 106 DGAK groups, to provide clues on leadership attributes considered important by the groups.

9.4. Data Collection and analysis

Two sets of interview schedules containing closed and open ended questions, one for the group chairperson and the other for his or her followers were used to collect data. Content analysis of the groups' by-laws was done to identify common themes on leader attributes across the groups. The data collection instruments were suitable for the study because some of the respondents had low or no literacy levels. The Interview schedule for group chairpersons solicited their personal attributes while that of the leader followers mainly dwelt on the evaluation of the group chairperson by his/her followers. An average score was computed from the interviewed leader followers of a particular group, to obtain the mean leadership effectiveness score of the leader. Project records were also reviewed to obtain figures on productivity. Data was analyzed using Statistical Package for Social Sciences software, while descriptive statistics and Pearson's correlation coefficient were used to present the findings of the study.

10. Results and Discussion

10.1. Attributes of group chairpersons (leaders)

Data in Table 1 show that (78.7 %) of the chairpersons were men while 21.3 % were women, revealing gender disparity in leadership composition in DGAK groups. This trend of low number of women leaders may be attributed to the traditional role expectations and biased community attitudes against women. The greater proportion (95.7 %) of the leaders were married and living with their spouse while the rest (4.3 %) were single through divorce and widowhood.

The mean age for all leaders was 56.15 years resulting from a wide range of 29 years for the youngest and 80 for the oldest leader. This indicates that the members of the DGAK groups had no preference for a particular age in choosing their leaders. However, a greater proportion, (68.1 %) of leaders was above 50 years.

The mean leadership tenure was 3.9 years, arising from a range of 0.25 to 13 years. Most of the group constitutions had specified a maximum tenure of 2 terms years (4 years) for the chairperson. For those who had exceeded 4 years, it may be an indication that they were very effective and therefore, group members repeatedly re-elected them. The mean years of formal schooling for all leaders was 7.85, with a range of 1 to 15 years, indicating that all leaders had some basic education, which may be an important attribute to their effectiveness. When leaders' mean years of formal education was compared with that of their followers (6.21), it was found out that the leaders' was slightly above that of their followers. This may mean that leaders whose education is above their followers were more likely to be effective in the Dairy Goat Association of Kenya. Majority of the leaders (68.08%) were fulltime farmers while the rest were part time farmers, whose second and/or third occupation comprised of teaching, business,

clergy and clerical work. The income earned from the above occupations had a wide range of Kenya shillings 60, 000 to 479,000.00 per annum, indicating a wide disparity.

Variable	No.	%	Mean	SD	Range	N
Gender:						
Men	37	78.72	-	-	-	47
Women	10	21.28	-	-	-	
Marital Status:						
Married	45	95.70	-	-	-	47
Widowed	1	2.15	-	-	-	
Separated/Divorced	1	2.15	-	-	-	
Age (Calendar Years)	-	-	56.15	12.71	29 - 80	47
Leadership tenure	-	-	3.9	2.7	0.25 - 13	47
Years of formal Schooling	-	-	7.85	3.25	1 - 15	47
Current Occupation:						
Fulltime Farmer	32	68.08	-	-	-	47
Part-time Farmer	15	31.92	-	-	-	
Income (Ksh.) per year	-	-	90,950.75	50,308.00	60,000–479,000.00	47
Professional training						
Yes	26	55.3				47
No.	21	44.7				
Previous Leadership experience						
Yes	36	76.6				47
No	11	23.4				
Number of Leadership positions:						
One position	23	60.9				36
More than one position	13	30.1				
Legitimacy:						
Moderate	3	6.4	-	-	-	47
High	44	93.6	-	-	-	

Table 1: Group Chairpersons' Personal attributes

Thirty-six leaders (76.6 %) had previous leadership experience, while (23.4 %) had none. Out of the 36 who had experience, 60.9 % had served in a single leadership position (as one of the officials) while the remaining 39.1 % had served in more than one position, either consecutively or simultaneously in other organisations. A higher percentage (77.7 %) had served previously as senior officials (chairperson, vice chairperson or both) and therefore, had the relevant experience. Majority (93.6%) of the group chairpersons were in the high level of legitimacy, while the rest (6.4%) had moderate legitimacy.

Table 2 revealed that the group members were very happy with the group (mean = 4.69). Individual group means varied from 2.0 to 5.0 points. The range may be an indicator of a few leaders, whose popularity may have diminished in the groups. Trust among members was also high (mean = 4.18), and scores ranged from 1.0 to 5.0

on a scale of 5. The range of scores indicates that, some degree of mistrust exists in few individual groups other than in the entire Dairy goat Association of Kenya. Members support for each other in times of need is relatively low, compared to other cohesiveness indicators (mean = 2.67, with a range of 0.2 to 4.0). This range depicts a

10.2. Leadership effectiveness, (Based on Responses from 251 leader followers and 47 leaders)

Indicators	No. of Groups	%	Mean	SD	Range	N
Members satisfaction with the group	-	-	4.69	0.44	2.0 - 5.0	251
Follower satisfaction with leadership	-	-	4.20	0.71	1.8 – 5.0	251
Trust among members	-	-	4.18	0.70	1.0 – 5.0	251
Member support for one another	-	-	2.67	0.11	0.2 – 4.0	251
Desire to remain in the group (From Leaders Perspective):						
Readiness to pay fines	-	-	2.15	0.82	1.0–3.0	47
Timeliness in paying subscription fee	-	-	3.23	0.73	1.0 – 4.0	47
Absence of secondary conflict	-	-	4.38	0.79	2.0–5.0	47
Member cooperation			4.34	0.83	3.0 – 5.0	47
Member unity	-	-	2.34	0.67	1.0 – 3.0	47
Membership stability			3.66	1.11	2.0 – 5.0	47
<i>Reasons for membership decline:</i>						
-Relocation	4	57.10	-	-	-	
-Dissatisfaction with group	3	42.90	-	-	-	7

Table 2: Group Cohesiveness Indicators (from Followers and leaders' Perspectives)

Wide disparity between individual group members' support for one another. The trend may be an indication of members' preference for task instead of social-oriented groups.

During the preliminary survey of this study, a sample of 69 group bylaws revealed that failure to pay instituted fines (in case of violating group conduct or project rules) and subscription fee, were a basis for expulsion from the group. The readiness and timeliness were thus, indicators of the members' *desire to remain in the group*. On a scale of 1 to 3, the mean score on readiness for all groups was 2.15. Individual group's range of scores was between 1 and 3.0. This range may be an indication of the presence of reluctant individual group members, which could be a threat to stability of group membership. However, the mean for all groups portrays at least a moderate level of readiness. Payment of subscription fee was timely as shown by a group mean score of 3.23 on a scale of 4.0 Individual leader's evaluation of their followers on this behaviour ranged from 1 to 4 points. This range when compared to the relatively high group mean reveals some laxity in a few groups. Frequency of verbal quarrels that were beyond reconciliation was generally low in that on a scale of 5.0 (with 5 representing complete absence), the mean for all groups was 4.36. Individual group scores ranged from 2 to 5.0. These findings reveal that although there was a general rare occurrence of the phenomenon, a few groups often experienced some degree of secondary conflicts, a threat to group cohesion.

Generally, members of all groups were at least cooperative when conducting group activities as revealed by a mean of 4.30. However, the range of scores for individual groups (1.0 to 5.0) showed that members of a few groups were very uncooperative. On a scale of 3.0 the group mean for member unity was 2.31, with a standard deviation of 0.78. This finding reveals that members in all groups assisted one another at least readily in times of need. Nevertheless, the range of scores (1.0-3.0) for individual groups, show that in some groups, members were reluctant to help each other. This phenomenon could be attributed to the fact that the area of study has a culture that is on transition from collectivism to individualism.

When membership stability was coded on a scale of 5, the mean for all groups (3.66) revealed that generally, all groups were almost stable. However, the range of scores showed that some individual ones had a low stability. In the 7 groups where there was membership decline, reasons forwarded by 4 leaders was due to member relocation while 3 indicated that the group failed to meet the expectations of the members, of getting free goats.

The ten cohesiveness indicators were utilised to compute a cumulative score for cohesiveness. Consequently, a minimum cumulative score of 10 and a maximum of 44 was obtained Proportional collapsing of this range was done to compute three levels of cohesiveness as follows: - 10 to 21.30 – low; 21.35 to 32.65- moderate and 32.70 to 44 – high, as shown on Table 3.

Group cohesiveness	No	%	Mean	S.D	Range
Low	0	0.0			
Moderate	26	55.3	35.90	3.47	24.9-42.0
High	21	44.7			
Total	47	100.0			

Table 3: Levels of Group Cohesiveness

Chi-square was used to test the hypothesis that there is no statistically significant influence of leader attributes on leadership effectiveness (Group Cohesiveness). To facilitate cross tabulation of independent and the dependent variables, interval variables (Age, years of schooling, leadership tenure and income were each collapsed into 4 categories. Each of the independent variables was cross tabulated with the levels of group cohesiveness, which consequently yielded the results on Table 4.

Independent Variable	Chi-square Value	Df	P value	N
Gender				
Age	8.87	8	.372	47
Marital Status	2.66	4	.616	47
Years of schooling	1.60	6	.952	47
Income	5.78	8	.672	47
Tenure of office	1.26	6	.906	47
Current occupation	.48	2	.785	47
Professional Training	9.45	2	.009*	47
Previous Leadership Experience	.406	2	.816	36
Number of Leadership positions engaged in:	2.69	2	.261	36
Level of legitimacy	5.61	2	.050*	47

Table 4: Chi-square values on the influence of Leader Attributes and Group Cohesiveness.

* Significant at $p \leq .05$

Professional training (regardless of the field) and leader legitimacy were the only Leader attributes found to significantly influence group cohesiveness at $p \leq 0.05$. The findings attest to the concept of leadership effectiveness by Kirkpatrick & Locke (1991) and Culbertson (2014), that possession of certain traits alone does not guarantee leadership effectiveness. Professional training may not have influenced leadership effectiveness directly but may provide the leader with intelligence, action oriented judgement, responsibility taking, interpersonal skills, assertiveness and self confidence that are associated with effective leadership. Legitimacy on the other hand is the bedrock for leadership effectiveness because it gives the leader the acceptance and authority to influence, act on behalf of, or speak for the group members in matters of the group (Hollander, 2009; Kamuru, Mwangi & Udoto, 2014).

11. Conclusion and Recommendation

The group chairpersons in the Dairy Goat Association of Kenya groups were at least moderately effective in keeping the groups cohesive. However, most of the personal leader attributes studied were not significantly related to group cohesiveness. Professional training and leader's legitimacy were the only leader attributes that significantly influenced leadership effectiveness. There is therefore, need to encourage leadership to evolve from the groups to ensure legitimacy, and select leaders with some professional training.

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