



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

ATTRIBUTES AND SAVINGS BEHAVIOUR OF ACAT CLUB MEMBERS IN KWAZULU

V Swanepoel

Masters student, Department of Agricultural Economics, University of Natal, Pietermaritzburg

MAG Darroch

Lecturer, Department of Agricultural Economics, University of Natal, Pietermaritzburg

Abstract

A survey of communal clubs serviced by the Africa Co-operative Action Trust (ACAT) in KwaZulu during 1989 is used to identify attributes and savings behaviour of club members. Discriminant analysis shows that garden club members tend to have higher on-farm income per household member and receive more KwaZulu Department of Agriculture (KDA) extension input than savings club members. Members who belong solely to a savings club receive more ACAT training and tend to be further from infrastructural amenities. Garden clubs can assist rural development by encouraging surplus production for sale and focusing KDA extension efforts. Savings clubs improve access of rural people to training and farm inputs. Club savings increase during the pre-planting season (August to November) when input purchases are made. Post-planting savings are much lower, indicating allocation of funds to alternative uses (reduced incentive to save until next pre-planting season). These patterns suggest that members use savings clubs to obtain inputs rather than as typical savings institutions. Total real annual savings and withdrawals in savings clubs fell between 1985 and 1987, due to a fall in average club membership. This was associated with declining real annual ACAT-KwaZulu operating budgets which reduced ACAT staff visits to clubs and assistance with input deliveries.

Uittreksel

Eienskappe en spaargedrag van ACAT-klubdele in KwaZulu

'n Opname van gemeenskapsklubs wat in 1989 deur die Africa Co-operative Action Trust (ACAT) in KwaZulu bedien is, word gebruik om die eienskappe en spaargedrag van klubdele te identifiseer. Diskriminant ontleding toon dat tuinklubdele gewoonlik 'n hoër op-die-plaas-inkomste per gesinslid het en meer voorligting van die KwaZulu se Departement van Landbou (KDA) ontvang as wat die geval is met spaarklubdele. Lede wat uitsluitlik aan 'n spaarklub behoort, ontvang meer ACAT-opleiding en is meestal verder weg van infrastrukturele geriewe. Tuinklubs kan landelike ontwikkeling aanhelp deur surplusproduksie vir verkope aan te moedig en KDA-voorligtingspogings te fokus. Spaarklubs verbeter die toegang van landelike mense tot opleiding en landbou-insette. Klubspaargeld vermeerder gedurende die voor-aanplantingseisoen (Augustus tot November), wanneer insette aangekoop word. Spaar na aanplanting is baie laer, wat dui op 'n toewysing van fondse aan alternatiewe gebruike (minder motivering om te spaar tot volgende voor-aanplantingseisoen). Hierdie patrone suggereer dat lede die spaarklubs gebruik as 'n middel om insette te bekom, eerder as tipiese spaarinstellings. Totale reële jaarlikse deposito's en onttrekkings in spaarklubs het tussen 1985 en 1987 gedaal, vanweë 'n daling in gemiddelde klublidmaatskap. Dit het gepaard gegaan met dalende reële jaarlikse ACAT-KwaZulu bedryfsbegrotings, wat besoeke deur ACAT-personeel aan klubs en bystand met insetaflewering verminder het.

1. Introduction

Africa Co-operative Action Trust (ACAT) began operating in KwaZulu during 1979 as a Christian missionary rural development agency. In subsequent years ACAT started operations in the Transkei, Swaziland, Ciskei and Bophuthatswana (ACAT, 1989:16). The ACAT method of operation is to enter a rural area upon invitation and form savings clubs. These clubs teach people how to save towards defined goals such as the purchasing of input packages (ACAT, 1982a; 1982b).

Authorities on the savings club movement in Southern Africa report that communal vegetable gardening is often one of the projects undertaken by savings clubs (Gwanya, 1988; Smith, 1974; Bratton, 1986). Although ACAT is mainly concerned with the formation and functioning of savings clubs, it also offers services to garden clubs which operate in KwaZulu.

Research on attributes and savings behaviour of ACAT club members can identify incentives for using these clubs and conditions under which such clubs can aid development efforts in rural areas. This paper identifies attributes of garden club members and members who belong solely to savings clubs, by applying discriminant analysis to data obtained from a survey

of clubs serviced by ACAT in KwaZulu during 1989. Savings behaviour of these members is studied using savings information from certain of these clubs over the period 1985 to 1988. Past studies of communal clubs in Southern Africa are reviewed to put the local study into perspective.

2. Past studies of communal clubs in Southern Africa

2.1 Club activities

Many informal savings cooperative groups exist in Africa, in fact most rural people have membership in at least one such group (Kirsch, 1978:155). These groups exist for a variety of reasons, but mainly for purposes of self-help.

Rotating savings and credit associations (Rosca's) are common in Africa (Ardener, 1964; Miracle, *et al*, 1980). These Rosca's are known by many names, in Southern Africa one of the more familiar being the 'stokvel' (Thomas, 1989: 2). Members of such clubs contribute on a regular basis to a central fund. This fund is paid out at the same rate as contributions are made. Payments are made to each person in turn so that members who receive payments early in the rotation are recipients of credit, while those who receive contributions later use the club

as a savings institution (hence the name Rosca). Bouman reports very elaborate procedures that some of these clubs have to determine order of rotation (268-270).

The main feature distinguishing savings clubs from Rosca's is that there is no borrowing or lending in any of their activities (Chimedza, 1986: 76). The long term objective of ACAT, however, is that savings clubs develop into institutions making use of a system of revolving credit (ACAT, 1982a:2).

Preston-Whyte and Nene (1984: 5) indicate that extension officer efforts in KwaZulu are mainly geared towards the development of vegetable gardens. These clubs are formed when land, usually low lying and near water, is ploughed and small, equally sized plots are allocated to individual members. Members are normally responsible for the care of their own plots, although some may use a system of rotational labour. The produce from an individual plot accrues to the user. There is an incentive to form communal gardens in KwaZulu because the KwaZulu Department of Agriculture (KDA) subsidizes certain costs such as initial ploughing and fencing. By the end of 1989 there were approximately 1800 communal gardens operating in KwaZulu (Le Roux, 1990).

Some clubs operate communal gardens and use the ACAT method of saving, whereby members individually save to purchase input 'packages'. Garden clubs not using the ACAT method of saving charge their members a higher membership fee than do savings clubs. In garden clubs the membership fee is used to purchase inputs collectively. Members receive inputs in proportion to the amount of money they have contributed (Swanepoel, 1990). The membership fee charged in savings clubs is used for administration expenses such as transporting the treasurer to town in order to bank or withdraw savings (ACAT, 1982c:2).

Literature which compares communal groups in Southern Africa is limited. Chitsike (1988) compared 5 types of agricultural co-operatives in Zimbabwe and found that savings club members scored high on indices of farm wealth, improved farming practices and least-cost management. This indicates that savings clubs can be used as an important pre-cooperative tool for improving agricultural productivity of small rural farmers.

Seibel and Marx (1986:110) compared Nigerian cooperatives based on traditional savings and credit associations with those not based on these associations. Their results indicate that the former group were more effective in mobilizing personal savings. Traditional, communal methods of mobilizing savings thus seem to have an important role in rural development.

2.2 Savings behaviour in a savings club

Savings clubs offer rural people a place to deposit money. In ACAT clubs, each member has a deposit book in which transactions are recorded. The club secretary also keeps a general register in which all individual transactions are recorded. Other books kept are the clubs bank book, order and invoice books for input packages and a minute book (Gwanya, 1988:84). This system differs from the stamp system of savings used in the Savings Development Movement in Zimbabwe. Both systems have advantages and disadvantages. The stamp system, for example, provides a visual representation of amount saved for the illiterate saver (Von Pischke and Rouse, 1983). At the same time, however, stamps have been known to fall out of books and the system also fails to teach members modern book-keeping skills (Chitsike, 1988:74).

Rose (1988) and Culverwell (1989) both indicate that members of savings clubs often deposit a large single amount with the club the week before input orders are made rather than saving weekly. Chitsike (1988:38) writes that many members of savings clubs paid cash when placing orders for inputs through

the club and did not depend entirely on their savings. Where this happens, savings records do not exist for the individual, or if they do exist, balances are often incorrect. ACAT field workers may act as auditors, inspecting club books from time to time (Gwanya, 1988). However, the ability of ACAT staff to visit clubs is severely hampered by limited resources (Schroeder and Buchan, 1987).

Chitsike (1988:78) found amounts saved by members in savings clubs in Zimbabwe to vary from low amounts during the crop growing season to high sums during the post-harvest season. Smith (1976) examined savings balances for clubs operating in the Ngezi district of Zimbabwe between 1973 and 1976. He found an increase in nominal balances before the planting season for each year of the period. Heeling and Knol (1989:37-40) report that average member savings rose during June and September and then fell in October for ACAT savings clubs in Swaziland during 1988. December savings were reported to be the lowest. Gwanya (1988:22) observed Transkeian members generally saving towards some predetermined goal, usually a seasonal investment such as an input package. Their savings were usually lowest in December, following the planting season.

The above review of past communal club studies indicates a need for more research on attributes and savings behaviour of local (South African) club members. By studying these aspects, this paper hopes to identify incentives for joining local communal clubs and whether local savings patterns resemble those of clubs elsewhere in Southern Africa.

3. Survey data

Communal clubs serviced by ACAT in KwaZulu were stratified by region for which ACAT field staff members were responsible. Eight strata which include areas from Hlanganani, Ongoye, Inkhanyezi, Emzumba, Okhahlamba, Vulamehlo, Vulindlela and Mphumulanga magisterial districts were identified (Buchan, 1989).

Clubs were sampled from each of these strata using Multistage sampling, a modified system of cluster sampling (Barnett, 1986:126). A method of multistage sampling in which primary stage units (clubs) are selected with probability proportionate to membership size (PPS) was used. This method controls variations in the size of primary sampling units (Lynch, 1981:42-46). Secondary sampling units (SSU's) were members drawn from a sub-sample of selected clubs.

In total, 43 clubs and 106 members were sampled. Sixteen of these clubs were communal garden clubs from which 42 members were sampled. Of the 64 members who belonged to savings clubs, only 38 had accessible savings information for the period 1985 to 1988.

4. Data analysis methods

4.1 Principal component analysis

Principal component analysis (PCA) is used to transform a set of correlated variables, relating to training courses attended and distance from club to infrastructure, into indices. Bartlett's sphericity test of the null hypothesis that variables in the population correlation matrix are uncorrelated is used to test that correlations between these variables in the relatively small sample are sufficient to permit use of PCA (Stevens, 1986:365).

4.2 Discriminant analysis

Discriminant analysis aims to separate groups as much as possible statistically (Klecka, 1975:435). This study uses discriminant analysis to identify attributes which distinguish mem-

bers belonging to garden clubs from those belonging solely to savings clubs. With the two defined groups, one discriminant function is obtained as:

$$D_i = d_{i1}X_{i1} + d_{i2}X_{i2} + \dots + d_{ik}X_{ik} \quad (1)$$

where,

D_i = standardized discriminant score for i^{th} case,
 $d_{i1}, d_{i2}, \dots, d_{ik}$ = standardized weighting coefficients, and
 $X_{i1}, X_{i2}, \dots, X_{ik}$ = standardized independent discriminating variables.

The standardized weights, d_i , show the relative importance of the independent variables, X_k . The X_k with relatively larger d_i account for relatively more of the discrimination between the two groups (Klecka, 1975:452-454).

Discriminant analysis assumes that independent variables are multivariate normal in each group. This assumption was violated by most of the variables used in the analysis. In practice, however, discriminant analysis is robust to departures from this assumption and if discriminant scores (D_i) are univariate normally distributed, then discriminant analysis is still statistically reliable (Truett, *et al*, 1967:521). The D_i for each club member group were therefore inspected for univariate normality.

4.3 Analysis of savings behaviour of savings club members

Only 15 savings clubs had savings and withdrawal information required for an analysis of savings behaviour for the period 1985 to 1988. Time series data on funds deposited and withdrawn were expressed in real terms by deflating with consumer price indices published by the South African Reserve Bank (South African Reserve Bank).

5. Variables used to discriminate between communal garden club and savings club members

Club members were classified using a dummy variable GAR, which equal 1 for garden club members and 0 for members of savings clubs. Variables used to discriminate between these club groups are discussed below.

5.1 ACAT training index (PCT)

The Non-Formal Education Exchange (1979:2) reports that many problems facing self-help groups result because group members lack organisational and communication skills. ACAT offers weekly self-help courses (e.g. in improving gardening and handicraft skills) for members of communal clubs which are held at one of three training centres in KwaZulu (McCrystal, 1988).

An index of member ACAT training (PCT) was constructed from the following variables by PCA: number of training modules attended by member (MEMTRAIN), average percentages obtained in the first (MEMPER1) and second (MEMPER2) sections of the modules, and distance from members club to closest training centre (DISTR). The first three variables were significantly positively correlated with each other and negatively correlated with DISTR (Table 1).

The index PCT, which accounted for 69% of correlations between the four variables and had an eigenvalue of 2,76, was extracted as:

$$PCT = 0,91267(MEMTRAIN) + 0,96386(MEMPER1) + 0,96142(MEMPER2) - 0,26271(DISTRA) \quad (2)$$

Bartlett's Sphericity test statistic was significant at the 1% level, supporting use of principal component analysis. Equation (2) shows that no single variable had a dominant coefficient, making PCT a 'general training' index. Members belonging to savings clubs are expected to make greater use of ACAT training courses (score higher on index) as these courses are actively promoted in ACAT savings clubs.

Table 1 Correlations between training variables for 106 ACAT communal club members, Kwazulu, 1989

Variable:	Memtrain	Memper1	Memper2	Distra
Memtrain	1,0000			
Memper1	0,8117***	1,0000		
Memper2	0,8039**	0,9472***	1,0000	
Distra	-0,1963	-0,1539	-0,1559	1,0000

*** denotes significance at the 1% level, ** significance at the 5% level and * significance at the 10% level.

5.2 Distance to infrastructural amenities (PCD)

Savings clubs act as catalysts which aid development by providing needed infrastructure (Von Pischke and Rouse, 1983; Devereux, *et al*, 1987). Adams (1986), Bottrall (1976) and Ong, *et al* (1976) all recognise that rural deposits would increase if financial intermediaries opened up branches in these areas.

An index of distance from club to certain infrastructural amenities (PCD) was constructed using amenities similar to those provided by a savings club - provision of a place where money can be deposited and where inputs can be obtained. Variables used were distances in kilometres to the nearest bank (DISBANK), post-office (DISPOST) and shop selling agricultural inputs (DISINP). As expected, correlations between these variables were positive because these amenities tend to be found at commercial centres (Table 2).

Table 2: Correlations between distance to infrastructure variables for 106 ACAT communal club members, KwaZulu, 1989

Variable	Dispost	Disbank	Disinp
Dispost	1,0000		
Disbank	0,9384***	1,0000	
Disinp	0,4140	0,5147**	1,0000

*** denotes significance at 1% level.

The index PCD, which accounted for 75,9% of correlation in the variables and had an eigenvalue of 2,277, was estimated as:

$$PCD = 0,93264(DISPOST) + 0,96407(DISBANK) + 0,69102(DISINP) \quad (3)$$

Bartlett's Sphericity test statistic was significant at the 1% level permitting use of principal component analysis. As no single coefficient dominates equation (3), PCD defines a 'general distance' index. Members further from these amenities (higher index scores) are more likely to belong to savings clubs which provide similar services. GAR and PCD should therefore be negatively correlated.

5.3 Possession of formal savings (SAV)

This is a dummy variable which equals 1 if the member has any formal savings and 0 if the member has no such savings. Members of garden clubs should more likely be inclined to open for-

mal savings accounts as they lack a savings facility which a savings club would provide. A positive relationship between GAR and SAV is thus expected.

5.4 Number of annual KDA extension officer visits to members club (KDA)

Bates (1979:277) reports that KDA extension personnel actively promote community gardens. Members who belong to garden clubs are thus expected to receive more KDA extension input than would members belonging to savings clubs.

5.5 Members annual on-farm income per household member (FINC)

Garden clubs tend to be market orientated, in that surplus production for sale is promoted (Le Roux, 1990). Members of these clubs could therefore have higher annual on-farm (rand) incomes per household member than savings club members. A positive relationship between GAR and FINC is anticipated.

5.6 Monetary value of 'agricultural' assets of members household (WEA)

Chitsike (1988:132) used an index of possession of farm assets to measure success of cooperative members in Zimbabwe. Savings club members tended to have higher index scores (own more farm assets). Assets used to estimate WEA include, among others, ox-drawn implements, tractors, wheel-barrows, scotch carts, hand implements and knapsack sprayers. Garden club members in Kwazulu are expected to hold more wealth in the form of farm assets than saving club members, as they tend to be more market orientated.

Correlations between the six independent variables and the club group variable GAR are given in Table 3. Coefficient signs agree with *a priori* reasoning on relationships between GAR and the discriminating variables.

Table 3: Correlation matrix of discriminant variables for 106 ACAT communal club members, KwaZulu, 1989

Variable	PCT	PCD	SAV	KDA	FINC	WEA	GAR
PCT	1,00						
PCD	0,08	1,00					
SAV	-0,16	0,09	1,00				
KDA	-0,15	0,06	0,26***	1,00			
FINC	-0,02	0,04	-0,04	0,03	1,00		
WEA	0,18***	-0,07	-0,16	0,07***	0,10***	1,00	
GAR	-0,45	-0,11	0,13	0,27	0,24	0,10	1,00

*** denotes significance at the 1% level, ** significance at the 5% level, and * significance at the 10% level.

6. Results

6.1 Discriminant analysis

Standardized coefficients estimated for the discriminant function distinguishing between garden and savings club members are shown in Table 4. Seventy-five percent of the sample (estimation cases) was used to estimate the function, and 25% (hold-out cases) to evaluate function predictive accuracy. This avoids bias introduced by using the same observations to both estimate the function and assess classification accuracy (Lachenbruch, 1975:7). To reduce probability of misclassification, prior probabilities of group membership were set proportional to group size (Hope, 1968:106). The stepwise procedure which minimizes Wilks' lambda was used to control entry of variables into the function. Only those discriminating variables

which added a statistically significant amount (at the 10% level or below) to the separation of the groups entered the function (Klecka, 1975:452-454).

Members of garden clubs have higher annual on-farm incomes per household member than those who belong solely to savings clubs. This may be due to surplus production for sale being encouraged in garden clubs. It also reflects the agricultural production orientation of members. Surveyed garden club members reported that a lack of facilities for selling produce hampered product marketing.

Members belonging to savings clubs tend to receive more ACAT training while garden club members tend to have more KDA extension personnel visits. Both club types offer members the incentive of access to technical agricultural information and training.

Table 4: Discriminant function results for variables which best distinguish between ACAT garden club and savings club members, KwaZulu, 1989

Independent variable	Member group means	
	Garden club	Savings club
FINC (R)	208,46	104,26*
PC	-18,66	29,07***
KDA	16,64	4,93**
PCD	46,88	65,45**

*** denotes significantly different group means at the 1% level, ** the 5% level, and * the 10% level.

Independent variable	Coefficients		F-value
	Unstandardized	Standardized	
FINC	0,0029	0,6279	7,15***
PCT	-0,0082	-0,5771	6,13**
KDA	0,0342	0,5701	6,20**
PCD	-0,0135	-0,3704	3,95*
(CONSTANT)	0,1877		
F		6,26***	
Wilks' lambda		0,70	
Canonical correlation		0,55	
Predictive Accuracy			
% of cases correctly classified:			
Estimation cases:			
Garden club members		70,4	
Savings club members		88,6	
All members		81,7	
Hold-out cases:			
Garden club members		66,7	
Savings club members		85,0	
All members		77,1	

*** denotes significance at the 1% level, and ** the 5% level.

Garden club members tend to be closer to infrastructural amenities than savings club members. Savings clubs are therefore used by people who are further from amenities, suggesting that they benefit from the substitute services provided by these clubs.

The F statistic (6,26) is significant at the 1% level indicating that the independent variables collectively, significantly distinguish between the two groups. The relatively high Wilks' lambda (0,70) and low canonical correlation (0,55) indicates that the discriminant function is fairly successful at separating

the two groups. The discriminant function correctly classifies the majority (77,1%) of hold-out sample members. Discriminant scores for both membership groups were approximately univariate normally distributed, implying that discriminant analysis is suitable for distinguishing between the two groups (Swanepoel, 1990).

Possession of formal savings, SAV, and monetary value of agricultural assets, WEA, only entered the function at the 60% and 39% significance levels, respectively, implying that they are poor discriminators.

6.2 Savings behaviour in savings clubs

Only 15 savings clubs had accessible savings and withdrawal information from 1985 to 1988. This is due to old registers being misplaced or thrown out, and some people paying cash for their inputs instead of using the ACAT saving facility.

Interest on funds in these clubs is not allocated to individual savers as the arithmetic involved is too complex. The main incentive to save therefore would be to obtain input packages which can be purchased through the club (one savings club actually lent out money on which it charged interest). In clubs without accessible information, registers were incorrectly kept with figures sometimes entered in the wrong columns and columns having incorrect balances. Clubs using this method of saving are dependent on registers being available. When registers are full, there is often a few weeks delay before new registers are purchased from ACAT staff members. This disrupts the recording process.

Figure 1 shows total real monthly savings and withdrawals for 15 savings clubs during 1985. Savings increase during the pre-planting season months (August to November), when input purchases are made. This implies that members of savings clubs rationally use their club facilities to get access to inputs. They may not necessarily use savings clubs to build up savings deposits.

Post-planting savings are low, indicating allocation of funds to alternative uses such as keeping money aside for Christmas celebrations and family expenditure. These savings patterns follow those identified by Smith (1976) in Zimbabwe, Heeling and Knol (1989) in Swaziland and Gwanya (1988) in the Transkei.

Real total amounts saved and withdrawn during 1986 fell by 43% from 1985 levels. Real 1987 and 1988 amounts saved and withdrawn were similar to 1986 levels. Savings patterns in these years did, however, follow the same monthly trend as shown in figure 1, indicating that members still 'target saved' to purchase input 'packages'.

Two factors are probably responsible for the fall in real amounts saved and withdrawn from 1985 through to 1987. Firstly, people may have started to pay cash for inputs instead of saving through their clubs, once access to inputs was secured. Secondly, average membership of the 15 clubs fell from approximately 23 to 15 members over the period.

Falling membership was associated with a drop in the real annual operating budget of ACAT-KwaZulu from R390 527 in 1984 to R215 246 in 1987 (ACAT, 1984-1987). This led to fewer staff visits and less assistance with delivery of inputs during this period (Trollip,1989). The fall in average membership resembles Gwanya's (1988) findings for ACAT savings clubs in the Transkei. It suggests a swing by savings club members towards other savings and input purchasing opportunities, where interest may be allocated and where input supply services are better. The drop in savings and withdrawals for input orders in the clubs was not associated with rising input package prices as real input package prices, remained constant over the study period (Agseeds, 1984-1989).

7. Conclusions

Discriminant analysis indicates that garden club members tend to have higher annual 'on-farm' income per household member. This could result from garden clubs encouraging their members to market surplus production. Communal gardens can therefore become important tools for raising household incomes in the surveyed areas.

Members belonging to savings clubs tend to have more ACAT training experience than garden club members, while garden club members tend to have more KDA extension personnel visits. Members of savings clubs seem to rely more heavily on ACAT for extension input. Both club types offer members the incentive of access to technical information and training which can raise farm productivity.

Members of savings clubs tend to be further from infrastructural amenities than garden club members. Members may join savings clubs to benefit from the substitute services they provide (place to purchase inputs and deposit money).

Savings club registers are not being used effectively. Apart from there being no interest incentive to encourage saving, registers appear too complicated for use by club secretaries. Savings club members tend to deposit more funds in clubs just before the planting season (August to November). Post planting savings are much lower, indicating allocation of funds to alternative uses (reduced incentive to save until next planting season). These patterns suggest that savings clubs are used as suppliers of inputs rather than as typical savings institutions.

Real amounts saved and withdrawn in surveyed clubs fell between 1985 and 1987 due to a decrease in average membership. This was associated with a fall in real annual ACAT-KwaZulu operating budgets. The budget cuts had a detrimental effect on ACAT services (staff visits and assistance with input deliveries), causing members to seek alternative sources for obtaining inputs and depositing money.

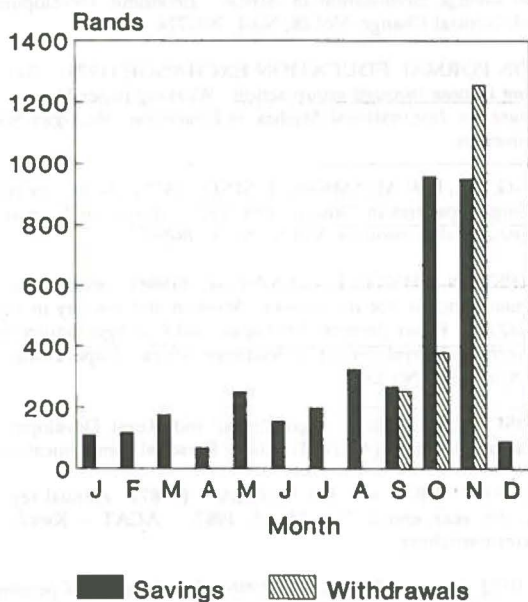


Figure 1: Total real monthly savings and withdrawals for 15 ACAT savings clubs, KwaZulu, 1985 (June 1985 = 100)

Results suggest that policy makers can use garden and savings clubs to improve access of communal farmers in KwaZulu to inputs and technical information. Organizers of savings club movements should perhaps address the problem of ineffective 'western-styled' savings methods and concentrate on improving member access to inputs. Budget cuts restrict services and reduce member incentive to use clubs.

References

- ACAT. (1982a). The origin, nature and purpose of ACAT. Promotional pamphlet by ACAT. Pietermaritzburg.
- ACAT. (1982b). Food, faith and work for Africa. Promotional pamphlet by ACAT. Pietermaritzburg.
- ACAT. (1982c). Constitution of a savings club. ACAT, Pietermaritzburg.
- ACAT. (1984-1987). Audited financial statements of ACAT-KwaZulu.
- ACAT. (1989). ACAT 1979-1989, The first 10 years - A success story in self-help amongst rural communities in Southern Africa. Promotional booklet by ACAT. Pietermaritzburg.
- ADAMS, DW. (1986). Rural financial markets. The case against cheap credit. *Ceres*, Vol 19, No 1:15-18.
- AGSEEDS. (1984-1989). Package programme price lists, Greytown.
- ARDENER, S. (1964). The comparative study of rotating credit associations. The Royal Anthropological Institute of Great Britain and Ireland, Vol 94, No 2:201-229.
- BATES, RF. (1979). Aspects of Zulu sugarcane production in Natal and KwaZulu with special reference to agriculture in Reserve 9, Ongoye District: A socio-economic survey. Unpublished M.Sc. Agric. thesis, University of Natal.
- BARNETT, V. (1986). Elements of Sampling Theory. London: Hodder and Stoughton.
- BOTTRALL, AF. (1976). Financing small farmers: A range of strategies. In HUNTER, G, AH BUNTING and AF BOTTRALL (Eds). Policy and Practice in Rural Development. London, Croom Helm:355-370.
- BOUMAN, FJA. (1977). Indigenous savings and credit societies in the third world: A message. *Savings and Development*, Vol 1: 181-209.
- BRATTON, M. (1986). Farmer organizations and food production in Zimbabwe. *World Development*, Vol 14, No 3:367-384.
- BUCHAN, AG. (1989). Director of ACAT - KwaZulu, Pietermaritzburg. Personal communication.
- CHIMEDZA, R. (1986). Saving together, spending together: Zimbabwe's rural savings clubs. The Courier, special section: Dossier on Rural Structures, Vol 99:75-77.
- CHITSIKE, LT. (1988). Agricultural Co-operative Development in Zimbabwe. Harare: Zimbabwe Foundation For Education with Production.
- CULVERWELL, R. (1989). Former field trainer with ACAT - Ciskei. Personal communication.
- DEVEREUX, S, H PARES and J BEST. (1987). A Manual of Credit and Savings for the Poor of Developing Countries. Oxford, OXFAM.
- GWANYA, TT. (1988). Factors that Motivate ACAT Savings Club Members in Umtata, Transkei. Unpublished study, University of Transkei.
- HEELING, M and H KNOL. (1989). Evaluation of ACAT-Swaziland. The effectiveness and relevance of the training centre at Mbulunzi. Unpublished report submitted to ACAT-Swaziland.
- HOPE, K. (1968). Methods of Multivariate Analysis. University of London, London Press.
- KIRSCH, OC. (1978). Credit unions to support rural development projects in Africa. *Journal of Rural Cooperation*, Vol 6, No 2:143-156.
- KLECKA, WR. (1975). Statistical Package for the Social Sciences SPSS. Second edition. New York, McGraw Hill Book Company.
- LACHENBRUCH, PA. (1975). Discriminant Analysis. New York, Hafner Press.
- LE ROUX, E. (1990). KwaZulu Department of Agriculture, Ulundi. Personal communication.
- LYNE, MC. (1981). The design, conduct and analysis of a sample survey for the collection of agricultural statistics in KwaZulu. Unpublished M.Sc. Agric. thesis, University of Natal, Pietermaritzburg.
- McCRYSTAL, LP. (1988). The chairman's report. ACAT Annual Review. Pietermaritzburg.
- MEIKLE, G. (1988). Director of ACAT - Ciskei, Stutterheim. Personal communication.
- MIRACLE, MP, DS MIRACLE and L COHEN. (1980). Informal savings mobilisation in Africa. *Economic Development and Cultural Change*, Vol 28, No 4: 701-724.
- NON FORMAL EDUCATION EXCHANGE (1979). Generating income through group action. Working paper No. 16, Institute for International Studies in Education, Michigan State University.
- ONG, ML, DW ADAMS and IJ SING. (1976). Voluntary rural savings capacities in Taiwan, 1960-1970. *American Journal of Agricultural Economics*, Vol 58, No 3:578-582.
- PRESTON-WHYTE, E and S NENE. (1984). Where the informal sector is not the answer: Women and poverty in rural KwaZulu. Paper presented at the second Carnegie inquiry into poverty and development in Southern Africa. Cape Town 13-19 April 1984. No 235.
- ROSE, CJT. (1988). Agricultural and Rural Development Research Institute (ARDRI), Alice. Personal communication.
- SCHROEDER, J and AG BUCHAN. (1987). Annual report for the year ended 31st March 1987. ACAT - KwaZulu, Pietermaritzburg.
- SEIBEL, HD and M MARX. (1986). Mobilization of personal savings through cooperative societies or indigenous savings and credit associations: Case studies from Nigeria. In: Savings for Development. Report of the third international symposium on the mobilisation of personal savings in developing countries, Yaounde, Cameroon, 10-14 December 1984, New York, United Nations:107-112.

- SMITH, GA. (1974). A strategy for rural development: Savings clubs and package programmes. Unpublished study, University of Zimbabwe. Institute of Adult Education.
- SMITH, GA. (1976). The savings development movement evaluation Report, 1976. Institute of Adult Education, University of Zimbabwe.
- SOUTH AFRICAN RESERVE BANK. (1984-1988). Quarterly Bulletin of the South African Reserve Bank, Pretoria.
- STEVENS, J. (1986). Applied Multivariate Statistics for the Social Sciences. London, Lawrence Erlbaum.
- SWANEPOEL, V. (1990). An economic analysis of savings and garden clubs serviced by ACAT in KwaZulu. Unpublished M.Sc. Agric. thesis, Department of Agricultural Economics, University of Natal, Pietermaritzburg.
- THOMAS, E. (1989). Rotating credit associations in Cape-Town. Paper presented at the annual conference of the Association for Anthropologists in Southern Africa. 13-16 September, 1989.
- TROLLIP, H. (1989). Training manager, ACAT-KwaZulu. Personal communication
- TRUETT, J, J CORNFIELD and LW KANNEL. (1967). A multivariate analysis of the risk of coronary heart disease in Framingham. *Journal of Chronic Diseases*, Vol 20: 511-524.
- Von PISCHKE, JD and J ROUSE. (1983). Selected successful experiences in agricultural credit and rural finance in Africa. *Savings and Development*, Vol 7, No 1: 21-24.