_Published by European Centre for Research Training and Development UK (www.eajournals.org) 8 ISSN

2 authors, including:

Anthony Gikuri
Moshi Co-operative University (MoCU)
2 PUBLICATIONS **0** CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Factors influencing students choice for cooperative majors View project

STATUS OF SACCOS GROWTH BEFORE AND DURING JK BILLION FUND IN TANZANIA MAINLAND

Anthony Gikuri and Marco Bura Sanka

Moshi Co-operative University (MoCU)

ABSTRACT: *This study investigated the growth status of SACCOS before and during the implementation of the JK Billions in Tanzania mainland. Linear regression models using enter method predicted varying relationships. Before the fund came into effect i.e. 2005, the study results showed that saving was well predicted by women than did their counterpart men. However, as the fund got underway, neither women nor men were significant predictors of savings. In both models i.e. before and after the implementation of the fund, savings amount appeared to predict well the level of loans issued to members. This study concluded that men and women have different saving preferences as members of savings and credit cooperative societies. Moreover, loans are also determined by the levels of savings. The government must limit its efforts to technical development and facility development of member-based financial institutions instead of pumping credit.*

KEYWORDS: SACCOS, JK BILLION, Fund, Government, Regressions

INTRODUCTION

Over the last 50 years governments and donor agencies have been the major source of cooperative finance. Essentially the nature of their funding has mostly been in the form of subsidized credit and of course limited startup capital for productive activities (Adeyeye, 1970). Donor agencies including international non-governmental organizations have also been active players in the cooperative finance in form of credit (Ledgerwood, 1998). However, much of credit programs were small, and in most cases, they were defaulted leading to increased indebtedness and eventual exacerbation of household poverty. In the recent years, however, the thinking has been shifting from credit first approach to a saving-led solution, the basis for the birth of saving and credit cooperative societies (SACCOS) in many developing countries including Tanzania.

SACCOS are not new, the fact that cooperation has been in place for the existence of mankind. However, what is new is the formalization of financial intermediation and the shift from credit subsidizing to commercial microfinance system (Robinson, 2001). SACCOS are kind of co-operative organizations that aim at improving the social and economic conditions of its members using financial resources pooled together. Saving and credit cooperative societies range from those serving the rural small holder farmers to those established by employees at workplaces in urban settings (IFAD, 2011). In fact, the different combinations of membership exist in SACCOS: individual persons, group members, and institutions (Piprek, 2007). Members make all attempts to build their own capital by increasing their regular savings, deposits, and shares. Savings falls in two main forms; compulsory saving termed as shares and voluntary savings. Compulsory savings or shares refer to a certain level of savings agreed by members to serve as a ownership guarantee by each member, and a precondition for microcredit lending (Bruno & Khachatryan, 2011; Cheruiyot *et al.,* 2012). On the other hand, saving is voluntary given the same member has purchased the agreed

minimum value of shares and is willing to set up a given amount of savings to help him or her meet future financial obligations including loans (Cheruiyot *et al.,* 2012).

Cooperative financing has continued to be a topical agenda in Africa and elsewhere in the developing world due to persistent weak economic growth and high levels of poverty. As pointed earlier, there have been various financing interventions by the government and donor agencies. The latest one in Tanzania is the presidential economic empowerment that was named after the then President of Tanzania, Jakaya Mrisho Kikwete, popularly known as The JK Billion. The JK Billion fund was a 21 billion shilling program (nearly USD 10 million, 1$=2200Tsh) designed to finance savings and credit cooperative members and other micro entrepreneurs in the country (Triodosfacet, 2007; NEEC, 2017). The fund was channeled through commercial banks which were in turn directed to issue loans three times the amount received from the government, and with an annual interest rate not exceeding 10% (Bibby, 2006). Beginning November 2006, the government begun to disburse the first package of loans worth Tsh. 5.25 billion to CRDB bank while the similar loan package had been issued by December 2007 (URT, 2010). The household economic survey of 2012 revealed that nearly Tsh. 8.5 billion had been disbursed to savings and credit cooperatives alone in the eleven regions of Lindi, Mtwara, Rukwa, Ruvuma, Singida, Coast, Manyara, Tanga, Mbeya, Kagera and Dodoma (URT, 2013).

The proclamation and eventual implementation of this Fund in the late 2005 and 2006 respectively attracted the general public who had no access to affordable credit to form around existing or new SACCOs for the sake of obtaining cheap loans (Triodosfacet, 2007). The number of savings and credit cooperative societies had doubled from 1440 in 2005 to 2833 in 2007. In the same period, membership had increased from 152690 in 2005 to 370029 in 2007, more than 142% increase in a span of two years (URT, 2010). On one hand, the growth of membership by nearly 150% would be expected to prompt the increase in similar levels of savings as it is the rule of thumb in member-based organizations, but on the hand, savings increased by only 50% (URT, 2005). Furthermore, loan default cases especially among those benefiting from the JK Loan, were high among the SACCOS members benefiting from JK Billion fund. For instance, Kajoki, (2010) reports that there were twelve savings and credit cooperatives from Misungwi and Kwimba districts which were yet to repay JK loans amounting to TZS 200 million. Whether or not the growth of SACCOS improved following the advent of this fund, is a question that is yet to be answered. This study therefore attempted to assess the status of growth and development of savings and credit societies in Tanzania mainland before and during the implementation of JK Billion fund, 2005 and 2007. First, the study aimed at predicting the effect of the number of membership (male and female) on the value of shares (compulsory savings). Secondly, the study focused on estimating the effect of the number of membership (male and female) on the value of voluntary savings before and during the implementation of JK Billion Fund. Third study aimed at determining the effects of savings on the amount of loans taken before and during the implementation of JK Billion Fund.

BRIEF LITERATURE REVIEW

The Savings and Credit Cooperative Societies (SACCOS) refer to the financial co-operatives that aim at addressing the financial needs of all members men/women, old/young, rich/poor in particular, by encouraging savings and granting loans to the members. Like other forms of

co-operatives, SACCOS belong to the members who own the societies jointly and manage them democratically (Anania & Gikuri, 2015). The SACCOS operate under the principle of "save first then get the loan". Saving, therefore, is defined as a practice by members, individuals or agencies to lay aside a given amount of the earnings for various reasons including planning for future investment; purchase of household goods and spending life cycle events such as wedding and funerals (Rogg, 2000). When this practice is performed over and over it becomes behavior. This kind of behaviour can be measured in form of regular savings into an accepted modality by a given group of people. There are several studies from all over on saving characteristics, motivation among other things, the empirical literature on the effects of external financing particularly governments and/ or donor funding on saving behaviour is limited and obsolete if any.

Aburge (1994) reports of the credit default and the damaged financial markets as a result of pumping in of millions of dollars in the microfinance market as a remedy to inaccessibility of credit. The author points out that a funding to more than 10 billion Ugandan shillings in the 1990s by major international donor agencies ended up in waste and turned the already indebted borrowers into miserable conditions. Their argument is based on the fact that members or a target group benefiting from cheap loans or grants for that matter, they were more likely to be irresponsible in the management of the fund, or even wilfully decided to default loans (Adeyeye, 1970; Huppi & Feder, 1990).

Rogg, (2000) conducted a study which aimed at highlighting the changes in saving behavior resulting from improved access to credit by informal financial system beneficiaries. In his study, he involved participants from three Latin American countries namely Equador, Paraguay and El Salvador. Findings revealed that savings increased with the improved access to credit. However, his findings are also questionable since the decision on whether or not to accept null hypotheses was established at, $p<.2$, a level higher than the standard acceptable, $p<.05$. However, several studies (Devereux & Best, 1990; Adams & Pischke, 1992) present a negative relationship between credit and savings. For instance Grace (2008) points out the cheap credit drains savings and commitment by the beneficiaries filled with false expectations that credit would replacement their contributions. She argues further that such an injection of capital may be harmful to the sustainability of the financial co-operatives such as SACCOS.

Allen (2002) reported damaged saving behavior with evidence from Kupfuma Ishungu project in Zimbabwe. There was a sharp decline in the number of groups from 270 to less than 90 just in six months following termination of the externally induced fund to the project. The reasons why this massive dropout was explained in relation to unwise recommendations given by donor based project advisor that groups should be given a cheap loan as a startup capital. This created false expectations among group members thus causing upheavals all over. As a result, this kind of credit first approach damaged severely saving behavior among the members. Later on, as the members started to realize the potential for their personal savings, the number of groups rose to nearly 800 with 5000 members. Anania and Gikuri, (2015) view SACCOS originated from donor-funded projects or other external creditors as a disaster in cooperative development. They feel the donors may choose to provide a large amount of money to promote SACCOS but unexpectedly, members become more active partners of such projects but become not "patrons" and owners of the established SACCOS. As a result, members' interest and common goals may be jeopardized hence leading to failure of a given cooperative society.

METHODS AND PROCEDURES

Dataset

There were two main sources of secondary data used in this study. First, data related to the trend of SACCOS growth (membership, shares, savings, deposits, loan, and outstanding loans) was derived from the ministry of finance and economic empowerment (2015). These data represented 21 regions from Tanzania mainland. The regions are Arusha, Dsm, Dodoma, Iringa, Kagera, Kigoma, Kilimanjaro, Lindi, Manyara, Mara, Mbeya, Morogoro, Mtwara, Mwanza, Pwani, Rukwa, Ruvuma, Shinyanga, Singida, Tabora, and Tanga. The data were for the period between 2005 and 2009. Second, data related to JK Billion fund were solicited from government published documents and media reports. It was not easy in this study to find sufficient data of SACCOS benefiting from the JK Billion loan countrywide so as to estimate the impact of the fund. However, since the JK Fund was a broad government program that targeted all 21 regions in the country, the authors assumed before and after study design as a basis for attributing its effects on SACCOS development.

Regression Analyses

To determine the reactions by men and women before and during the implementation of the JK Billion fund, a series of linear regression models using enter methods were performed on key input variables, number of members (men and women) to predict the amount of savings at two points in times, 2005 and 2007. Other than estimating the impact of membership on savings, the authors also performed and compared regression models predicting the effects of savings on the value of loans at two interval periods i.e. 2005 and 2007. The year 2005 was set as the period when the JK fund was not yet established while the year 2007 stands for a period after the JK Billion fund had been introduced. In this study, shares and savings were identified as compulsory and voluntary forms of savings respectively that depict the level of growth and development of any member based credit and savings associations. Shares were regressed against a number of female and male members while savings was regressed against both a number of members (male and female) and amount of loans taken. The inclusion of the variable loan amount was based on the suggestion by Raftopoulous & Lacoste (2001) that it if we want to measure savings based on loans; this has to be done at two separate times. Finally all regressions were done before and during the implementation of the JK Fund as a basis to establish comparative analyses.

Several statistical tests were performed on the raw data to make sure these data met the primary assumptions underlying linear regressions. To start with, data from all 21 regions were explored and tested for normality using Shapiro-Wilk test. At first, the raw data appeared to violate normal distribution pattern, therefore log transformation was considered the best solution as far as Field (2009) is concerned. After transformation data were re-checked for the same, and both the Kolmogorov-Smirnov and Shapiro-Wilk tests were not significant, implying that finally data were normally distributed (see table 4). In addition, table 5 shows no signs of the presence of multicollinearity problems, Variance Inflation Factor (VIF) being less than 10, as recommended by Mayers (1990). To be sure that the data did not violate the heteroscedasticity rule, Koenker tests were performed, and in all analyses, they revealed that regressions models' ability to predict outcome variables were consistent across all values of the dependent variables (see table 5). According to Breusch and Pagan, (1979), the assumption for heteroscedasticity may be met provided; the p-value is greater than .05. The general format for the regression model is as shown below:

$$Log\ y_1 = \beta_0 + \beta_1 logx_1 + \beta_2 logx_2 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots.. \ (1)$$

$$Log\ y_2 = \beta_0 + \beta_1 logx_1 + \beta_2 logx_2 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots. \ (2)$$

$$Log\ y_3 = \beta_0 + \beta_1 logx_{11} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (3)$$

where $y_1 = Share, y_2 = Amount\ of\ saving, y_3 = Amount\ of\ loans,$

$x_1 = Number\ of\ male\ members, x_2 = Number\ of\ female\ members, \beta_{is}$

$= Parameters\ to\ be\ estimated, x_{11} = Amount\ of\ saving, \varepsilon$

$= error\ term\ which\ is\ assumed\ be\ identicaly\ and\ normally\ distributed$

For example consider the effects of log-transformed variable (number of members) on an outcome log-transformed variable, say "share". The two values of log-transformed number of members, X_1 and X_2 in equation (1) yields: (*the same can be applied for equation 2&3*):

$$Log\ (y)(x_2) - log\ (y)(x_1) = \beta_2(log\ (x_2) - log\ (x_1))\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (5)$$

The equation can further be simplified as:

$$Log\ (y)(x_2)/y(x_1) = \beta_2(log(x_2/x_1))$$

Yielding

$$yx_2/yx_1 = (x_2/x_1)^{\beta_2} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (6)$$

This gives an impression that as long as the ratio of the two values of membership, for example, X_2/X_1 remains the same, the resultant outcome variable,(y= shares), remains unchanged too. Consider a 10% increase in membership, this results in an increase/decrease in the ratio of the two means by 1.1^{B_2}.

Hypotheses

$H_0 = 0$: There is no relationship between mandatory savings (shares) and membership before and during the implementation of the JK Fund.

$H_0 = 0$: There is no relationship between saving (voluntary) and membership in SACCOS before and after the establishment of the JK Fund.

$H_0 = 0$: There is no relationship between the amount of loans taken and the value of savings made before and during the JK Fund.

RESULTS AND DISCUSSION

RESULTS

Effects of Membership on Compulsory Savings (SHARES)

The logs of total purchased shares, which is regarded compulsory in member-based microfinance institutions, was regressed against the logs of the number of women and men who were members of SACCOs in 2005 and 2007 the introduction of JK Fund. The model for 2005 shares purchased by men and women is not significant. However, as the fund gets underway, there was a decreased pace of purchase of shares by both male and female members. On one hand, the 2007 model is more improved compared to 2005 and predict that a 10% increase in the number of female members led to at least 9.3% increase in the value of shares bought (ceteris paribus). On the other, the effect of the number of male members in SACCOS share purchase is not statistically significant.

Table 1: Multiple regressions on the amount of shares purchased in 2005 and 2007 by men and women members

Model	Outcome variable	Predictors (Coefficients)		Adjusted R^2	ANOVA	Status of JK Billion fund
		Number of Male members	Number of Female members			
2005	Amount of shares	0.207	0.770	0.512	F (2,18)=11.482, p=.001	Before the implementation of the fund
2007	Amount of shares	-0.037	.929*	0.460	F(2,18)=9.532, p=.002	Phase II loan package issued

*=significant at p<.05, **=significant at p<.001

Effects of Membership on ContributionS (SAVINGS)

The results of multiple regressions performed on the log of savings before (2005) and during (2007) the implementation of the JK Fund provided varying findings (table 2).

Table 2: Multiple regression models of savings made in 2005 and 2007 by men and women members

Model	Outcome variable	Predictors		Adjusted R^2	ANOVA	Status of JK Billion fund
		Male members	Female members			
2005	Savings	-0.199	1.132*	0.624	F (2,18) =17.59, p=.000	Before the implementation of the fund
2007	Amount of savings	-0.236	0.79	0.554	F(2,18)=13.412, p=.000	Phase II loan package issued

*=significant at p<.05, **=significant at p<.001

In 2005, the model predicts a positive and significant effect of women making significant savings. Holding the number of men constant, a 10% increase in the number of female membership was associated with 11.4% increase in the amount of savings. On the contrary, the number of male members' influence on savings was merely by chance. Following the introduction of the fund, the models predict no effect on saving levels by both men and women.

Effects of savings on loan before and during the Implementation of JK Fund

Table 3 reports the regression results for saving by the loan. Exploring unstandardized coefficients reveals that savings in both models are important in predicting the value of loans. The coefficients are not only positive but also significant before and after the fund came into effect. This is to say, a ten percent increase in savings for example predicts an increase in loans by 9.3% and 8.8% in 2005 and 2007 respectively. Nevertheless, the 2005 model shows a better prediction of the loan than does 2007.

Table 3: Multiple regression models to predict effects of savings on loans issued in 2005 and 2007

Model	Outcome variable	Predicator	Adjusted R^2	ANOVA	Status of JK Billion fund
		Savings			
2005	Loans	.933**	0.852	F (1,19) =115.991, p=.000	Before the implementation of the fund
2007	Loans	.890**	0.748	F(1,16)=51.386, p=.000	Phase II loan package issued

*=significant at p<.05, **=significant at p<.001

DISCUSSION

Findings in this study reveal interesting observations that can be linked with the introduction and eventual implementation of JK Billion fund as far as SACCOS growth and development are concerned. First, the relationship between shares (compulsory savings) and the growth of membership, for both men and women is non-significant. This result confirms the hypotheses that, members, irrespective of their gender were committed to mobilizing shares as per their by-laws before the government led financial intervention came into effect. Furthermore this is attributed to the reasons that shares represent members' state of ownership and justification for their continued existence in the SACCOS. Unfortunately as the fund implementation begins, slowly, men draw back and their commitment towards compulsory contributions decline while, as expected, women remain committed to compulsory savings. This is a confirmation of literature that portrays women as major players of informal and semi-formal financial sector in the developing economies (Ledgerwood, 1998). However, as the JK funds implementation gets underway, both men and women relax a bit the mobilization of voluntary savings which provide them with access to loans because to some extent they believe the fund would replace savings with contributions, a similar observation made by

Adeyeye (1970). This government-led fund is further treated by many people in SACCOs as a gift so which require initial savings as a lending prerequisite.

The hypothesis that loans were not linked with savings was rejected due to a lack of statistical evidence. One interesting observation to note from the study results is that, before the fund came into effect, savings was a better predictor of loans while following the implementation of the fund, the effect of savings on loans slightly declined. Before the externally induced fund was introduced, landing procedures were observed, but as the SACCOS secured additional capital, the requirement for meeting certain savings levels is relaxed; a practice that endangers the growth and sustainability of SACCOS.

Research and Policy Implications

Both the advantages and disadvantages of external funding have been observed in this study and literatures visited. There is a point where external funds play a positive role in influencing savings but with loose conditions, the practice may pose risk. Based on the findings of this study, the following may be recommended in relation to external financing to SACCOS.

i. There is a need for the government/donors to put clearly the loan conditions on the funds provided to microfinance institutions such as SACCOS. The institutions and their members should understand what are terms of the loan and be informed of repayment procedure since it is not a gift as it was misinterpreted.

ii. The members of SACCOS need to be highly motivated to make savings if external funding is acquired by their institution. This will enable the SACCOS to channel all the funds from the external capital and be able to; repay the loan and make profits to cover its operational costs. The members will also benefit from accessing a large amount of loans that may meet their financial needs.

iii. Once, the external funds from the government are issued, there is a need to put a strong financial follow-up and reporting system to enable tracking of issued funds, effective recovery of issued funds. This need to be done in collaboration with SACCOS' leadership and other stakeholders like banks and financial institutions.

iv. Regardless of presence or absence of external funding to SACCOS, there is a need to promote saving behavior to both male and female members. This influence creating external capital and lending capacity of the SACCOS hence increase in organizational profitability.

CONCLUSION

This study investigated the status of SACCOS growth and development measured in form of increased members contributions both mandatory and voluntary before and during the implementation of the JK Billion fund. The study findings suggest that before the fund's introduction members, both male and female were active contributors of mandatory savings while during the fund implementation the level of obligatory contributions is not equally distributed between men and women. Considering voluntary savings, women more than men, are actively involved in savings mobilization. Finally, savings and loan are closed linked

before and during the lifetime of the government loan, however, the effect of savings being strong on loans before the introduction of the fund.

REFERENCES

Abugre, C. (1994). When credit is not due: A critical evaluation of donor NGO experiences with credit. *FJA Bouman/O. Hospes: Financial Landscapes Reconstructed-The Fine Art of Mapping Development, Boulder, San Francisco, Oxford*, 157-175.

Adams, D. W., & Von Pischke, J. D. (1992). Microenterprise credit programs: Deja vu. *World development*, *20*(10), 1463-1470.

Adeyeye, O. (1970). Cooperative Development through Institutional Adaptation: The Nigerian Experience. *Cooperative Information*, *2*(70), 13-18.

Allen, H. (2002). CARE International's Village Savings & Loan Programmes in Africa. *Tanzania, CARE*.

Anania, P. and Gikuri, A. (2015). SACCOS and Members' Expectations: Factors Affecting SACCOS Capacity to Meet Members' Expectations. *A Paper Presented to the Co-operative Research Workshop Held On 24th March 2015 at J.K. Nyerere Hall, Moshi Co-operative University (MoCU).* Retrieved from https://www.researchgate.net/publication/308948542, 27th May 2017.

Bibby, A. (2006). Tanzania Co-operatives look to the future. www.andrewbibby.com accessed on March 9, 2015.

Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient variation. *Econometrica: Journal of the Econometric Society*, 1287-1294.

Bruno, O., & Khachatryan, K. (2011, May). Compulsory versus Voluntary Savings as Incentive Mechanism in Microlending Contracts. In *28e Journées Internationales d'Economie Monétaire*.

Cheruiyot, T. K., Kimeli, C. M., & Ogendo, S. M. (2012). Effect of Savings and Credit Co-operative Societies Strategies on Member's Savings Mobilization in Nairobi, Kenya. *International Journal of Business and Commerce*, *1*(11), 40-63.

Devereux, S., Pares, H., & Best, J. (1990). *Credit & Savings for development*. Oxfam GB.

Grace, D. (2008). Financial Cooperatives in India: Where are the members? *CAB Calling, January–March*.

Huppi, M., & Feder, G. (1990). The role of groups and credit cooperatives in rural lending. *The World Bank Research Observer*, *5*(2), 187-204.

IFAD, (2011). United Republic of Tanzania Rural Financial Services Program Loan No. 550-TZ and Agricultural Marketing Systems Development Program Loan No. 575 Interim Evaluation. Retrieved from http://www.ifad.org/evaluation/public_html/eksyst/doc/prj/region/pf/tanzania/rfsp.pdf on March 21, 2015.

Kajoki, J. (2010). SACCOS fail to repay 'JK billions' loans: In the Citizen Daily. Monday, 5 July 2010.

Ledgerwood, J. (1998). *Microfinance Handbook: An institutional and financial perspective*. World Bank Publications.

Ministry of finance and economic empowerment, (2015). Status of SACCOS 2005-2009. Dar es Salaam, Tanzania.

Myers, R. H. (1990). *Classical and modern regression with applications* (No. 04; QA278. 2, M8 1990.).

National Economic Empowerment Council (NEEC), (2017). *J.K Fund*. Web page accessed from http://www.uwezeshaji.go.tz/jkfund, on 27th May 2017.

Piprek, G. (2007). Linking with savings credit cooperatives (SACCOs) to expand financial access in rural areas: A case study of CRDB Bank in Tanzania.

Raftopoulos, B., & Lacoste, J. P. (2001, May). Savings mobilization to micro-finance: a historical perspective on the Zimbabwe savings development movement. In *International Conference on Livelihood, Savings and Debts in a Changing World: Developing Sociological and Anthropological Perspectives, Wageningen* (pp. 14-16).

Robinson, M.S. (2001). The Microfinance Revolution: Sustainable Finance for the poor. The World Bank. Washington DC.

Rogg, C. S. (2000). The Impact of Access to Credit on the Saving Behavior of Microentrepreneurs.

Triodes Facet (2007). Tanzania Country Scan Microfinance. http://www.microfinancegateway.org/sites/default/files/mfg-en-paper-tanzania-country-scan-microfinance-2009.pdf site visited on March 15, 2015.

URT, (2010). The Economic Survey 2009. Ministry of Finance, Dar es Salaam.

APPENDICES

Table 4: Tests of Normality and multicolineality

Variable	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
logshares5	0.132	18	.200*	0.968	18	0.765
logsav5	0.109	18	.200*	0.958	18	0.559
logmal5	0.107	18	.200*	0.976	18	0.906
logfem5	0.098	18	.200*	0.973	18	0.852
logloan5	0.134	18	.200*	0.967	18	0.731
logshare7	0.112	18	.200*	0.974	18	0.863
logsav7	0.131	18	.200*	0.951	18	0.435
logmal7	0.154	18	.200*	0.931	18	0.205
logfem7	0.093	18	.200*	0.986	18	0.991
loglon7	0.096	18	.200*	0.97	18	0.796

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 5: Tests for heteroscedasticity (Koenker) and multicollinearity (VIF)

Dependent variable	Independent variable(s)	Koenker Test		VIF
		LM	SIG.	
Log shares for 2005	Log number of male members in 2005	.1.067	0.587	4.265
	Log number of female members in 2005			4.265
Log shares for 2007	Log number of male members in 2007	0.138	0.934	4.572
	Log number of female members in 2007			4.572
Log loan 2005	Log savings for 2005	.000	0.998	1.000
Log loan 2007	Log savings for 2007	3.129	0.077	1.000