THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Effect of Ability and Governance on Wellbeing of Savings and Credit Co-operative Societies (SACCOS): Analysis in Tanzania

Dr. Kitala Christian Tobias Malamsha
Senior Lecturer, Faculty of Co operative and Community Development,
Department of Economics and Statistics, Moshi Co-operative University (MoCU), Tanzania

Abstract:
It remained inconclusive by various studies about factors that lead to ability of SACCOS, determinants of governance in SACCOS; and effect of ability and governance on wellbeing of SACCOS. That was a knowledge gap focused by this paper on "Effect of Ability and Governance on Wellbeing of Savings and Credit Co-operative Societies (SACCOS) in Tanzania". The specific objectives are to determine key factors that lead to ability of SACCOS; establish determinants of governance in SACCOS; analyse effect of governance and ability of SACCOS in providing services for high wellbeing in SACCOS. Primary data were collected using a questionnaire administered to one hundred and twenty SACCOS. Principle Component Analysis enabled the author to determine the key factors which lead to ability of SACCOS and establishing determinants of governance. Probit regression analysis enabled the author to establish factors that lead to high wellbeing in SACCOS.
The findings revealed four key factors that lead to ability of SACCOS namely growth in value of shares, savings, loans and loan repayment rate. Four determinants of governance in SACCOS were established to be participatory decision making, the committees held meetings as per schedules, actual number of board meetings befive, seven or nine and the audited reports made open to members. Ability and governance were revealed led to high wellbeing in SACCOS. It is concluded that high wellbeing of SACCOS depend on their ability and governance in provision of services and they should be given priority in SACCOS' activities.

Keywords: Savings and Credit Co operative Society (SACCOS), Ability of SACCOS, Governance in SACCOS, Wellbeing in SACCOS.

1. Introduction

Savings and Credit Cooperative Society or in its acronym "SACCOS" means a registered society whose principal objects are to encourage thrift among its members and to create a source of credit for its members (URT, 2014; Kitala and Kayunze, 2014). SACCOS is a financial co-operative society and is a microfinance institution (URT, 2000; URT, 2002; URT, 2003). Micro finance refers to small-scale financial services provided by microfinance institutions (MFIs) to people. These can be people who work in agriculture, fishing and herding, who operate small or micro enterprises, who provide services, who work for wages or commissions, and other individuals and groups at the local levels both in rural and urban areas (Robinson, 1996; Graume, 1997).

To improve the wellbeing, the poor must be reached by SACCOS. The poor must be accessed to supply them with services easily, cheaply and constantly. Well-being is a positive outcome that is meaningful for people and for many sectors of society. Good living conditions (example., housing, employment, clothing, education, health) are fundamental to well-being. Well-being is associated with numerous health-, job-, family-, and economically-related benefits (CDC, 2016). Well-being, wellbeing, welfare or wellness is a general term for the condition of an individual or group, for example their social, economic, psychological, spiritual or medical state; a high level of well-being means in some sense the individual or group's condition is positive, while low well-being is associated with negative happenings (Oxford Dictionary, 2016). In this paper high level of well-being means in some sense the members or SACCOS is positive, while low well-being is associated with negative happenings to members or SACCOS after members use services from SACCOS.

Financial and economic values of SACCOS influence greatly increased growth and formation of SACCOS in Tanzania since independence. For instance, after independence in 1961 there were only 3 SACCOS. About 40 years later, by May 2005, the number of SACCOS had increased to 1875, with 254 651 members of SACCOS (SCCULT, 2005; SCCULT, 2006). About 10 years later, December 2015, the number of SACCOS increased to 4093, with 921 689 members of SACCOS (TCDC, 2016). However, the increase in number of SACCOS may not posses' adequate ability to provide intended services under good governance for high wellbeing in SACCOS. Whatever the case, the problem is that the factors which lead to ability of SACCOS to provide services and factors determining governance for high wellbeing in SACCOS in Tanzania were not well established in previous academic works.

Despite the fact that SACCOS members strive to attain adequate ability and good governance in providing SACCOS services in terms of financial access and wellbeing, still some SACCOS are not able to provide adequate services under good governance. The number

of members, volume of savings, shares, deposits and loan portfolio of SACCOS in Tanzania remained small despite the increase in number of SACCOS (Financial Sector Deepening Trust, 2010). Some SACCOS have been faced with poorly performed members, boards, management and employed staff hence low wellbeing in SACCOS.

The main objective of the paper was to assess the effect of ability and governance in wellbeing of SACCOS in Tanzania. The specific objectives are to determine key factors that lead to ability of SACCOS; establish factors influencing governance in SACCOS; and analyse effect of governance and ability of SACCOS in providing services for high wellbeing in SACCOS.

2. Theoretical Framework and Literature Review

Theory of academic achievement has been adopted as a theoretical framework of this paper. Maruyama and McGarney (1980) advocate theory of academic achievement. The theory states that ability causes achievement. Furthermore, they said that, in reality, achievement may cause ability. The statements regarding ability and achievement that each of the two can cause one another are true as far as this study is concerned. When SACCOS are new they are characterized by small ability depicted by small services provision will be achieved. The ability of SACCOS was expected to make more people to get services from SACCOS, increasing services hence bringing positive wellbeing and good governance.

The positive wellbeing can be attained if the SACCOS practise MFIs best practices. The MFIs best practices are done if SACCOS charge affordable interest rates for the advanced loans coupled with low total costs (Urio and Kessy, 2006).

Regarding previous studies conducted on SACCOS, studies on SACCOS and other MFIs have been conducted in various countries all over the world. Duursma (2004) pointed out generally success factors as mentioned by members to contribute to success of CHAMBASHO SACCOS in Dodoma, Tanzanianamely as, the bank is not a goal in itself, but it is a means to solve problems in the community. This brings people together; the self-help concept and aspect of voluntarism are well understood in the community, which is also involved in other self-help projects; involvement of different groups: farmers, business people and livestock keepers; Transparency from the beginning: about meetings, progress and performance; and a successful SACCOS had been operating for some time in a nearby ward – this provided an inspiring and practical example.

Chijoriga (2000) pointed out low population density, poor infrastructures and low house hold income levels as the main constraints that hinder MFIs performance. Many of these MFIs had no clear mission and objectives, and their employees lacked capacity in credit management and business skills.

Rweyemamu *at al.,*(2003) pointed factors affecting performance of MFIs including high interest rate on loans; lengthy credit procurement procedures; inadequate loans disbursed, poor repayments especially at early stages of MFI, poor yield productivity on the borrower's enterprises, and low producer prices of the products supplied by members of MFIs.

Through reviewing relevant literature (Chijoriga 2000; Rweyemamu *at al.,*2003; Urio and Kessy,2006, Kitala and Kayunze, 2014) regarding the factors of wellbeing for SACCOS, we can generally say that the wellbeing of SACCOS and their members depend on a combination of many factors. The factors are age of SACCOS; effort of SACCOS to reach and avail it services to people; ability of SACCOS to provide services regardless of difficulties in that task; networking of SACCOS with other organization; products and services offered by SACCOS; attitude of members towards their SACCOS (members' retention); financial control; interest rate charged on loan from members; governance (transparency, participation, accountability, equity); active number of members of the SACCOS; members' care by the SACCOS (training to members, loans provision); and members' entrepreneurial characteristics.

The knowledge gaps have been identified through reviewing relevant literature. A number of studies have investigated the importance of SACCOS in Tanzania. Although there were some researchers conducted on SACCOS some areas were yet to be covered by those researches in Tanzania. What eventually was inconclusive by all of them include the establishment of determinants of governance in SACCOS; determination of key factors that lead to ability of SACCOS and effect of ability and governance on wellbeing ofSACCOS. This knowledge gap is critical for designing effective intervention to SACCOS and developing long term research policies. This paper came up with results to fill the knowledge gaps.

3. The Study Approach

This study was conducted in four areas in Tanzania namely Dar es Salaam, Dodoma, Kilimanjaro and Morogoro regions. It employed a cross-sectional research design. The design entails collection of data on more than one case at a single point in time. The design enables a researcher to collect quantitative and/or qualitative data for about two or more variables which are then examined to detect patterns of associations (Bryman, 2004; Rwegoshora, 2006). Simple random sampling was used so as to give each region equal chances to be included in the research. Each region was assigned a number, and the selection of the four regions was done randomly using random numbers generated with a computer, particularly the Excel programme.

Stratified random sampling was used so as to give each SACCOS in the four regions region equal chances to be included in the research. The selection of the study SACCOS was done during the preliminary survey, when discussion of wellbeing characteristics was done between the researcher and key informants. The results from the discussion are first 14 statements of wellbeing characteristics. These were developed through combining literature and discussion with key informants during preliminary survey. The second results are criteria for categorizing a SACCOS to be High wellbeing SACCOS (HWS) or Low Wellbeing SACCOS (LWS). The identified HWS and LWS facilitated formation of sampling frames. A sampling frame or source list is a list from which a sample is drawn (Kothari, 2004). Two sampling frames or source lists of SACCOS were prepared for each region; one sampling frame consisted of HWS and the second one consisted of LWS. Simple Stratified Random Sampling (Kothari, 2009; Rwegoshora, 2006) was employed to select 15 SACCOS from identified HWS and 15 SACCOS from the identified LWS in each region. The two strata were HWS and LWS. This resulted into a sample size of 30 SACCOS for each region and a total of 120 SACCOS.

SPSS and STATA softwares were used in data analysis. Transfer of data from SPSS software to STATA software was done to allow running of the probit model. The data transfer was necessary because SPSS is not good for probit regressions as it gives omitted data. The probit regression analysis was conducted in STATA software. Through probit regression analysis the values of Z and their respective probit coefficients of each independent variable were obtained. On top of that, STATA software has ability to automatically drop down the variables which cause multicollinearity.

The data for first and second specific objectives were analysed together by using Principle Component Analysis. To achieve the third specific objective probit regression analysis was conducted.

3.1. Principal Component Analysis (PCA)
Factor analysis refers to a class of techniques whose purpose often consists of data reduction and summarization (Wuensch, 2009). According to Simon (2006; Wuensch, 2009), the purpose of factor analysis is to identify a relatively small number of factors that can be used to represent relationships among sets of interrelated variables and the PCA which is the default method for factor extraction in SPSS/PC+ was used as a method of factor extraction in this study. According to Wuensch (2009), one may do a PCA simply to reduce a set of *p* variables to *m* components or factors prior to further analyses on those *m* factors. For example, Ossenkopp and Mazmanian had 19 behavioral and physiological variables from which they wished to predict a single criterion variable, physiological response to four hours of cold-restraint. They first subjected the 19 predictor variables to a FA. They extracted five factors, which were labeled Exploration, General Activity, Metabolic Rate, Behavioral Reactivity, and Autonomic Reactivity. They then computed for each subject scores on each of the five factors. That is, each subject's set of scores on 19 variables was reduced to a set of scores on 5 factors. These five factors were then used as predictors (of the single criterion) in a stepwise multiple regression, Wuensch (2009).

In this paper, factor analysis particularly PCA was used as a method of item analysis for index variables of indices of ability to provide microfinance services (ABS), and governance (GOV) in order to identify the appropriate items that determine these variables. According to IDRE (2014) communalities is the proportion of each variable's variance that can be explained by PCA. Extraction of communalities values indicate the proportion of each variable's variance that can be explained by principal components. The condition is for the communalities values less than 0.5are removed as written by Kline (1993), cited by Towo (2012).

According to Wuensch (2009); IDRE (2014) Eigen values are the variances of the principal components. Through extraction Sums squared loadings the numbers of principal components whose Eigen values are 1 or greater are determined. Scree plot graphs of the Eigen value against the principal component shows graphically principal components whose Eigen values are 1 or greater. In general, we are interested in keeping only those principal components whose Eigen values are greater than 1. Furthermore the condition is that the component loadings, which are the correlations between the variable and the component must be greater than 0.3. The operationalization of PCA in this study was guided by accepting variables with communalities of 0.5 or more, Eigen values greater than 1 and correlations between variables and components greater than 0.3.

3.1.1. Developed Index Variables
To formulate single number variable representing aggregate effects of number of individual factors may need a conversion of units to a common unit, something which could be complex and a time consuming procedure. This could require some assumptions which may not hold true in real situations. The index variable development does not require such complex situation. This enables two indices, ability index and governance index to be developed from aggregate effect of a number of individual factors (Kothari, 2009). Hotland (1993) cited by Simon (2006) to have developed a Wealth index formulae [WET = ∑(Yij/Ymax) (i=1,2…x, j=1,2…. n)] by summing up individual asset indices obtained from assets determining individuals' wealth. This index formulae were adopted by the present research   in developing the following indices. The indices are Index of ability to provide services, and Index of governance. Before these indices were developed, sets of statements were made on each factor which was considered to influence the variable. These statements were included in the questionnaire administered to sample SACCOS. Developing such statements was necessary because it was not easy to solicit information for such variables by asking one question to a respondent. The descriptions of individual indices development and operationalization were as follows:

3.1.2. Index of Ability to Provide Microfinance Services (ABS)
Key informants hypothesized 6 factors influencing ability of SACCOS to provide services as follows:
    i.   Ability of SACCOS to attain financial self-reliance (100%),
   ii.   Ability of SACCOS to attain positive growth of value of shares for 3 years,
  iii.   Ability of SACCOS to attain positive growth of value of savings for 3 years,
  iv.   Ability of SACCOS to attain positive growth of value of loans for 3 years,
   v.   Ability of SACCOS to attain 95% repayment rate of loan per year, and
  vi.   Ability of SACCOS to attain a size of common bond of 3000 people.

The factors were then converted into statements which were included in the questionnaire used in the study which form a basis for this paper. SACCOS' board members and managers were requested to provide scores to each statement depending on their strength of influence on the ability of SACCOS to provide services. The hypothesized statements were subjected to PCA to select the important ones used to calculate ABS. Four statements were selected. Therefore, ability index was measured by four factors namely Size of common bond to be 3000 or more people for SACCOS, Growth of value of shares being positive for the past 3 to 10 years, Growth of value of savings be positive for the past 3 to 10 years and Percentage repayment rate being 95% of expected amount of loan per year. The scores were analyzed through the following formula to get the ABS:

ABS = $\sum (A_{ij}/A_{max})$ {i = 1, 2, -----, s, j = 1, 2, -------, n} ……………. (1)

      Where ABS = Index of ability for individual SACCOS

      A_{ij} =   Scores for statements of an individual SACCOS; A is ability and ij are factors

      A_{max} =   Maximum scores in the ability statements.

The total score values in index of ability therefore ranged from (1 to 5)*4 = 4 to 20. A score of 4 means that the SACCOS is able and a score of 20 shows full ability of SACCOS. The total score of each SACCOS was divided by 20 so as to have an index ranging from 0.0 to 1.0. Indices of ability of SACCOS between 0.0 and less than 0.8 were classified as unable SACCOS and therefore to be assigned a value of 0 in the binary model. Indices of ability of SACCOS between 0.8 and 1.0 were classified as able SACCOS and therefore to be assigned a value of 1 in the binary logistic model in section 3.2.

3.1.3. Index of Governance (GOV)

Key informants hypothesized 8 factors influencing good governance practise by a SACCOS as follows:

    i.   If idea for SACCOS formation was from members,

    ii.   Election of leaders was conducted in every three years,

    iii.   Practising participatory decision making,

    iv.   If accountability is practised to leaders and members,

    v.   If audited reports are open to members,

    vi.   Number of board members be 5, 7 or 9

    vii.   Committees held meetings as per schedule, and

    viii.   High possibility to use of information presented in suggestion box.

The factors were then developed into statements which were included in the questionnaire used in the study which form a basis for this paper. SACCOS were requested to provide scores to each statement depending on whether the statement was practised 1 or is not practised 0. The hypothesized statements were subjected to PCA to select the important ones used to calculate GOV. Six statements were selected. Therefore governance index was measured by six factors namely, Election of leaders being conducted in every three years, accountability being practised by leaders and management, presence of financial openness through audited reports being open to members, and Number of board members being 5, 7 or 9 to allow balanced decision making (URT, 2003), Committees held meetings as per schedule and higher possibility of use of information presented in the suggestion box.   The scores were analyzed through the following formula to get the GOV:

GOV = $\sum (G_{ij}/G_{max})$ {i = 1, 2, -----, g, j = 1, 2, -------, n} …………… (2)

Where:

GOV   = Governance Index for individual SACCOS

G_{ij} = Scores for statements to an individual SACCOS; G is governance and ij are factors. G_{max} = Maximum scores in the governance statements.

The total score values in index of governance therefore ranged from 0 to 6. The 0 score means that the SACCOS do not practise good governance and 6 scores shows that SACCOS practise good governance in all aspects. The total score of each SACCOS was divided by 6 so as to have an index ranging from 0.0 to 1.0. Indices of governance of SACCOS between 0.0 and less than 0.8 were classified as SACCOS without good governance and therefore were assigned a value of 0 in the binary logistic regression model. Indices of governance practised by SACCOS between 0.8 and 1.0 were classified as SACCOS which practised good governance and therefore to be assigned a value of 1 in the binary logistic model in section 3.2.

3.2. Operationalization of Probit Model

Survey data were applied to the empirical probit model and estimation was done using Maximum Like hood (ML) command of STATA econometric model. The ML estimates maximize the value of the probability density function f (X, ß) and assumes normality of the disturbance term, Griffiths et al. (1993). Thus ML coefficients become consistent and asymptotically normally distributed. The assumption of asymptotic normality of distribution and consistency is known to give satisfactory results when the sample size is large (Madalla, 1983; IDRE, 2014). One of the major benefits of using STATA econometric computer program is its ability to automatically drop down the variables which cause multicollinearity.

In this study the HWS was assigned a value of 1 (HWS = 1) and 0 otherwise that LWS that is low wellbeing SACCOS. The empirical model is specified as shown in equation (3) and Table 1.

The operationalization of model variables covers the explanation of influence of each independent variable to the dependent variable. Specifically are explanations about if the influence is high or low, the direction of influence and finally the reason of that influence. The dependent variable is the high wellbeing of SACCOS (HWS). The independent variables were operationalized as explained below.

HWS=β_0+β_1(ERP)+β_2(ABS)+β_3(AGE)+)+β_4(NET)+β_5(FIC)+β_6(ACM)+β_7(ATI)+β_8(PRS)+β_9(INT)+β_{10}(MEC)+β_{11}(GOV)

+β_{12}(CAM)+e …………………………………………….(3)

Variable	Types of Variable	Explanation of Variables
Y= HWS	Binary	Binary dependent variable that takes the value of "1" for HWS "0" otherwise for LWS
X_1 = ERP	Dummy	1 if the ith SACCOS is classified as attained effort to reach people, 0 otherwise
X_2 = ABS	Dummy	1 if the ith SACCOS is classified as attained ability to provide services, 0 otherwise
X_3 = AGE	Continuous	Age of SACCOS in years since registration
X_4 = NET	Continuous	Benefit to cost ratio of networking.
X_5 = FIC	Continuous	Ratio of number of years external auditing done to those not done
X_6 = ACM	Continuous	Actual number of active members for SACCOS
X_7 = ATI	Continuous	Ratio for number of members in SACCOS in current year to previous year
X_8 =PRS	Continuous	SACCOS offers 3 products and services namely savings, loans and deposits, 0 otherwise
X_9 = INT	Continuous	SACCOS has interest rate on loans equal or less than 15% per annum, 0 otherwise
X_{10}=MEC	Dummy	1 if i^{th} SACCOS is classified to have entrepreneurial members, 0 otherwise
X_{11} = GOV	Dummy	1 if i^{th} SACCOS is classified to practise governance, 0 otherwise
X_{12} =CAM	Dummy	1 if the ith SACCOS is classified to practise care for members, 0 otherwise

Table 1: Variables entered in the probit model
Source: Synthesized from reviewed literature by the Author of this paper

ßí   = Parameters estimated
ßo   = Intercept
eí   =   Random error term
X_1-x_{12} = Predictor variables included in the model

3.2.1. Testing for Significance
Testing for significance between HWS and LWS involved chi-square test. The chi-square test was used to determine whether associations in the distribution of responses were significant in statistical sense. The differences between groups were tested using both z - test of differences between means and chi-square test for cross tabulations. Chi-square test is used when one wants to see if there is relationship between two categorical variables (Madale, 2007; Gupta, 2008).
The (χ^2) defined as:
$\chi^2 = \sum (O - E)^2/E$ …………………………………………………..(4)
Where
χ^2 is Chi square
O is observed frequency
E is expected frequency
The calculated value of χ^2 was compared with the table value of χ^2 for degrees of freedom at 5% level of significance. In this study for χ^2 (P = 0.000) the difference between theory and observation is considered to be significant, that is it could not have arisen due to fluctuations of simple sampling. If, on the other hand, the calculated value of χ^2 was less than the table value, the difference between theory and observation was not considered as significant, that is it was regarded as due to fluctuations of simple sampling and hence ignored.
The Z test is defined as
$Z = \sqrt{2\chi^2}$ - $\sqrt{\sum(2n-1)}$ (Gupta, 2008) …………………………………….(5)

Where
χ^2 is Chi square
2n – 1   are degrees of freedom
If the calculated value of Z through probit regression was revealed to be equal or more than 1.96 the effect of the hypothesized factor was statistically significant to effect wellbeing in SACCOS and therefore the null hypothesis was rejected (Kothari, 2009). The z-statistic (sometimes called a Wald z-statistic), and the associated p-values enable to decide about whether the independent variables are statistically significant. The probit regression coefficients give the change in the z-score or probit index for a one unit change in the predictor. For a one unit increase in predictor variable, the z-score increases by amount equal to the positive coefficient; the converse is true for the negative coefficient [https://idre.ucla.edu/state/dae/probit/htm].

4. Results and Discussion

4.1. Ability of SACCOS to Provide Services
Table 2 shows factors determining ability of SACCOS to provide financial services. The average score for all six factors ranged from 3.1667 to four out of five for the respondents. This indicates that these factors were highly agreed by SACCOS to influence their ability. The average scores were higher for HWS than those for LWS. For the overall sample, the average was between the two. This suggests that ability is a key factor for high wellbeing in SACCOS and other MFIs as supported by Zeller and Meyer (2006).

Factors	HWS (n=60	LWS (n=60)	Overall sample (n=120)
Ability based on size of common bond	3.9833	2.8167	3.4000
Ability based on financial self-reliance of the SACCOS	4.5333	3.4667	4.0000
Ability on growth of value of shares for the past 10 years	3.8667	2.6000	3.2333
Ability on growth of value of savings for the past 10 years	3.8667	2.7667	3.3167
Ability on growth of value of loans for the past 10 years	4.1000	2.7167	3.4083
Ability based on percentage repayment rate of loans for the past ten years	3.5500	2.7833	3.1667

Table 2: Mean scores for each factor of the (ABS) ability index for SACCOS
Source: Analysed from field data, 2014

4.1.1. Principal Component Analysis (PCA) for determining Ability Index

Table 3 shows Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity for factors determining ability of SACCOS. Kaisers (1974) cited by EMC (2015) recommends accepting values greater than 0.5. Values between 0.7 and 0.8 are good (Weunsch, 2009). In this research the value was 0.721, and therefore it should be confident to use in PCA.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.721
Bartlett's Test of Sphericity	Approx. Chi-Square	211.807
	Sig.	0.000

Table 3: KMO and Bartlett's Test for factors determining ability
Source: PCA from field data, 2014

On the other hand theBartlett's Test of Sphericity recommends having (p < 0.05) significance value. For this case the Bartlett's Test is highly significant (p < 0.001) and therefore factor analysis is appropriate. Table 4 shows results of the factor analysis (PCA). Through factor loadings, four factors were revealed to meet the conditions that communalities were more than 0.5 and the correlations between those variables and the component were greater than 0.3. This means that these 4 factors were important determinants of the ability towards wellbeing of SACCOS. This is supported by the Wuensch (2009) that one may do a PCA simply to reduce a set of *p* variables to *m* components or factors prior to further analyses on those *m* factors. As a result, the four were considered by SACCOS to determine ability and hence they were used in the analysis of the ability to high wellbeing of SACCOS. Therefore, four statements/factors were added up to calculate ABS.

Factors	Component 1
Ability on growth of value of shares for the past 10 years	0.802
Ability on growth of value of savings for the past 10 years	0.805
Ability on growth of value of loans for the past 10 years	0.755
Ability based on percentage repayment rate of loans for past 10 years	0.624

Table 4: Component Matrix (a) for ability index
Source: Source: PCA from field data, 2014

Table 5 shows the estimated ability indices for HWS and LWS, on average HWS had significantly higher ability index than LWS. These results revealed that the ability of SACCOS is a key factor of wellbeing.

Items	HWS	LWS
Mean	0.8	0.6
Standard deviation	0.1	0.2
Minimum	0.4	0.2
Maximum	1.0	0.8

Table 5: Index of ability for SACCOS
Source: Source: PCA from field data, 2014

4.2. Governance in SACCOS

The study results revealed that the majority of SACCOS practised good governance (openness, equity, accountability and participation among the members, leaders, employees and other stakeholders). The results were such that good governance practice in HWS was 91.7% and for LWS 77.5%. This again indicates that good governance is an important factor of high wellbeing of SACCOS. The details of good governance in SACCOS are as shown in Table 6.

Statement/factor	HWS (n = 60)		LWS (n=60)		Difference	
	Freq.	%	Freq	%	Freq	%
Members develop the idea of formation of SACCOS.	59	98	54	90	5	8
Election of leaders after every three years is practiced	59	98	45	75	14	23
Participatory decision making is practiced	59	98	52	87	7	12
Leaders are accountable	58	97	46	77	12	20
The audited reports are made open to members	58	97	34	57	24	40
Number of board meetings have been 4 or more	58	97	45	75	13	22
The committees held meetings as per schedules	59	98	41	68	18	30
The SACCOS has suggestion box	42	70	25	42	17	28
Good governance in total	55	92	47	78	08	13

Table 6: Good governance in SACCOS
Source: Analysed from field data, 2014

4.2.1. Principal Component Analysis (PCA) for determining Governance Index

The factors in Table 6 were subjected to factor reduction through PCA which gave the results shown in Table 7. The Table shows distribution of SACCOS based on the four variables influencing governance from PCA. This again supports the Wuensch (2009) that one may do a PCA simply to reduce a set of *p* variables to *m* components or factors prior to further analyses on those *m* factors.

Factors	Component 1
Participatory decision making is practiced	0.581
The committees held meetings as per schedules	0.837
The actual number of board meetings have been 5, 7 or 9 to allow balanced decision making for the past three years	0.690
The audited reports are made open to members in the SACCOS office	0.702

Table 7: Component matrix of Governance index for SACCOS
Source: Source: PCA from field data, 2014

Table 8 shows index of governance (GOV) for SACCOS. The GOV indices were obtained by summing up the mean score as described in section 3.2.

Items	HWS	LWS
Mean	0.8	0.6
Standard deviation	0.1	0.2
Minimum	0.2	0.1
Maximum	1.0	1.0

Table 8: Index of Governance for SACCOS
Source: Source: PCA from field data, 2014

4.3. Analysis of Effect of Ability and Governance to Wellbeing in SACCOS

The purpose of this section is to present and discuss data towards achieving specific objective number 3 of this paper. That objective was to determine factors that lead to wellbeing of SACCOS in Tanzania. The analysis was done through probit model estimation as prescribed by equation (3) and Table 1 above.

4.3.1. Performance Indicators of the Probit Regression Model

The performance indicators of the model are presented in Table 9. As can be seen from the table, the specified probit model fits very well the data as measured by Pseudo R^2. The high value of Pseudo R^2 (0.877) suggests a good predictive ability of the model implying that the variables included in the model explained about 87.7% of the variation of dependent variable (binary results HWS or LWS). Therefore, goodness of fit of the model was relatively high as measured using Pseudo R^2 of 87.7%.

Iterations			
Iteration o:	log likelihood = -83.177662	Iteration 6:	log likelihood = -10.360036
Iteration 1:	log likelihood = -32.627627	Iteration 7:	log likelihood = -10.247528
Iteration 2:	log likelihood = -20.671958	Iteration 8:	log likelihood = -10.239735
Iteration 3:	log likelihood = -14.939699	Iteration 9:	log likelihood = -10.239694
Iteration 4:	log likelihood = -12.07886	Iteration 10:	log likelihood = -10.239694
Iteration 5:	log likelihood = -10.801707		
Probit estimates	Number of obs = 120		
	LR chi^2(12) = 145.88		
	Prob > chi^2 = 0.0000		
	Pseudo R^2 = 0.8769		
	Log likelihood = -10.239694		
obs. P 0.5			
Z and P>z are the test of underlying coefficient being zero			

Table 9: Performance indicators of the estimated probit model
Source: Probit analysis from field data, 2014

Furthermore, the Chi-square statistic showed that the model was highly significant (p < 0.0001) implying that the variables included in the model were jointly different from zero. The number of observations was 120, the Chi-square was 145.9 and degrees of freedom were 12. The iterations were 10 in number associated with Log likelihood ranging from -83.177662 to 10.239694. All these confirm that there was relationship between the dependent variable and explanatory variables included in the model.

4.3.2. Probit Model Regression Results for Determinants of Wellbeing in SACCOS
The results from the estimation are as shown in Table 10. The table summarizes factors hypothesized to lead to wellbeing of SACCOS. The factors were the independent variables entered into the probit regression model. The binary results were successful SACCOS signed a value of 1 (HWS = 1) and 0 otherwise successful SACCOS (LWS =0) as explained in section 3.2. From the results, three variables were found to lead to wellbeing in SACCOS significantly at (Z > 1.96 and the associated (P < 0.05or 5%). Other four variables were found to lead to high wellbeing in SACCOS at (P < 0.1 or 10%). The rest five variables were found to have Z values and probit coefficients which were not zero and therefore this suggests that when all twelve independent variables were acting together none of them contributed zero to lead to high wellbeing in of SACCOS. The regression results for each independent variable are presented in Table 10.

Variables	Coefficients (dF/dx)	Z values	P>z	x-bar	[99% C.I.]	
ERP	0.3554006	1.88	0.060	3.70833	-0.096232	0.807033
ABS	7.486663	2.07	0.038	0.685833	-1.6138	16.5871
AGE	0.3149708	1.32	0.185	3.425	-0.295092	0.925033
ACM	0.8384924	2.11	0.035	2.59167	-0.235818	1.9128
NET	1.868249	0.90	0.367	0.280833	3.5328	7.2693
PRS	0.6293552	0.48	0.629	0.418333	-2.77774	4.03645
MEC	0.0965909	-1.73	0.083	2.09167	-1.65831	0.383386
ATI	0.6798396	2.24	0.025	3.33333	-0.032437	1.39212
CAM	0.0244868	1.21	0.225	5.44167	-0.111074	0.304256
FIC	0.0244868	0.13	0.899	2.56667	-0.475903	0.524876
INT	-0.2959726	-1.95	0.052	2.85833	-0.664714	0.072769
GOV	1.085256	1.88	0.060	1.13333	-0.323525	2.49404

Table 10: Probit model regression results for factors leading to wellbeing in SACCOS
Source: Probit analysis from field data, 2014

Attitude of Members towards their SACCOS (ATI) was revealed to have positive relationship with wellbeing in SACCOS as per expectation. It was found to lead to high wellbeing in SACCOS significantly at (Z= 2.24) and associated (P<0.05 or 5%). Its coefficient was positive (0.6798396). This means that for a one unit increase in ATI increases the possibility of SACCOS wellbeing by 0.68.
Ability of SACCOS to provide services (ABS) had positive wellbeing in SACCOS as it was expected. It was found to lead to high wellbeing in SACCOS significantly at (Z = 2.07), and the association was a significant (P<0.05 or 5%). Its probit coefficient was positive (7.486663). This means that, for a one unit increase in ABS increases the possibility of SACCOS wellbeing by 7.49. This shows that wellbeing of SACCOS and its members to high wellbeing in SACCOS was highly depending on their ability to provide services. This implies that SACCOS which were more capable were likely to grow to HWS. This is probably due to the fact the more

able SACCOS are the ones which have big potential of membership coming from the common bond and accumulating capital from shares and savings of the members. This suggests the capacity building of SACCOS from its stakeholders to be of importance to have high wellbeing SACCOS. This finding determines the ability of SACCOS to provide services to be among the most important factors that lead to wellbeing of SACCOS. These findings support the theory put forward by Maruyama and McGarney (1980) advocate theory of academic achievement. The theory states that ability causes achievement. The achievement is the high wellbeing in SACCOS as far as this paper is concerned.

Interest rate charged on loans to members (INT) was found to have negative relationship with successful SACCOS as it was expected. The influence was at $Z = -1.95$ and associated ($p < 0.1$ or 10%). Its probit coefficient was negative (-0.2959726). This means that for a one unit increase in INT the possibility of increasing in wellbeing of SACCOS decreases by 0.30.

Good governance practices by SACCOS (GOV) influenced wellbeing of SACCOS to high wellbeing in SACCOS positively as it was expected. The influence was found to be at $Z = 1.88$ and significant ($p<0.1$ or 10%). Its probit coefficient was positive (1.085256). This means that for a one unit increase in GOV increases the possibility of wellbeing of SACCOS by 1.09. This implies that as SACCOS practise good governance they build confidence of their stakeholders. This makes the members to maximize to get their financial services from the SACCOS. Members involved in developing the SACCOS, regular election time of three years, participation, accountability, audited reports open to stakeholders, number of board members be five to nine, regular meetings and more possibility of using information from the suggestion box, all these make good governance in the SACCOS resulting will high wellbeing in SACCOS and its members.

5. Conclusions and Recommendations

The main objective of the paper was to assess the effect of ability and governance in wellbeing of SACCOS in Tanzania. The specific objectives are to determine key factors that lead to ability of SACCOS; establish factors influencing governance in SACCOS; and analyse effect of governance and ability of SACCOS in providing services for high wellbeing in SACCOS.

On the basis of findings the following conclusions are derived in terms of implications of the findings. It is concluded that the key factors of ability of SACCOS to provide services are four namely, ability on growth of value of shares, ability on growth of value of savings, ability on growth of value of loans, and ability based on percentage repayment rate be 95% or more.

It is also concluded that key factors determining governance in SACCOS to be four namely, participatory decision making be practiced, the committees held meetings as per schedules, the actual number of board meetings have been 5, 7 or 9 to allow balanced decision making for the past three years and the audited reports are made open to members in the SACCOS office.

Furthermore it was concluded that the key influencing factors of SACCOS in providing services for high wellbeing are attitude of members to their SACCOS, actual number of active members of the SACCOS, ability of SACCOS to provide services regardless of task difficulties, interest rate charged from loans, efforts made by SACCOS to reach people, good governance practises by SACCOS and member entrepreneurial characteristics. Therefore ability of SACCOS and governance in SACCOS are heavily affecting services provided for high wellbeing in SACCOS.

Based on the conclusions it is recommended that ability of SACCOS in terms of growth of savings, shares, loans and repayment rates should grow over time. Similarly SACCOS should ensure that governance in terms of participation, board members' numbers, meetings held as per plan and reports be transparent to members should be effected. These are critical issues to bring adequate services and hence high wellbeing in SACCOS.

6. References

i. Bailey, K. D. (2009). Methods of Social Science Research. The Free Press.
ii. Bryman, A. (2004). Social Research Methods. Oxford University Press.
iii. Centers for Disease Control and Prevention.(2016). Well being Concepts.[http://www.cdc.gov/hrqol/wellbeing.htm] site visited on 25/10/2016.
iv. Chijoriga, M.M. (2000). Microfinance: Missed opportunities in empowerment: The Performance and Sustainability of Microfinance Institutions in Tanzania. Journal fiir Entwickings politik 16(3): 275 – 302.
v. Duursma, M. (2004). Community Based Microfinance models in East Africa. FACET BV., Dar es salaam.
vi. Evolutionary Media Com (2015) Statistical Methods –. KMO and Bartlett's Test of Sphericity (Factor Analysis). [https://www. public. asu. edu/ pythagor/principal component/htm] site visited on 22/01/2015.
vii. Financial Sector Deepening Trust., (August 2010). FinScope Tanzania: Fin Scope financial surveys 2006 and 2009. [openmicrodata.wordpress.com] site visited on 20/1/2011.
viii. Graume, B. (1997). Micro Finance in Africa. Is it either the Problem or the solution? Journal of World development25(7): 1081-1093.
ix. Griffiths, W. F., Hill, R. C. and Judge, G. G. (1993). Learning and Practicing Econometrics. John Wiley and Sons, Inc.
x. Gupta, S. P. (2008). Statistical Methods. Sultan Chad and SonsNew offset press., New Delhi India.
xi. Institute for Digital Research and Education. (2013). R Data Analysis Examples: Probit Regression. [https://idre.ucla.edu/state/dae/probit/htm] site visited on 28/06/2013.
xii. Institute for Digital Research and Education. (2014). Annotated SPSS Output: Principal Components. [https://statistics.ats.ucla.edu/stat/spss/output/principal_components.htm] site visited on 07/04/2014.
xiii. Kitala, C. T. M. and Kayunze. K.M. (2014).Success Characteristics of Savings and Credit Co-Operative Societies (SACCOS) in Tanzania Journal of Co-operative and Business Studies(JCBS)2(1): 73- 88.

xiv.   Kothari, C. R. (2004). Research Methodology Methods and Techniques. New Age International Publishers., New Delhi.
 xv.   Kothari, C. R. (2009). Research Methodology Methods and Techniques. New Age International Publishers., New Delhi.
xvi.   Madalla, G. S. (1983). Limited Dependent and Qualitative Variables in Econometric. Econometric Society Monographs in Quantitative Economics. Cambridge University Press., Cambridge.
xvii.   Madale, M. M. (2007). Contribution of NGOs to Primary Education in Kibaha and Kisarawe district councils: The case of Plan Tanzania. Thesis for Award of PhD Degree at Sokoine University of Agriculture, Morogoro, Tanzania.
xviii.   Maruyama, G. and McGarney, (1980). An application of maximum livelihood analysis of structural equations. Psychological bulletin 170(87):502-522.
xix.   Oxford Dictionary. 2016). Definition of Wellbeing.[https://en.oxforddictionaries.com/word-of-the Trust] site visited on 22/07/2016.
 xx.   Robinson, M.S. (1996). Addressing Some Key Questions on Finance and Poverty. Journal of International Development 8:157 – 163.
xxi.   Rwegoshora, H. M. M. (2006). A Guide to Social Science Research. Mkuki and Nyota publishers, Dar es Salaam.
xxii.   Rweyemamu, D.C., Kimaro, M.P. and Urassa. O.M., (2003). Assessing Micro – Finance Services in Agricultural Sector Development: A case study of Semi-Formal Financial Institutions in Tanzania. [http://www.ifpri.org] site visited on 20/8/2013.
xxiii.   SCCULT.(2005). Microfinance in Tanzania. [www.bot-tz.org/MFI/Defaultasp? Menu=SCCULTHEADER] site visited on 31st July 2007.
xxiv.   SCCULT. (2006). Tanzania – Microfinance [http://www.bot-tz.org/mfi/sccult/2006]site visited on 15th August 2007.
xxv.   Simon, S. M. M. (2006). Adoption of rotational wood technology in semi arid areas of Tanzania: The case of Tabora region. Thesis for Award of PhD Degree at Sokoine University of Agriculture, Morogoro, Tanzania.
xxvi.   TCDC (2016). The importance of Statistics in Success of Co operative Societies in Tanzania (Umuhimu wa Takwimu katika Ufanisi wa Utendaji kwenye Vyama vya Ushirika katika Tanzania), A paper presented in Hazina Building in the co operative workshop held from 25-26February 2016.
xxvii.   Towo, E. N. (2012). Rural Small Scale Farmers Access to Credit in Iringa and Kilimanjaro regions, Tanzania. Thesis for Award of PhD Degree at Sokoine University of Agriculture, Morogoro, Tanzania.
xxviii.   Urio, F. M. and Kessy, S. A. (2006). The Contribution of Microfinance Institutions in Poverty Reduction in Tanzania: REPOA, Research report 63.Mkuki and Nyota Publishers., Dar es Salaam,1- 42.
xxix.   URT (2000). National Micro Finance Policy. Government printer, Dar es Salaam.
 xxx.   URT (2002). Co operative Development Policy. Ministry of Cooperatives and marketing Dodoma. Government printer., Dar es Salaam.
xxxi.   URT (2003). Cooperative Society Act2003. Government printer., Dar es Salaam.
xxxii.   URT, (January 2014) Cooperative Societies Act 2013. Act supplement No.1 3rd January 2014 to the Gazette of United Republic of Tanzania No1 Vol.95. Printed by the Government Printer.111pp. [http://www.kilimo.go.tz/legislation and regulations/legislations/ The Cooperative Societies Act 2013(1).pdf].site visited on 06/10/2014.
xxxiii.   Wuensch, K. L., (February 2009). Principal Component Analysis.[http//core.edu/psyc/wuenschk/MV/PA/FA/-SPSS doc.] site visited on 16/2/2010.
xxxiv.   Zeller, M. and Meyer, R. L. (2006). The Triangle of microfinance, financial sustainability, Outreach and Impact.The Johns Hpoking University Press.