PERFORMANCE MEASUREMENT SYSTEM AMONG PRIMARY AGRICULTURAL MARKETING CO- OPERATIVE SOCIETIES IN ROMBO DISTRICT, TANZANIA

VICTOR EMILIAN SHIRIMA

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DECLARATION

I, Victor Emilian Shirima, do hereby declare to the Senate of Moshi Co-operative University that, this thesis is my own original work done within the period of registration and that it has neither been submitted nor is it being concurrently submitted in any other institution.

Victor Emilian Shirima Date 25/10/2021

(PhD Candidate)

The above declaration is confirmed by:

Dr. Henry Chalu

(Supervisor)

Date 25/10/2021

Dr. Benson Ndiege

(Supervisor)

Date 25/10/2021

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DEDICATION

To my late father Emilian Bartholome who passed away before the completion of this work. To my mother Aurelia Shokiva who was always there to encourage me; To my wife Magdalena and our beloved children, Heavenlight, Praygod and Godric who were always supporting and encouraging me.

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LIST OF ABBREVIATIONS AND ACRONYMS

AGM	-	Annual General Meeting
AMCOS	-	Agricultural Marketing Co-operative Society
BSC	-	Balanced Scorecard
CIA	-	Conditional Independence Assumption
FGD	-	Focus Group Discussion
ICA	-	International Co-operative Alliance
ILO	-	International Labour Organisation
KNCU	-	Kilimanjaro Native Co-operative Union
MoCU	-	Moshi Co-operative University
PCA	-	Principal Component Analysis
PhD	-	Doctor of Philosophy
PM	-	Performance Management
RAS	-	Regional Administrative Secretary
SACCOS	-	Savings and Credit Co-operative Societies
SEM	-	Structural Equation Modelling
URT	-	United Republic of Tanzania

EXTENDED ABSTRACT

Co-operatives have been important organisations contributing to the social economic growth of the country and improving the welfare of the members. Given the nature of the co-operatives and the environment in which they operate, a proper measurement system is required to measure their performance. However, the performance of these co-operatives especially primary Agricultural Marketing Co-operative Societies (AMCOS) at institutional level has been reported by using the traditional approaches such as profit and ROA. These traditional approaches are likely to give misleading information since the co-operatives have both economic and social roles to play. Thus, the study aimed to establish key performance evaluation framework factors, examine the causal relationships among performance measurement system aspects, identify the Success Factors (SFs) and evaluate the performance of AMCOS. The study used a mixed method research design applying qualitative and quantitative approaches. The sample size was 334 co-operative members of AMCOS. Systematic sampling technique was used to obtain respondents. Qualitative data were analysed using content analysis by the help of Atlas software. The quantitative data were analysed by descriptive statistics, Factor Analysis, Structural Equation Model, Regression, Paired t-test and ANOVA. The study established five measurement aspects namely: financial, membership, learning and growth, internal business process and social. The study further revealed that there is a causal effect relationship between: learning (competency, staff satisfaction, training and education, number of employees, staff retention, employee skills) and internal business process (quality of service and quick service delivery, sufficient facilities, use of technology, new product development); internal business process and member aspect (member retention, member increase, member satisfaction, market share increase, member profitability); and member aspect and financial aspect (profitability, cost reduction, price, revenue growth, ROI, share increase). It also established eleven (11) SFs that were grouped into three categories: commitment, governance and strategy. The study also found that members perceived the co-operative to perform better in non-financial aspects especially in social aspect compared to financial performance. However, there was a positive contribution of non-financial performance indicating that there is no trade-off between the two sides. The study concludes that in order to understand well the performance of the primary AMCOS, the results should come from the holistic approach. The study recommends to the policy makers, practitioners and researchers to apply the aspects when evaluating AMCOS performance in order to have

a holistic view of the performance for better monitoring and managing. Provided that members benefit financially as well as non-financially, AMCOS should make sure they balance these dimensions so that they benefit members and become competitive in the market. The study recommends to the policy makers and AMCOS to involve all studied aspects in order to have a full reflection in terms of AMCOS performance. It is also recommended that emphasis should be given to the learning aspect so that will influence the other aspects. The study contributed to the knowledge by developing a performance measurement system framework specific for the primary AMCOS operating independent in doing their businesses.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Historical Background

Worldwide, co-operatives have been important vehicles for stirring socio-economic development (Bianchi, 2019; Altman, 2017; Odetola, Awoyemi and Ajijola, 2015; Münkner, 2012). They contribute in generating income to members and by so doing they play part in alleviating poverty. They also contribute to food security among members through the income generated (Simmons and Birchall, 2008). Co-operatives provide jobs for millions of people worldwide hence becoming an important source of employment (Wanyama, 2016). Among other types of co-operatives, those which are operating in the farming sector such as Agricultural Marketing Co-operative Societies (AMCOS) have received increasing research interest for many years given their contribution to the community.

Co-operatives in Tanzania can bring people together in efforts to alleviate poverty (Wanyama, 2016; Birchall and Simmons, 2009, 2010; Baffes, 2004). However, they operate under a very challenging and competitive environment which threaten their performance. In order to perform well in this hostile competitive environment, they should depend on their own struggle rather than depending on government support (Brazda and Schediwy, 2001). Given the nature of the environment they are operating, they need a proper system which evaluate the performance and give feedback. Performance goes together with the ability to know exactly what is supposed to be measured and managed and the success factors to be considered within their business operations. Measuring performance especially in co-operatives has its complications especially in understanding the performance measurement system which is suitable for the specific co-operative. There have been inconclusive debates on the measures to be used in measuring the cooperative performance. This has led to the majority of researches using the investor-owned measures such as profitability ratios (Ishak, 2020).

Double commitment of members and multiple goals of the co-operative are the dilemma in which, it must be considered clearly in the performance system (Mayo 2011). This includes setting good strategies for a successful co-operative. In an organisation, formulating good strategies might be a complex task which requires proper creation of future directions for better functioning. Most of the time in the process of planning, co-

operatives rely on the financial reports which actually represent the financial perspective, while neglecting the other side of non-financial perspectives (Beaubien and Rixon 2012). Sometimes the non-financial perspectives are taken as the irrelevant activities that can just wait while concentrating on the financial perspective. For the case of co-operative organisation, studies have emphasized on accounting tools and economic theory of the firm without considering theoretical literatures which argue the co-operative to have multiple objectives (Sobor, 2009).

Although there is integrated report which is prepared during financial reporting, it does not give detailed analysis on the performance of the AMCOS in totality. Given this challenge, in order to capture both financial and no-financial, a comprehensive measurement system such as Balanced Scorecard (BSC) is used. Since its development by Kaplan and Norton in 1992, it has proven to assist the planning teams in making future strategic plans, which from there, they will also depend on the operating and organisational strategy (Stefanovska and Soklevski, 2014). BSC provides the managers a full view of the business, including operative measures to satisfy the clients, innovation level and activity for improving the organisation, as well as financial measures (Nielsen *et al.*, 2017; Hitt, Ireland and Hoskisson, 2012). BSC has transformed companies around the globe by helping top executives to set corporate strategies and objectives and translate them into coherent set measures (Umashankar and Dutta, 2007; Kaplan and Norton, 1996b, 2004).

Structurally, a co-operative is made of multiple goals of which needs a comprehensive tool which will make sure there exist a balance between monitoring and evaluation (Duguid, 2017; Malgwi and Dahiru, 2014; Liebrand, 2007). All the multiple goals must be attained without impairing its financial health. Co-operatives do not rely only on return on capital or investment as a sole goal since by doing so can fail to look for other aspects like education to members, cooperation among co-operators, and concern for community as well as offering social benefit to their members. The traditional practice of measuring performance in co-operatives by using only financial measures shows how the aspect of non-financial is not taken seriously given that the purpose of a co-operative is to offer economic benefits as well as social benefits to the members. The essence of considering both financial and non-financial aspects is the fact that non-financial aspects sometimes act as the driver for the financial performance (Kober and

Northcott, 2021; Kaplan and Norton, 2004) and therefore the need to know the nature of relationship among the aspects.

The traditional approach of using financial indicators alone leaves behind the assessment of the members ability to co-operate and sense of trust within members which might be a driving force towards a very strong co-operative institution. Evidences show that co-operatives which build trust among members, leads to co-operation and economic growth even in the economic crisis period (Liñán and Santos, 2007; Svendsen and Svendsen, 2004; Svendsen and Svendsen, 2000). Therefore, reporting only the financial performance of the co-operative while leaving social aspects which in fact, differentiate them from other forms of business entities, is misleading.

Given that, the purpose of co-operative is to fulfil members' economic and social needs. To achieve this, they need to be commercially viable enterprises and able to survive and prosper in the marketplace. Furthermore, to be sustainable, co-operatives have to be run on a business-like footing (Mruma, 2014; Bibby, 2006) as well as fulfilling their social benefit goals. It has been argued by researchers that, managers should use multiple measures to measure performance (Boateng, Akamavi and Ndoro, 2016). Despite the benefits of using a comprehensive approach in measuring the performance of co-operative, the application is not evidenced in primary AMCOS in Tanzania. The lack of studies using this approach has also led to lack of information on how members perceive their co-operatives in terms of performance measurement system.

1.2 Statement of the problem

Evaluating co-operative performance has been a very challenging task due to the lack of a system specific to the primary AMCOS. The approach mostly used is the application of traditional approach such as the financial measures. The study by Benos *et al.,* (2018) showed that, only 9.79% of the empirical studies considered the social aspect when measuring performance. Currently, there is a growing interest to understand the impact of co-operative beyond the economic performance. The stakeholders need to know the overall performance of the primary AMCOS taking into consideration they have both economic and social roles to play. While there are available literatures showing the non-financial application in other sectors, the case is different in co-operatives (Duguid, 2017) and specifically in primary AMCOS. Literature presents a strong interest on organisations' performance by the Balanced Scorecard approach because evidences

show that for the business which has adopted it, the approach has contributed to improve the performance (Malgwi and Dahiru, 2014) and profitability (Sahiti, Ahmeti, Sahiti and Aliu, 2016; Tibbs and Langat, 2016).

BSC has been used in many organisations and has been gaining its popularity and application day to day. Since its development, many researchers and organisations have been using it as a measurement tool (Kurniawan, 2017) and not as a strategic management tool while it is known that good measures are derived from the strategic objectives. Also, many studies have concentrated on various organisations from profit-oriented organisations to non-profit organisation but little has been done in the co-operative sector. Although BSC has been studied as a performance management as well as performance measurement tool (Magu, 2013) in other organisations, yet there is little focus on including the success factors that influence the same. The performance measurement used in the cooperatives is still based on financial measures, and annual general meeting reports (Beaubien and Rixon, 2012; Saïsset, Couderc and Saba, 2011; Liebrand, 2007).

It is not empirically known whether co-operatives set suitable strategic objectives by considering all aspects of the organisation and how these strategic objectives influence the overall performance. This is done by examining the factors which can be included in the measurement system and the relationship among the aspects constituted in the system. Since there is extensive evidence that the BSC represents one of the most significant management accounting developments and an important management tool for improving performance, the study applied it to develop a performance measurement system for primary AMCOS. It is done by assessing the strategic aspects within the BSC perspectives and their relationships. Furthermore, there is limited empirical evidence on how the non-financial performance affects the financial performance and vice versa. More so, the performances reported in AMCOS do not consider the driving forces such as the Success Factors for primary AMCOS performance. Since performance of an organisations depends also on the success factors towards the performance, that calls for the necessity to assess the success factors which requires primary AMCOS to focus. Therefore, the study also, aimed to assess the critical success factors for the performance of AMCOS.

1.3 Justification of the study

Co-operatives are among the important organisations which have been used as the vehicle to alleviate poverty in Tanzania. The Government of Tanzania is putting a lot of efforts in ensuring that, the co-operative sector is vibrant. Laws (Co-operative Act, 2013) and regulations (URT, 2014) are set to ensure that co-operatives have good operating environment. Given the importance of co-operatives in Tanzania, the Government declared as a mandatory all the strategic crops to be sold through co-operative channel. However, all these efforts need the vibrant member-controlled co-operatives which knows exactly how to manage themselves and therefore calling for a proper measurement system. It is said, *"you cannot manage what you cannot measure"* (Berenson, 2016). Therefore, the study is timely so as to inform the policy makers and stakeholders on how the primary AMCOS should prioritize their resources in ensuring that they are both financially and non-financially performing. Also, to get deep understanding on what it means when one says the AMCOS is performing.

The research will contribute to the body of knowledge by proposing a comprehensive measurement system. The study is set to show how the multiple goals of the co-operative can be captured within the BSC. Policy makers will also use the findings to develop the policy framework which will demand co-operatives to use this comprehensive method so as to have stable co-operatives within the country. The study is in line with national vision of 2025 (Tandari, 2004) which among other things is to reduce poverty. Co-operatives being one of the tools for poverty reduction (Sumelius *et al*., 2013) they need to be institutionally strong and sustainable.

1.4 Research objectives

1.4.1 Main objective

The main objective of the study was to assess the performance measurement system of the primary AMCOS.

1.4.2 Specific objectives

Specifically, the study aimed to:

(i) Establish factors for a comprehensive evaluation framework in primary AMCOS;

(ii) Examine the causal relationships among performance measurement system aspects in primary AMCOS;

(iii) Determine the Success Factors (SFs) for in primary performance; and

(iv) Analyse the perceived performance of primary AMCOS using both financial and non-financial measures.

1.5 Research questions and hypotheses

The research developed three research questions for objectives 1,2 and 4. Also the study formulated nine (9) research hypotheses covering objective 2, 3 and 4.

1.5.1 Research questions

The study had the following research questions for objective 1,2 and 3:

(i) What are the factors for a comprehensive evaluation framework in primary AMCOS?

(ii) What are the perceived Success Factors for the primary AMCOS?

(iii) Does the empirically developed performance measurement system reflect the performance of primary AMCOS?

1.5.2 Research hypotheses

The following research hypotheses guided the study:

(i) H_1: Learning and growth aspect is positively associated with internal business process aspects

(ii) H_2: Learning and growth aspect is positively associated with financial aspects

(iii) H_3: Internal business process aspect is positively associated with members' aspect

(iv) H_4: Members' aspect is positively associated with financial aspects

(v) H_5: Members comitment have a positive effect on the primary AMCOS performance

(vi) H_6: Governance has a positive effect on the primary AMCOS perormance

(vii) H_7: Strategy focused co-operative has a positive effect on primary AMCOS performance.

(viii) H_8: There is a significance mean difference in performance between financial performance and non-financial performance

(ix) H_9: Non-financial performance affects the financial performance of the AMCOS

1.6 Guiding theories

The study was guided by Co-operative Theory, Stakeholder Theory (Freeman,1984), Balanced Scorecard (BSC) Model (Norton and Kaplan, 1992), Ability, Motivation and Opportunity to participate (AMO). The theories have been adopted since the study is concerned with the performance measurement system focusing to the comprehensive assessment of the organisation.

1.6.1 Co-operative performance theory

Studies in co-operative performance have been using the economic theory of the firm or behaviour model of co-operave that emphasize on profit maximisation and accounting techniques (2009). Both reviews papers of LeVa (1983) and Soboh (2009) indicated that most of the empirical studies consider profit maximisation without considering the multiple objectives of the cooperatives.The reason behind many studies using economic theory, is because there is limited specific co-operative theory that can be used when assessing the co-operative performance. However, to suit the nature of the co-operative institutions, co-operative theoretical literature framework has been used as an alternative to economic theory to explain the co-operative performance that emphasize the need to consider the multiple objectives of the co-operative. The current study is going to use a cooperative theoretical literature framework since it give a framework in measuring the co-operative performance in a holistic view.

1.6.2 Stakeholder theory

Stakeholder theory which was developed by Freeman (1984) does offer a multi-dimensional approach for enterprise performance measurement. Stakeholders can be defined as the groups or individuals, inside or outside the enterprise, that have a stake or can influence the organisation's performance (Freeman, 2010). The theory identifies five stakeholder categories for an organisation. These are shareholders, customers, and communities who define the external expectations of an organisation's performance; suppliers and employees, who participate with the organisation to plan, design, implement and deliver the organisation's products and services to its customers. In co-operatives, these categories are available with a slight difference of members as the owners and customers and suppliers. Many scholars who apply stakeholder theory to performance measurement, believe "performance measurement design starts with stakeholders" (Cheowsuwan, 2016). Given this definition it is obvious that even in

designing a measurement framework and measuring performance there is a need to ensure a holistic view is considered.

1.6.3 Balanced scorecard (BSC) model

The Balanced Scorecard is a tool that translates an organisation's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system (Hill and Powell, 2005). This model was developed by Kaplan and Norton (1992) after realising that, relying solely on the financial measures is not suitable for the management of an organisation. Therefore, Kaplan and Norton designed this performance measurement tool in order to capture both financial and non-financial measures in performance measurement (Řehoř and Holátová, 2013; Becsky, 2011). After gaining popularity and review, the application has increased its scope from performance measures to strategic management tool. Therefore, BSC can be defined in two ways: the first one is a system that enables an organisation to translate its vision and strategy into action, and second is a tool that formalizes what an organisation should measure (Kaplan and Norton, 2000). This study is going to adopt this model, first by employing both financial and non-financial aspects as well as evaluate the relationship between the aspects.

BSC is an integral part of the mission identification, strategy formulation and process execution, with an emphasis on translating strategy into linked set of financial and non-financial measures (Kaplan and Norton, 2007). Kaplan and Norton did put BSC in terms of perspectives (Kaplan and Norton, 2001). The four perspectives which make strategic BSC settings are: financial, customer, internal processes, learning and growth. These four perspectives were designed for the purpose of encouraging organisations to broaden their performance measurement thinking and not relying only on financial measures (Řehoř and Holátová, 2013). In this model the causal effect relationship among aspects is assumed. BSC can be adopted by considering the nature of the organisation. Therefore, in this study, the perspectives are not limited to four but five. BSC approach start with strategy, then identifies the inter-relationships and objectives for various stakeholders (Kaplan and Norton, 1996a). It focuses on the need to focus on all the stakeholders of the organisation. This study was guided by this model in order to consider all aspects of the AMCOS the performance evaluation with their causal effect relationship determine.

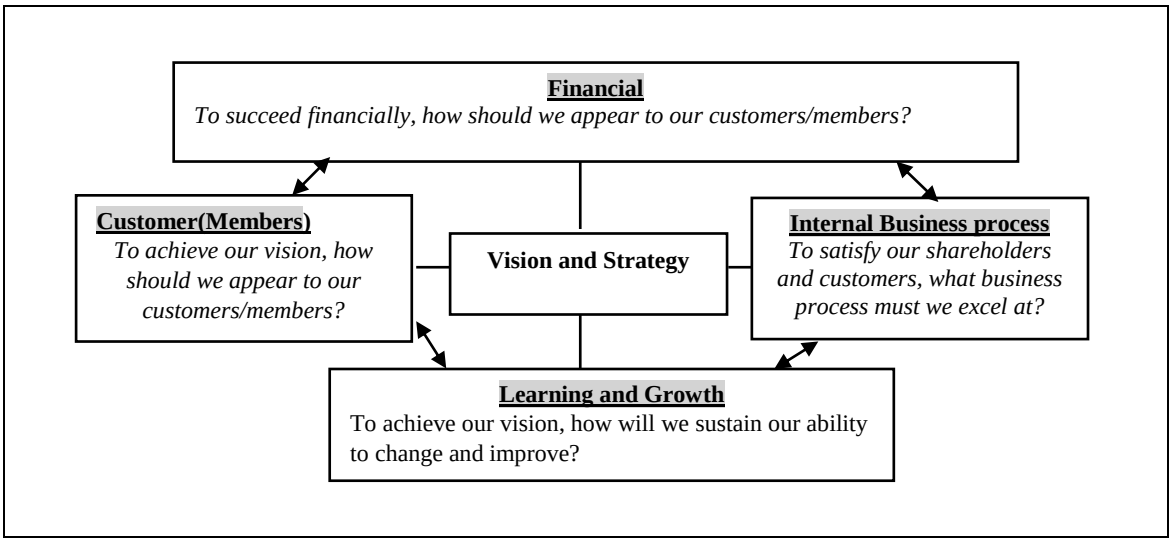

Figure 1. 1 : Balanced Scorecard Model

Source: Norton and Kaplan (1992)

1.6.4 Ability, motivation and opportunity to participate (AMO) theory

Ability, Motivation and Opportunity to participate (AMO) theory argue that, for organisations to achieve superior performance they need to ensure, they have human capital with appropriate skills, abilities, motivated, and that, they are given chance to execute their skills, knowledge and experience (Marcoux, Guihur and Leclerc, 2018; Moraes *et al*., 2018; Rajiani, Musa and Hardjono, 2016). The theory is suitable to the study because primary AMCOS require human capital with appropriate skills, abilities, motivated and also, they are given chance to execute their skills, knowledge and experience in order to increase members' value. In co-operatives members are the ones who also approve the annual budget in the Annual General Meetings (AGM). Although they are not the ones who execute the day-to-day activities, their decisions concerning for example, cost reductions, might have some impacts on the financial performance of the co-operative. Therefore, having members with skills, experience and knowledge (learning aspect) on the co-operative issues can influence the financial performance (financial Aspect).

1.6.5 The Critical success theory

The study adopted a Critical Success Factors Theory (CSFT) developed by Daniel (1961). Veen-Dirks and Wijn (2002) when they were developing an integrated performance management system in companies. They insisted on using both BSC and CSFT because they support each other. CSFT can be considered in two perspectives:

strategy formulation and strategy implementation. Since the study is dealing with the integrated performance measurement system, the strategy implementation perspective will be the focus of the study. This is because it defines few things that must go well to ensure success in the primary AMCOS. It insists on the need to identify limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation (Dinter, 2013; Boynton and Zmud, 1984). The Critical Success Factor Theory is useful in this study to understand the importance of process of improvement for the primary (Luthra, *et al,* 2018; Haleem, Qadri, and Kumar 2012). In facilitating decisions in order to achieve a desired goal, in any organisation can be a complex task (Shankar, Gupta and Pathak, 2018) but the SF theory can simplify it by enabling the organisation to focus on the most important SFs. Therefore, this study has used this theory to identify the few factors which are most important to focus in the primary AMCOS.

1.7. Conceptual framework

The conceptual framework outlines the approach that was used to connect all aspects that were included in the study. It provides a road map for this research. Having the strategic objectives which cover four perspectives will result to the overall performance of the co-operative. The conceptual framework in this study by adopting the concept of BSC, explain that, AMCOS as any other organisation should have Learning perspective, internal business perspective, customer perspective, and financial perspective. The first three perspectives can be grouped and termed as non-financial perspective. The assumption is that, the perspectives are causally linked, where learning influence internal business, internal business influence customer and customer influence the financial perspective. However, there are success factors which the AMCOS must focus for them to operate effectively. Therefore, by having the strategically imposed perspectives and success factors, the AMCOS will have good overall performance.

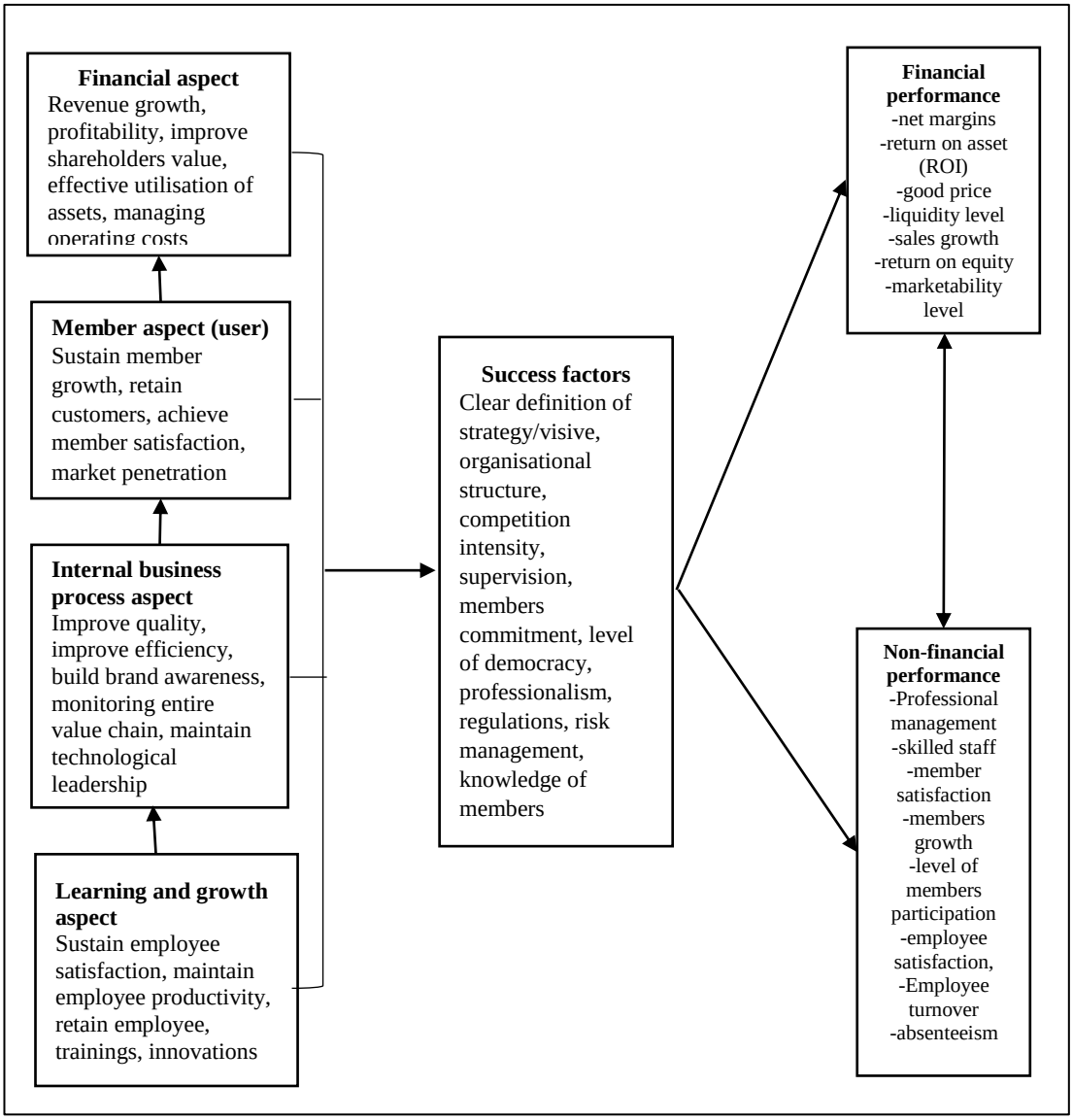

Figure 1. 2 : Conceptual framework Modified from the Balanced Scorecard Model
Source : Norton and Kaplan, (1992)

1.8 General methodology

1.8.1 Description of the study area

The study was conducted in Rombo District in Kilimanjaro Region located in Northern part of Tanzania between Latitude: 3°09' South, Longitude: 37° 33' East. The District is bordered to the North and East with the Republic of Kenya, to the West by the Hai District and to the South by Moshi Rural District. Rombo district is divided into five (5) divisions namely: Mengwe, Mkuu, Mashati, Usseri and Tarakea. Ninety (90) percent of economic activities practiced in Rombo is agriculture where the main cash crop in the district is Coffee (URT, 2013). Coffee is sold through primary AMCOS according to the

government directives. Although, there was a decline in coffee production, current strategy in the district is to emphasize the farmers to plant new species and stumping the old coffee trees so as to achieve high yield (URT, 2013). Kilimajaro was selected due to its historical background in the co-operative movement where it passed through various experiences from members selling their crops through Unions to the current situations where some of the primary AMCOS engage direct to the market without involving the Union in the process. The study was conducted in Rombo because all primary AMCOS were active (see Appendix 6) and operating by doing business on their own with little dependency on the secondary co-operative which is Kilimanjaro Native Co-operative (KNCU) (URT, 2018). Having these characteristics, it was possible to have reliable information depending on the nature of study rather than studying the co-operatives which are still using traditional models of collecting coffee and selling through Unions.

1.8.2 Research philosophy

The study adopted the pragmatism philosophy by assuming that there are many different ways of interpreting the world and undertaking research with multiple realities (Saunders, Lewis and Thornhill, 2012). Pragmatism philosophy allows the use of mixed methods and variety of approaches to answer research questions which cannot be answered using single method (Doyle, Brady and Byrne, 2009). The study used theories but there was inadequate literature to build the theoretical stance which requires the research to start with qualitative research in order to explore the phenomena then ending with the quantitative research studying the relationship. Therefore, the pragmatism approach was suitable for this study to allow collection of the qualitative data using multiple methods and also the quantitative data for testing the relationship among variables.

1.8.3 Research design and approach

The study was guided by an exploratory sequential mixed method designed in order to enhance triangulation (Berman, 2017; Creswell, Fetters and Ivankova, 2004). Since there were limited literature in the area of performance measurement in primary AMCOS and given the complexity of the concept of performance measurement system to the primary AMCOS members, this design was inevitable. The design enabled the research to start with qualitative study and end up with the quantitative research through survey. Qualitative data and analysis enabled the researcher to be able to develop a

survey instrument for quantitative data. The study had two phases: The first phase was a qualitative data collection and analysis, followed by a second phase of quantitative data collection and analysis. An integration of data from qualitative and quantitative was done for validation and triangulation purposes.

1.8.4 Sample and sampling procedures

Qualitative data were collected from the Key Informants Interviews, Focus Group Discussion and documentary review. The 15 Key Informants (KI) were selected purposely because of the experience and knowledge as experts in the co-operative sector. KI were obtained from Moshi Co-operative University (MoCU) (2) as a training institution which has the direct intervention with the area of study; Kilimanjaro Native Co-operative Union (KNCU), (5) because they have the knowledge about the AMCOS in the area; Assistant Registrar's Office in Kilimanjaro (1) and the District Co-operative officers (2) since they are playing a supervisory and promotion role in the co-operative movement. Also, five (5) AMCOS board members were also purposively selected. The rationale for focusing on these KIs is their involvement in the co-operative sector for a long period and therefore rich of valuable information.

The study collected data from 334 sampled respondents, in eight (8) primary AMCOS through questionnaire which was administered by the researcher. Although the unit of observation was individuals (members), the unit of analysis was the primary AMCOS since the study is interested with the average score that was taken for each performance aspect at the AMCOS level. Sample size was calculated using the Cochran (1977) formula as discussed by Bartlett, Kotrlik and Higgins (2001) and Adam (2020) states that:

$$n_o = \frac{t^2 * s^2}{d^2} \quad \text{.....(1.1)}$$

Where t = value for selected alpha level

s = estimate of standard deviation in the population

d = acceptable margin of error for mean being estimated

According to the Cochran (1977), the alpha level of 0.5 of the t-value of 1.96 is used for the sample size above 120. Acceptable margin of Error is 3% for the continuous and scaled data (e.g., Likert Scale). Therefore, the true mean of a five scale is within plus or minus 0.15 (5 times 0.03).

Variance of a scaled variance (S) = $\frac{number\ of\ points\ on\ the\ scale\ (5)}{number\ of\ standard\ deviations\ (4)}$……..(1.2)

= 1.25

$n_o = \frac{1.96^2 * 1.25^2}{(5*0.03)^2}$ = 266.79/0.8 =334 ……...…….(1.3)

Since there is no fraction respondent the required minimum sample is 267. It was assumed that the response rate to be 80%. Therefore, the new sample could be recalculated to 266.79/0.8 = 334. Hair *et al*. and Tatham (1998) and Williams, Onsman, and Brown (2010) suggest a rule of thumb of 100 participants and above.

For the Chi-square it is recommended the sample to be 100 and 200 because of being highly sensitive to sample size.For factor analysis it is recommended to use 200 sample size for 10 items; 250 sample size for 25 items; 400 sample size for 90 items. Whereas for multiple regression analysis it is recommended to use 15 to 20 observation for each predictor (Siddiqui, 2013). Researchers (Hair, et al, 1998; Williams, *et al*, 2010) suggest a rule of 10 per observation to be applied which for this case a maximum of 22 indicators have been usedie. 10 times 22 indicators (220). Generally, for factor analysis a rule of thumb suggests having at least 300 sample size as adequate (Tabachnick, Fidell and Ullman, 2007; VanVoorhis and Morgan, 2007). Therefore, sample size used in this study meets all the standards for data analysis according to the scholars' empirical evidences discussed above.

Systematic sampling was involved where the first member was picked randomly and then the others were picked using K^{th} formula depending on the list of members in a specific primary AMCOS. The first observation (L) was randomly chosen by picking a paper from the folded papers with serial numbers. Systematic sampling was followed basing on the formula:

S = L, L + 2k, ...L + (n – 1)k…….(1.4)

1.8.5 Methods and tools of data collection

The study explored data from the Key informants, documentary reviews, audited financial statements and survey for the purpose of triangulation. Key informants were selected from the registrar, co-operative officers and co-operative leaders who had above ten years' experience in co-operative organisation. Interview was conducted by using the interview guide. This was appropriate in order to clarify the factors and items arose that from the literature review. Three (3) Focus Group Discussions (FGDs) were

also conducted by using a checklist where each group consisted 6 to 8 co-operative members taking 1-2 hrs each as recommended (Nyumba, Wilson, Derrick, and Mukherjee, 2018). Mixed method was necessary due to the complexity of the performance measurement system concept, especially in primary AMCOS where there are limited studies in the area of performance measurement (Simkhada, 2017).

Documentary review was done by accessing eight Annual General Meeting (AGM) reports from primary AMCOS. The reports consisted of the Chairman's report, the annual budget, business plan (for this study only one co-operative attached), minutes of the year 2018 and the year 2017. The reports were those approved and signed by the Co-operative Officers. The aim of accessing AGM reports was to check how issues discussed during their meetings are related to the various performance measurement aspects in their co-operatives. After the synthesis of the qualitative results a structured questionnaire was developed and administered by a researcher to the 334 sampled members of primary AMCOS. The study used members of the co-operative society as a unit of inquiry since it is recommended that, in understanding the performance of the co-operative ask members (Mayo, 2011). Members perceptions on performance of their co-operative is very important since the emphasise in co-operative society is on members' given that they own and control their institutions.

1.8.6 Data Reliability and validity

The surveyed data were tested for reliability using Cronbach Alpha (CA)to ensure internal consistency testing. Cronbach alpha is considered to be suitable measure by researchers (Saunders, 2011). The recommended measure for Cronbach Alpha rate is 0.7 and above. A composite reliability (CR) was also used in order to overcome the weaknesses which might be in the CA such as assuming that, factor loadings are the same for all items. The CR considers the varying factor loadings items (George and Malley, 2003). When factor loadings fluctuate among items, there will be higher discrepancy between values of CR and Cronbach Alpha.

To ensure validity, sufficient literature was reviewed in order to achieve the content validity. Validity test was done by conducting a confirmatory factor analysis (CFA) for construct validity. CFA is a more rigorous test of construct validity (Gefen, Straub, and Boudreau, 2000; Garver and Mentzer, 1999). Construct validity was measured in two aspects; convergent and discriminant validity. These examine the extent to which

measures of a latent variable shared their variance and how they are different from others (Alarcón, Sánchez and De Olavide, 2015). Convergent validity measures the degree to which individual items reflects a perspective convergent in comparison to items measuring different aspects. Convergent validity was achieved since the factor loadings were above 0.6 indicating a good threshold for convergent validity (Park and Gagnon, 2006). Discriminant validity was assessed to ensure that constructs have the strongest relationship with their own indicators using cross loadings and heterotrait ratio of correlations (HTMT).

1.8.7 Data analysis

To establish the factors for a comprehensive performance measurement, content analysis was used to analyse qualitative data obtained from documentary review, key informant interviews and FGDs. The first step was coding data, categorising, sorting and retrieving. Transcribing was done from the recorded information to the text. Likewise, notes which were written in the notebook were also transcribed in the word text. Coding was then done from the text where the phrases which share the same idea were coded the same. After coding, there was a need to give them themes and sub themes. Themes were developed depending on the objectives of the study. In this case the performance measurement aspects and the measures for the aspects were the main categories. Data were further categorized into five (5) aspects: Financial, human capital, business process, member/customer and social. Data were analysed after reducing them to the analysable format and then documented in the form of descriptions and interpretation. To rank the importance each aspect, the descriptive statistics (mean and standard deviations) were used. While the agreeability of the items in the aspects, Exploratory Factor Analysis (EFA) was employed to confirm the factors which can be established for the performance measurement system in AMCOS.

The causal effect relationship among the performance measurement aspects was analysed through descriptive statistics for preliminary analysis, as well as, inferential statistics for detailed analysis. Principle Component Analysis (PCA) was conducted to reduce redundant items and to increase the reliability of each aspect. The Partial Least Square Structural Equation Modelling (PLS-SEM) by using SMARTPLS 3.0 software was used in order to test the hypothesis in the model. SEM was chosen because it tests multiple regression models in a single analysis at once and has become popular

technique to the researchers in social sciences (Hooper, Coughlan, and Mullen, 2008). PLS-SEM is flexible to permit examination of complex associations and can handle various types of data (Wolf, Harrington, Clark and Miller, 2013) and also combines factor analysis and linear regression (Hair, Hult, Ringle and Sarstedt, 2016).

In assessing the Success Factors (SF) data were analysed through descriptive statistics as well as inferential statistics. Inferential statistics were done through Factor analysis, and regression. Multiple linear regression was used because of having multiple independent variables. Performance was measured subjectively by using the statements which the respondents were supposed to give their level of agreeability on the performance in each statement given. This approach was used because the measures reliably assessed the success of business and become the best way to obtain information that would otherwise be very difficult to gather (Alfoqahaa, 2018; Perez and Canino, 2009). The mean score index was calculated and used for further analysis.

In assessing the overall performance of the primary AMCOS, the analysis was done using descriptive statistics in determining the mean scores of the performance in each aspect. Then the correlation was done to see how the items are correlated in the study. Paired T-test was conducted to determine the means difference in performance for the all the areas of performance. Regression analysis was conducted to assess the influence of non-financial performance on the financial performance. Regression was preceded by multicollinearity and normality test using the Variance Inflation Factor and Correlation matrix.

1.9 Ethical considerations

Research ethics were observed as required by research guidelines and postgraduate university guideline. Measures were taken into consideration includes: data collection clearance was obtained from the university, research permit for data collection from the Kilimanjaro Regional Administrative Secretary (RAS). Also, researcher sought respondent consent.

1.10 Organisation of the study

The thesis is organised in six chapters. Chapter one provides the general overview of the study that formed the foundation of the entire thesis covering background to the study, statement of the problem, justification of the study, research objectives, hypotheses,

theoretical review, conceptual framework, general methodology and ethical consideration. Chapters two, three, four and five consecutively present manuscripts from PhD research in publishable format. The manuscripts were prepared and categorised as per specific research objectives. Chapter six presents a summary of the study findings, conclusions that include theoretical reflections and lastly the recommendations of the study basing of the key findings of the study as reflected in the manuscripts.

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CHAPTER TWO

2.0 Performance Evaluation Framework Factors for Agricultural Marketing Co-operative Societies in Rombo District, Tanzania

Victor Shirima[1], Henry Chalu[2] and Benson Ndiege[3]

[1]Department of Banking, Accounting and Finance, Moshi Co-operative University, Tanzania, P.O. Box 474, Moshi, Tanzania

[2]Department of Accounting, University of Dar es Salaam Business School, P. O. Box 35046, Dar es Salaam, Tanzania

[3]Tanzania Co-operative Development Commission (TCDC), P.O. Box 201, Dodoma, Tanzania

2.1 Abstract

The aim of this study was to establish the performance evaluation framework factors for Agricultural Marketing Co-operative Societies (AMCOS). Specifically, the study assessed the current performance system, identified the critical performance aspects, and established the indicators for each performance aspect. The study adopted a sequential exploratory mixed methods research design which started with qualitative approach followed by the quantitative research. The methodology for qualitative research involved an extensive literature review, documentary review, Key Informants, and focus group discussion. The quantitative research was done by employing questionnaire distributed to 334 sampled members in order to validate the qualitative results. Qualitative data were analysed using content analysis by the help of Atlas software, while the quantitative data were analysed by descriptive and Exploratory Factor Analysis. The study established five measurement aspects named financial, members, learning and growth, internal business process and social. Each aspect was accompanied by its respective measurement indicators. It is concluded that in order to evaluate co-operative performance, unlike the traditional approaches, both the financial and non-financial indicators should be considered. The study recommends to the policy makers, practitioners and researchers to apply the aspects in evaluating primary AMCOS performance in order to have a holistic view of the performance for better monitoring and managing of primary AMCOS.

Key words: Co-operative, Performance, Measurement, Evaluation

2.2 Introduction

Cooperatives are the important vehicles in stirring socio-economic development throughout the world to both developing and developed countries (Altman, 2017). They are unique institutions for the fact that they have a double commitment of members, that is, member as a supplier and as the owner of their co-operative resources. Double commitment of members is a dilemma in which, when one wants to assess the performance of these institutions would need to understand the aspects to be considered in the performance system. Thus, given the nature of co-operative institutions, it can be argued that, measuring co-operative performance should be a comprehensive task. Although it seems to be difficult to manage an organization with multiple goals, no way evaluation will be avoided for an organization to improve. It is said, "you cannot manage right what you cannot measure well" (Berenson, 2016; Cruz-Cázares, Bayona-Sáez and García-Marco, 2013). Researches are inconclusive about how to best measure co-operatives (Benos *et al.*, (2018). Therefore, there is need to identify the areas to monitor with their respective factors in order to have a sound comprehensive performance evaluation.

Limited empirical studies which have come up with the factors which can be used to have a comprehensive performance measurement system in AMCOS specifically in Tanzania. The traditional measurement approach has been the use of ad *hoc* measures such as ROI, and other financial indicators without considering the main goals and objectives of a given organization (Hansen and Schaltegger, 2016; Kaplan and Norton, 2001a). It is not then, proper to use measures that will deal with one goal in the organisation which has multiple goals. The current debates in the area of performance measurement system are on the use of the comprehensive approaches that is able to show both financial and non-financial aspects of the organisation. However, the system should consider the type of the organisation and its uniqueness.

Co-operative performance should show how a co-operative is able to deliver value to its members over time and at least cost (Mayo, 2011). This can be assessed by using key indicators such as satisfaction of members on goods and services provided by co-operatives, returns on investment, education and training of members and employees. However, a number of studies (Beaubien and Rixon, 2012; Doumpos and Zopounidis, 2012; Kanchu, 2012; Simkhada, 2017; Soboh, Lansink, Giesen and Van Dijk, 2009) on performance system give much emphasize on financial ratios which seem to be

inadequate for co-operative performance evaluation (Louis-Antoine, Jean-Pierre and Mario, 2011; L. Saïsset and Rivière-Giordano, 2015). Beaubien and Rixon (2012) show that, co-operatives use benchmarks that are developed for investor-owned companies to evaluate their performance while using measures that reflect relatively little consideration of the co-operative principles and values. Also, Liebrand (2007), insisted that, most co-operatives use return on assets and net margins on sales. The shortfalls for these measures are more of short term that emphasize economic benefits and hence ignore other aspects like education and social aspect. Saïsset et al.(2011), in their study on co-operative performance measurement urged that conflict between co-operative short term and long term performances should be balanced in order to reach their economic and social objectives.

Other studies including Nkuranga and Wilcox (2013) have put co-operative performance into five (5) strategies the first being co-operative development recruitment and retention strategy focusing on the human capital as the central part of any organisation. The second one is the market linkages and relationships management where a co-operative has to manage properly the marketing strategy so as to fetch high prices, through adding value. The third one is structure and accounting system while the fourth one is production and quality of inputs. The two strategies are the internal ability of the co-operative to operate well. The fifth one focusses on the legal status and co-operative planning strategy. The approach suggested by Nkuranga and Wilcox (2013) is viewing the performance of the co-operatve comprehensively. However, it lacks some detailed analysis on learning and social aspect.

Simkhada (2017), viewed the performance of the co-operatives in various perspectives which are customers, internal business and learning and growth. The customer perspectives as suggested by Simkhada (2017) measures types of products and services, quality of product, and service, and customer satisfaction. Then, the internal business process measures policies and procedures of a co-operative, operational efficiency, competitive position and business plan. Again the performance is well measured by using these perspectives, although it lacks the social aspect of the co-operative goals. These perspectives have been used in financial co-operatives and yet to be tested in primary AMCOSthat has different characteristics.

Yang *et al.,* (2010) contended that co-operatives performance to be measured against four (4) key measures; procurement strategy, marketing strategy, distribution strategy and information systems strategy. Ainebyona and Tiruhungwa (2011), used the same approach in examining the relevance and key performance indicators of a co- operative to measure performance in Agricutural Co-operative at Union level. However, the study did not tell as to why the indicators were selected and ignores the member aspect as well as learning and growth. Also, it did not capture the social aspect of the co-operative.

From the empirical studies discussed above, it is observed that there have been conflicting views on what should be used as proper measure of performance in primary AMCOS. More so, there is limited empirical evidence especially in Tanzanian context. Most literature are from developed countries and other countries which might have different characteristics. Despite the limited empirical studies available yet the emphasis is given to the investor-owned indicators relying on financial performance. Although financial performance is important to be evaluated in AMCOS, limiting to it alone can give only the historical performance of the co-operative and ignore the driving factors. It is by these reasons some of the empirical studies combine financial indicators with non-financial indicators (Da Silva, Leite, Guse and Gollo, 2017; Masuku and Mutangira, 2016; Shukla, and Mbeche, 2016; Deriada, 2005). The current seeks to identify both financial and non-financial measures specific to the primary AMCOS.

According to the literature reviewed there are measures that capture the holistic view of the cooperatives, with insufficient factors. The other extreme area observed from the studies is for those which have decided to use only the non-financial measures (Liang, Huang, Lu and Wang, 2015; Henehan and Anderson, 1999). This also is one sided view that could not be proper because the multiple objectives of the co-operatives could not be measured properly. Therefore, they can be summarised into: human capital (trainings, skills, etc.), internal process capabilities (strategic planning, operational efficiency, relational etc.), and lastly the financial part where various indicators have been used. Despite the fact that the above studies are showing little focus on comprehensive performance evaluation approach, even with those weaknesses there is limited empirical studies in Tanzanian context which have identified the constructs and indicators which are suitable for the evaluation of the primary AMCOS.

2.3 Guiding theory

An organization with multiple goals will eventually attract the interests of many stakeholders (Hassan, 2005). Hence this study is guided by Stakeholders Theory (ST) developed by Freeman (1984). The theory does offer a multi-dimensional approach for enterprise performance measurement (Freeman, Harrison, Wicks, Parmar, and De Colle, 2010). Stakeholders can be defined as the groups or individuals, inside or outside the enterprise that has a stake or can influence the organisation's performance (Freeman, 2010). The stakeholders for a co-operative institution are: members, customers, communities, suppliers, and employees who participate in the organisation to plan, design, implement and deliver the organisation's products and services to its customers (Gijselinckx, 2009). Cheowsuwan, (2016) argued that many scholars who apply stakeholder theory to performance measurement, believe "performance measurement design starts with stakeholders". Given this view, apparently, in measuring performance there is a need to ensure it covers a holistic view of the organisation.

2.4 Methodology

The research design adopted was an exploratory sequential mixed method. The design was used in order to enhance triangulation of data (Berman, 2017; Creswell et al., 2004). The other reason was limited literature on the area, and also the complexity of the concept of performance measurement system to AMCOS members. The study went through two phases: first phase was a qualitative data collection and analysis, then was followed by a second phase of quantitative data collection and analysis.

Phase one: A qualitative study was opted in order to get the detailed insight from the literature (Appendix 4), co-operative experts as well as the documentary review (Appendix 5) from co-operative reports, on the performance measurement system due the complexity of the concept to the co-operative members who according to the co-operative structure are the decision makers. A thorough literature review was done to identify various factors which have been used for conceptual development.

The concepts were then discussed with the key informants who have knowledge on the performance measurement in co-operatives. The Key Informants were selected purposely because of the experience and knowledge on co-operative performance system. Experts were obtained from Moshi Co-operative University (MoCU), Kilimanjaro Native Co-operative Union (KNCU), Assistant Registrar's Office, District Co-operative officers and AMCOS board members. The rationale for focusing on these

organisations is their involvement in the co-operative sector for long enough and therefore rich of valuable information. The key informants for the study consisted of 15 experts: Moshi Co-operative University (2), Registrar's office (1), Co-operative union staff (5), co-operative officers (2) and AMCOS board members (5) respectively. Conducive atmosphere was provided to stimulate participants to openly discuss their ideas and to actively interact.

Key informants' views were appropriate in order to clarify the factors and items which arose from the literature review. The key informants were thoroughly engaged through in-depth interviews and Focus Group Discussions (FGDs). There were 3 focus groups composed of five members each. For more triangulation, documentary review was used by accessing 8 AMCOS Annual General Meeting Reports which were approved and signed by the co-operative Officers. The researcher saw that this to be a very rich source of data. The aim was to check whether the concepts discussed by the experts are also discussed also in the Annual General Meeting. For reliability the study used textual data approach through documentary review method to see the areas which the co-operatives were more concerned during their plans and meetings. These reports consist of the Chairman's report, the annual budget, business plan (for this study only one co-operative attached), minutes of the current year and the previous year.

Content analysis was used to analyse data obtained from the documentary review, key interviews and FGDs. The first step was coding data, and then categorized, sorting and retrieving. Transcribing was done from the recorded information to the text. Also, the notes which were written in the notebook were also transcribed in the word text. Then the coding was done from the text where the sentences which share the same idea were coded the same. After coding, there was a need to give them themes and sub themes. The theme was developed depending on the objective of the study. In this case the performance measurement aspects and the measures for the aspects were the main categories. The data were further categorized into five aspects: Financial, human capital, business process, member/customer and social. Data were analysed after reducing them to the analysable format and then documenting them in the form of descriptions and interpretation.

Phase two: The objective of this phase was to validate the results from the qualitative findings, where the survey was conducted. After the synthesis of the qualitative results a

questionnaire was developed and distributed to 334 members of AMCOS. First, they were asked to rank the importance of the five aspects. Then a total of 30 items in the five aspects: financial 7, member 5, internal 7, learning 8, social 3 were assessed. Likert scales statements were developed ranging from 1 to 5 to assess the perceptions of the respondents on how they agree with aspects and measures which were established by the experts and documentary review analysis.

The study used members of the co-operative societies as a unit of inquiry since scholars recommend that when you want to understand the performance of the co-operative ask members (Mayo, 2011). The emphasis in co-operative society is on members' value because these institutions are owned by members. Active members were selected depending on the criteria that, they have sold coffee through their co-operative societies for the past three. Random sampling was involved where names of the active members were picked randomly in an equal interval depending on the list of a specific co-operative society. To rank the importance of each aspect, the descriptive statistics was used. While for the seeks agreeability of the items in the aspects, Exploratory Factor Analysis (EFA) was employed to confirm the factors which can be established for the performance measurement system in AMCOS.

2.4.1 Reliability and validity test and EFA results

Cronbach's Alpha (Cronbach, 1951) is one of the widely used measures of internal consistency reliability in the social sciences (Loewenthal and Lewis, 2018; Diedenhofen and Musch, 2016; Bonett and Wright, 2015; Cronbach, 1951). Reliability of data was conducted in order to assess the internal consistency of the aspects through Cronbach's Alpha and was significant at an Alpha above 0.7 for financial, member, internal business and learning which indicates strong consistency among aspects (Prajogo and Sohal, 2003). However, the social aspect scored low (0.565) but still the aspect was maintained due to its importance in the co-operative. The results gave a support to use exploratory factor analysis to determine whether some items could be removed and to capture the meaning of the framework accurately.

Table 2.1 : Reliability and validity test

Aspect	Cumulative variance	Factor loading range	Cronbach's Alpha	AVE	CR	KMO	Bartlett's Test
Financial	54.584%	0.663-0.790	0.861	0.546	0.894	0.894	P<0.001
Member	60.911%	0.729-0.817	0.839	0.609	0.886	0.854	P<0.001
Internal business	52.262%	0.662-0.788	0.847	0.523	0.884	0.875	P<0.001
Learning	50.554%	0.622-0.788	0.859	0.505	0.891	0.870	P<0.001
Social	53.569%	0.673-0.767	0.565	0.536	0.775	0.617	P<0.001

Construct validity of a test is measured in two aspects that are convergent and discriminant validity. These examine the extent to which measures of a latent variable shared their variance and how they are different from others (Alarcón *et al*., 2015). The Composite Reliability (CR) was used in order to overcome some traditional CA's deficiencies. The CRs in this study are in an acceptable range of above 0.80 except for the social aspect which was 0.775. The last measure was a convergent validity to measure the degree to which individual items reflects a perspective convergent in comparison to items measuring different aspects. Convergent validity was achieved since the factor loadings were above 0.6 (Table 2.1). This is a good threshold for convergent validity (Park and Gagnon, 2006). The Average Variance Extracted (AVE) from this study as recommended by Fornell and Larcker, (1981), is above 0.5 indicating that convergent validity was adhered. All AVE results for the model's constructs are greater than the squared inter-construct correlations that indicate that there is no problem with discriminant validity.

Bartlett's test of sphericity and Kaiser- Meyer- Olkin (KMO) measure of sampling adequacy were tested in order to evaluate the appropriateness of the data for factor analysis. Bartlett's test was $p < 0.001$, a significant probability level indicating that there is association among variables since the matrix is not identity matrix. Besides, the KMO value 0.60 was higher than the threshold of 0.5 (Darko et al., 2017; Williams, Onsman, and Brown, 2010), indicating that sample is acceptable for factor analysis. Hence data were accepted for running EFA for further Analysis.

2.5 Findings and discussion

The study came up with five aspects (social, human/learning, business process, member and financial). However, these qualitative results were validated by the survey which also found the same aspects to be of important in AMCOS performance (Table 2.2). In ranking the importance of each aspect using percentages, it is revealed that the social

aspect (M=52.52) ranks the last by having the least percentage although the difference between the other aspects is not alarming.

Table 2. 2 : Ranking the importance of performance aspects

Aspect	N	Minimum	Maximum	Mean	Std. Deviation
Social Perspective	334	0	100	52.52	30.634
Human capital	334	0	100	57.77	29.786
Financial perspective	334	0	100	60.80	28.023
Member perspective	334	5	100	60.80	28.165
internal business process	334	0	100	61.62	28.233

The findings imply that the five areas are important and all should be taken into consideration when one wants to evaluate the performance of the AMCOS. This is evidenced from the literature review, documentary review (Appendix 4), Key informants and survey. However, it can be noticed that social aspect is not given much weight in the AMCOS compared to internal business, member, financial and human capital. Yet the quantitative study confirms the findings from the qualitative research.

2.5.1 Social aspects

Respondents recommended changing the current performance measurement system so as to balance the view of the co-operative in terms of financial and non-financial performance. Among the vital changes suggested was to include the social aspect when evaluating co-operative performance. Based on that, one of the key informants argued; "*…. social aspect is very important to be included…. there is a time when TANESCO SACCOS distributed bed sheets to the community (KI1, May 2018*). It was also claimed that the co-operative has been collaborating with the community in addressing some of the challenges. This can be evidenced also in the documentary review (Table 2.3) where Mamsera AMCOS has been sponsoring two students for secondary school which could be taken as one of the indicators of social performance. However, little emphasize is given by other AMCOS as apart from Mamsera, social aspect was not an agenda for the meetings.

It can be argued that it is important to consider social aspect when evaluating the performance of AMCOS. Although sometimes social aspect can be overlooked, it is emphasized in the seventh co-operative principle, the concern for community. Therefore, one could argue that, so long as these co-operatives are involved in social practices, it is prudent to evaluate the same when it comes to the issue of performance.

One of the key informants argued that; *"…. It is not good for the co-operative to profit while the community is suffering (KI2, May 2018).* This implies that, wherever co-operatives are operating, they should consider the well-being of the surrounding community. The logic is that, co-operative institution is a community product, then when the community around is flourishing, there is a possibility of having strong co-operative as well.

The issue of social aspect, however, goes beyond helping the community. It focusses on achieving the social benefits within the co-operative's members as well as in the surrounding community. This can enhance trusts, values, beliefs, shared norms that facilitate cooperation and collective action for mutual benefits (Bhandari and Yasunobu, 2009). That means; members are in the co-operative to fulfil their economic as well as social benefits. The study also revealed that in order to achieve the social benefits, members' participation is paramount. Through participating, is when decisions will be made by the majority in social areas which seem to them as of priority and importance and the decisions are made democratically.

Social aspect is influenced by the presence of trust among members, leaders and staff and agreement on the objectives (Bianchi, 2020; Valentinov, 2004). Trust should also pay attention to the entire community sorrounding the co-operative. Some involvement in the local community includes things such as voluntary work in local associations, membership in associations, help among community members, solidarity among community members, feeling safe and secure in local community and knowing each other in local community (Bianchi, 2019). Social aspect can help to bring new ideas and opportunities (Sørensen, 2016). When government supports the promotion of agricultural activities through the mobilisation of people to join co-operative, implicitly is the mobilisation of social capital in order to achieve the economic activity (Flanigan and Sutherland, 2016). Another proof for the social role as the co-operative is the extension of mutuality to non-members. The solidarity, altruism helps the co-operators to spread benefits among other community members as individuals or collectively (Bianchi, 2020).

The study also found out the indicators for measuring the performance of social aspect to be collaboration with the community and a number of supports to the society. The indicators concur with those used by Kinyuira (2019), who did research on social aspect

performance rating in Co-operatives in Kenya. That means as a co-operative collaborates with the society surrounding it, there is a possibility to attract more people to join the co-operative and feel comfortable to participate in various areas. The same applies when the co-operative gives support to the community. This includes the possibility of saving people's lives as well as empower them whether financially or socially. The return of this action can have a far-reaching benefit to the co-operative since it increases the level of trust within the co-operative members and the community. Therefore, knowing the level of collaboration of a certain co-operative and the number of supports given to the community is a proxy measure of the social performance aspect.

Table 2. 3 : Social performance indicators

Item	N	Minimum	Maximum	Mean	Std. Deviation	Loadings*
SO1-number of activities done in the community	334	1	5	3.49	1.326	0.753
SO2-involvement in the community issues	334	1	5	3.54	1.209	0.764
SO3-collaborations with the community	334	1	5	4.03	1.083	0.678
Total variance explained	**53.66%**					
KMO 0.619						
Bartlett's test	**p<0.001**					

***Extraction Method:** Principal Component Analysis.

a. 1 components extracted.

To validate the qualitative results, the study run a descriptive analysis to assesses the level of the agreeability of the measures to be used in the social performance where it found collaboration with community (Mean = 4.03), number of activities or support to the community (Mean = 3.49) and level of involvement in the community matters (Mean = 3.54) was agreed to be the proxy measure for social aspect (Table 2.3). To ensure more validity, Exploratory Factor Analysis using Varimax was run to check the factor loading > 0.6 (Williams *et al*., 2010) and whether they fit for the framework and remove the item which do not fit. A total of 3 items were tested to define the social aspect as revealed from the qualitative analysis. The result revealed that they explained 53.66 percent of the variance. Factor loading ranged from 0.678 and 0.764 which is > 0.5. KMO (0.619), and Bartlett's test ($p < 0.001$) all exceeded threshold level. Therefore, the factors which were qualitatively developed have been validated by the survey from the members who are the owners of the AMCOS.

2.5.2 Human capital aspect

One of the key informants argued that:

> *"Education and training should be given to members first because when members have knowledge, it will be easy to understand when the management makes mistakes……training and education will make them understand how to put in office good, leaders as well as how to translate the organisations vision (KI, May 2018)".*

It is generally agreed that when membership education is given, it will be possible for members to engage in strategy formulation effectively and participate fully in improving the other remaining functions. The issue provided a bold argument on the need to have strong members before other structures. This is because the decision makers of these institutions are the members. Thus, in order to have an informed decision, education and training are very important. It is from this line of argument another respondent argued that, *"…. members should be able to direct leaders and management on what they want their co-operatives to be (KI5, May 2018).* The argument here holds water so long as members are the owners who elect few among them to become board members and committee members. Therefore, having educated members implies having educated leaders. The same applies that having educated members means having people who can question their leaders, or challenged them according to the task they have been mandated to oversee.

Apart from members' education, training should extend to board members and to the staff, although Focus Group consensus was; *"…the budget which is set for training, is insufficient (FGD, May 2018)"*. Usually, the budget is approved by members during the AGM. Then, if the budget is claimed to be insufficient it is an indication that members themselves do not put education as a first priority. This was confirmed by the FGD discussion which came up with a consensus that, *"…members just remain silent and hopping that everything will be done by the management (FGD, May 2018).* This shows how members are not empowered enough to manage their institution.

It was also revealed that, even if they have in training, they are not committed to the training's knowledge and skills, rather most of them are after allowances. Furthermore, it was also claimed that, in AGMs, things like training are discussed rarely. This can be evidenced from the documentary review that; the training is seen not to be discussed much in the AGM. Moreover, there were some claims that some board members and

members think that when they educate staff/management, they will look for greener pastures elsewhere. This implies that such co-operatives will remain in a cycle of illiteracy from members to staff.

According to the findings, the following were identified as measurement indicators for human capital: number of trainings, type of trainings, number of staff members, skilled staff members, level of understanding, duration of training increased, number of staff and competent staff, minimum required skills for the job and employee satisfaction. The factors identified match with those under the areas of performance that have been summarized in Appendix 4 of documentary review. The aspects are supported by other researchers (Masuku *et al*., 2016; Ainebyona and Tiruhungwa, 2011) who suggested some of the indicators which fit to human capital aspect.

The findings from the qualitative study were tested in the field through survey by assessing the level of agreeability of the indicators by members. All the indicators observed were agreed by members to be used as the proxy measure of the human aspect performance. The mean for each item ranged from 3.75 to 4.14 indicating that members agreed the indicators to be used for measuring human aspect performance (Table 2.4).

Table 2.4 : Human capital aspect

Item	N	Minimum	Maximum	Mean	Std. Deviation	Loadings*
L7-number of trainings	334	1	5	3.75	1.040	0.696
L2-employee satisfaction	334	1	5	3.83	1.148	0.788
L6-number of employees	334	1	5	3.85	1.124	0.710
L8-frequently members education	334	1	5	3.98	1.010	0.635
L3-employee retention	334	1	5	4.00	1.031	0.695
L4-quality of training	334	1	5	4.05	0.988	0.765
L5-employee skills	334	1	5	4.07	0.948	0.718
L1-employee competence	334	1	5	4.14	0.865	0.692
Total variance explained		**51.11**				
KMO		**0.874**				
Bartlett's test		**p<0.001**				

*Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The items in Table 2.4 show the validity of the results by having a total of 8 items which were tested to define the human aspect as revealed from the qualitative analysis. The result revealed that the items explained 51 percent of the variance. Factor loading

ranges from 0.63 and 0.78 which is > 0.5. KMO (0.874), and Bartlett's test ($p < 0.001$) all exceeded threshold level. Therefore, the factors which were qualitatively developed have been validated by the survey from the members who are the owners of the AMCOS.

2.5.3 Business process aspect

The study found that internal business aspect is a challenging but important area in co-operatives. Although business process aspect is very important for consideration in evaluating performance, yet the area is poorly given due attention. *"…. this is partly why our co-operative is not doing well…. for example, marketing is neglected, the books of accounts are not audited…the co-operative has weak plans (FGD, May 2018).* As evidence, the respondents claimed that the co-operative does not carry out auditing and inspection and sometimes they fail to respond to audit queries. Another respondent said, "…. *[They] failed to get loan because the financial reports were not audited (KI6, 2018)*''. The study also revealed that some staff members do not adhere to the co-operative rules and regulations, internal control systems, strategies for development and preparation of strategic plans.

The study further established the co-operatives inability to deal with cases in courts, producing quarterly reports, a gap between the time to act and the AGM, communication and feedback among studied co-operatives. The findings established that, co-operatives lack the mechanism to improve their business processes. According to the AGM reports as reviewed in Table 2.5, it can be seen that this area is addressed by nearly all co-operatives. What is not seen from the reports are strategies toward the achieving of the co-operative plans. Also, no any proper measuring mechanism is put forward in the performance evaluation.

The study also found that, the indicators which are suitable according to the respondents and documents reviewed are: facilities availability, quick service delivery, quality service, the use of internet services which meets members' needs, collecting and selling members' crops, quality services, operational efficiency and ability to develop products. These measurement indicators suggest that if used properly, the co-operatives will do well in their business operations. Nkuranga and Wilcox (2013) support the study on including the internal business operation by insisting on the co-operative to ensure they have the internal ability to operate.

For validation purposes the survey study tested the items in the field where they reported high level of agreeability by having the mean value ranging from 3.76 to 4.18 (Table 2.5). The leading indicators are quality of services and quick service delivery.

Table 2. 5 : Business process aspect

Item	N	Minimum	Maximum	Mean	Std. Deviation	Loadings* a
I2-sufficient facilities	334	1	5	3.76	1.111	0.721
I4-product development	334	1	5	3.76	1.145	0.788
I3-use of ICT	334	1	5	3.84	1.058	0.722
I7-contract sales	334	1	5	3.92	1.025	0.708
I6-operational efficiency	334	1	5	4.00	1.003	0.673
I5-quick serving members	334	1	5	4.14	0.925	0.772
I1-quality	334	1	5	4.18	0.805	0.0661
Total variance explained		**52.1%**				
KMO		**0.875**				
Bartlett's test		**p<0.001**				

*Extraction Method: Principal Component Analysis.
a. 1 components extracted.

A total of 7 items were tested to define the human aspect as revealed from the qualitative analysis (Table 2.5). The result revealed that they explained 52 percent of the variance. Factor loading ranges from 0.66 and 0.78 which is > 0.5. KMO (0.875), and Bartlett's test ($p < 0.001$) all exceeded threshold level. Therefore, the results from both qualitative and survey indicates that the factors which were suggested fit the measurement system framework.

2.5.4 Members/customers aspect

Members have dual roles in co-operatives; they are both supplier and consumer of the resources. In trying to understand the factors which can be used for performance evaluation in this area, the study found member participation to be very important for the betterment of the co-operatives. This goes together with the co-operative being able to meet the member's needs. It means that, so long as members are the customers of their own co-operatives, they should participate fully in producing their products. Therefore, by doing so it is possible to attract potential customers as well as external customers who are going to buy their crops. It was revealed that one of the contributing factors for this to happen is member commitment. The question was asked on how committed the members were, and the response was that: *"…. Most of the members and board members are not committed (KI, May 2018)".* We have to remember that,

members are the owners of their co-operative vision and Mission. Now here comes the serious case that, the one that is required to follow his/her vision is not committed to it. This can have two possible explanations: one, the member is uneducated and two, the member does not know why he/she is a member.

Another respondent pointed that: *"…many of the members are not committed, they are locked to formula of AGM…. not outgoing …and it is easy to tell [them] there is no fund (KI1, May 2018)"*. This means members are indifferent and leaving the co-operative to leaders and managers and wait until the end of the year to receive the annual report. This lack of commitment automatically will affect the performance of the co-operatives. Members take co-operatives as a place to solve their problems without involving themselves directly to the social and economic activities. Hence, one could say the members do not own their co-operatives. Some members consider the co-operative as something that belongs to board members and managers.

Likewise, the study revealed that some of the board members are also not committed rather they are after meeting allowances and other benefits. As discussed previously in the human capital aspect, when there are strong members the chance to have good board members is big and the vice versa is true. What is revealed the results given here is the outcome of having uncommitted members as well. Therefore, one could argue that if the member commitment is lacking, we expect also members' satisfaction to be low because the possibility of the co-operative to deliver without members' commitment is nearly negligible.

The suitable established factors for measuring performance in member aspect are: increase of members, members' economic participation, ability to utilize opportunities, participation in meetings, participation in decision making, members' satisfaction, membership promotion, farm visits and level of cooperation among themselves. The findings are supported also by Masuku *et al.,* (2016) and Mubirigi et al., (2016) which emphasize member participation in cooperatives. Results from survey (Table 7) suggest with the evidence that member satisfaction (Mean = 3.81), member profitability (Mean = 3.87), membership increase (Mean = 3.98) and market share increase (Mean = 3.99) are the suitable indicators for measuring member aspect.

Table 2. 6 : Members aspect

Item	N	Minimum	Maximum	Mean	CV	Std. Deviation	Loadings*
CU1-member satisfaction	334	1	5	3.81	28.53	1.087	0.780
CU4-member profitability	334	1	5	3.87	24.81	0.960	0.807
CU5-membership increase	334	1	5	3.98	25.53	1.016	0.817
CU3-market share increase	334	1	5	3.99	25.44	1.015	0.728
Total variance explained			**60.76%**				
KMO			**0.854**				
Bartlett's test			**p<0.001**				

*Extraction Method: Principal Component Analysis.

a. 1 components extracted.

From table 7 above a total of 5 items were tested to define the human aspect as revealed from the qualitative analysis. The result revealed that they explained 60.76 percent of the variance. Factor loading ranges from 0.728 and 0.817 which is > 0.5. KMO (0.854), and Bartlett's test ($p < 0.001$) all exceeded threshold level. Therefore, the survey findings are in line with the qualitative findings of the study.

2.5.5 Financial aspect

The financial aspects are very critical in performance evaluation in co-operatives. However, this seem not to be discussed deservedly during member meetings. Both members and board members seem to give scanty attention on this matter during meetings. Respondents indicate that during the AGM, most attention is paid on sitting allowance matters rather than discussing strategic issues concerning the same. It has been revealed that during AGM, the major focus is on how much sitting allowances will the delegates get. The moment the allowance is paid most participants leave and major decisions are left in the hands of co-operative officials and the board members without effective member participation. This is against the spirit of co-operative member participation.

The study found that in the financial aspect, the suitable indicators which can be used and reflect the financial aspects were: growth of assets, profitability, price, ROI, revenue growth, shares, dividend and cost reduction. This means, as co-operatives, they should strive to utilize their assets like buildings, land and vehicles to generate income. The utilization benefit should go down to the member so that they will produce quality crops, hence fetching good market price. Availability of market will be possible to have

good price and good revenue, which leads to profitability. The study went further in order to validate the results from the qualitative study. The survey found that return on investment (Mean = 3.49) was not agreed to be one of the indicators (Table 2.7).

Table 2. 7 : Financial aspect

Item	N	Minimum	Maximum	Mean	Std. Deviation	Loadings*
F6-dividend to members	334	1	5	3.38	1.207	.696
F4-Return on investment	334	1	5	3.49	1.087	.739
F2-Price	334	1	5	3.61	1.146	.772
F7-Cost reduction	334	1	5	3.66	1.061	.771
F5-Share increase	334	1	5	3.72	1.160	.705
F3-Revenue growth	334	1	5	3.74	.965	.790
F1-Profitability	334	1	5	3.93	.963	.721
Total variance explained	**60.76%**					
KMO	**0.894**					
Bartlett's test	**p<0.001**					

*Extraction Method: Principal Component Analysis.
a. 1 components extracted.

From table 8, a total of 8 items were tested to define the human aspect as revealed from the qualitative analysis. The result revealed that they explained 60.76 percent of the variance. Factor loading ranges from 0.663 and 0.790 which is > 0.5. KMO (0.894), and Bartlett's test ($p < 0.001$) all exceeded threshold level. Therefore, the factors which were qualitatively developed have been validated through survey.

2.6 Conclusion and recommendations

The objective of the study was to establish performance measurement aspects of primary AMCOS in a holistic view. There were five (5) measurement aspects named financial, members, learning and growth/ human capital, internal business process and social which were found to form a comprehensive measurement system in primary AMCOS. Also, the indicators for each aspect were established. The five (5) aspects cover both financial and no financial aspects of the primary AMCOS. Therefore, the established aspects and their corresponding indicators form a vital input to the measurement system in the primary AMCOS. The study benefits not only to the primary AMCOS in Rombo but to other AMCOS which operates independently in doing their businesses. Applying these five aspects and indicators in the performance measurement system will help to monitor and manage various activities in the primary AMCOS since they act as roadmap for improvement. This can lead to a robust AMCOS since monitoring and management of the AMCOS from time to time in all aspects will be enhanced, thus, providing quality services to their members.

Since findings show that the aspects are very important, it is recommended to the scholars and practitioners to use the established aspects and indicators in assessing the performance of primary AMCOS for a comprehensive result. It can be done by using a scorecard to have an overall performance result. It is also recommended to the policy makers to consider all five aspects whenever they are making any decision concerning the co-operatives by balancing them.

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CHAPTER THREE

3.0 Relationship between Performance Measurement System Aspects Among Agricultural Marketing Co-operative Societies in Rombo District, Tanzania

Victor Shirima[1], Henry Chalu[2] and Benson Ndiege[3]
[1]Department of Banking, Accounting and Finance, Moshi Co-operative University, Tanzania, P.O. Box 474, Moshi, Tanzania
[2]Department of Accounting, University of Dar es Salaam Business School, P. O. Box 35046, Dar es Salaam, Tanzania
[3]Tanzania Co-operative Development Commission (TCDC), P.O. Box 201, Dodoma, Tanzania

3.1 Abstract

Co-operatives like any other institutions have various performance measurement aspects that can be grouped into financial aspect and non-financial aspect. The non-financial aspect can be also subdivided into learning and growth, internal business process and members/customers. There have been some theoretical claims on the causal relationship between performance measurement aspects. However, the empirical evidence on causal effect relationship between these aspects in co-operative sector has not got much attention. This paper, empirically, examined the causal relationships among performance measurement system aspects in Agricultural Marketing Co-operative Societies (AMCOS). Specifically, the paper examined the relationship between learning, business process, member and financial aspects. The study adopted a cross sectional design, where 334 sampled respondents were involved. Structural Equation Model (SEM) was applied test the hypothesis. The findings revealed that: learning has a positive significant relationship with internal business process; internal business process with member aspect; and member aspect with financial aspect. It also established a positive significant relationship between the learning aspect and financial aspect. The study concludes that, there is an empirical evidence on the presence of significant relationship among co-operative performance aspects. The study recommends that, so long as learning and growth appear to influence all the other aspects, policy makers should put much efforts in developing human capital. Furthermore, it is recommended to those charged with internal business processes to use the expertise and skills they have to come up with innovative ideas to provide quality services to members.

Key word: Co-operative, Performance, Evaluation, Balanced Scorecard, Structural Equation Model

3.2 Introduction

Co-operative institutions are the popular economic institutions that have spread all over the world (Ezekiel, 2014) to meet multiple goals of economic, social and cultural needs. Presence of multiple goals makes difficult and complex to evaluate the performance of these types of institutions. Given the nature of the co-operatives, the performance should consider financial and non-financial aspects. Non-financial aspect can also be subdivided into member aspect, internal business process aspect, learning aspect and social aspect (Dhamayantie, 2018; Duguid, 2017). The assumptions according to performance measurement system is the presence of causal effect relationship (Kaplan and Norton, 1996, 2001). Causal relationship is very important in order to understand what to manage and the priorities to be given during planning in various aspects. Knowing the causal relationship assists to express how the indicators are linked together, hence, can give a direction on what is supposed to start with, during planning and the effect they have whenever the decision is made and therefore, used as a strategic tool. Performance aspects and indicators have been discussed by a number of scholars in co-operative (Dhamayantie, 2018; Masuku, Masuku and Mutangira, 2016; Mayo, 2011), yet, the identification of variables and their empirical causal effect relationship is not yet established.

Co-operative institutions are operating under a very competitive environment which need a sound understanding of what drives the performance. Resource Based View (RVB) Theory assumes that organisation can attain competitiveness by acquiring and possessing resources in their domains that are firm specific and not available to competitors. These resources are human resources, technology, social relation (Bloodgood, 2019; Campbell and Park, 2017). Nevertheless, a causal relationship assessment is vital within the performance measurement aspects. Cause-effect relations is also emphasised by model like Balanced Scorecard (BSC) system (Kober and Northcott, 2021; Kaplan and Norton, 1996, 2001).

BSC was introduced by Kaplan and Norton in 1990s, and has been a framework for organisations to translate their missions and strategies into a comprehensive set of key performance indicators. It is composed of four perspectives in the following order: Learning and Growth, Internal Business Processes, Customers (for the case of co-operatives members will be used), and Financial. Given the importance of this model,

the current study has also adopted the same to assess the causal relationship among various aspects in AMCOS. The study used learning (competency, staff satisfaction, training and education, number of employees, staff retention, employee skills); internal business process (quality of service and quick service delivery, sufficient facilities, use of technology, new product development); member aspect (member retention, member increase, member satisfaction, market share increase, member profitability); and financial aspect (profitability, cost reduction, price, revenue growth, ROI, share increase). Although some of the co-operatives might not know BSC (Cardemil and Shadbolt, 2006), their organization's performance aspects fit well in the BSC framework. Cardemil and Shadbolt (2006) argued that, co-operatives use all the BSC building blocks like objectives, measures and targets in four areas, namely financial, customer, internal business process and learning and growth irrespectively of their relatively small size and business field. The mentioned aspects form a holistic view of the institutional performance system.

3.3 Theoretical perspective of the study

Ability, Motivation and Opportunity to participate (AMO) theory argue that, for organisations to achieve superior performance they need to ensure, they have human capital with appropriate skills, abilities, motivated, and that they are given chance to execute their skills, knowledge and experience (Marcoux, Guihur and Leclerc, 2018; Moraes et al., 2018; Rajiani, Musa and Hardjono, 2016). BSC model insists the organisations to ensure learning and growth, internal business process, customers and financial are monitored and assessed (Kaplan and Norton, 2001, 1996). The same applies to the AMCOS which are required to struggle in order to increase AMCOS performance. In co-operatives members are the ones who also approve the annual budget in the Annual General Meetings. Although they are not the ones who perform the day-to-day activities, their decisions for example cost reductions, might have some impacts on the financial performance of the co-operative. Therefore, having members with skills, experience and knowledge (learning aspect) on the co-operative issues can influence the financial Aspect.

Institutional performance system of the co-operative society considers four aspects, learning and growth, internal business process, member and financial aspect. Learning and growth calls the continuous improvement in organisation. Learning and growth is taken as a pillar for organisation's success (Daniel, 2017) because, it tries to look on

employee and members capabilities, information system capabilities and on motivation, empowerment and alignment (Sainaghi, Phillips and Corti, 2013). Therefore, learning aspect when improved, it is likely to lead to a high-quality governance which is the most important factor to the co-operative success. Human capital affects innovation and improves business operations. Therefore, it affects the internal business process aspect (Chahal and Bakshi, 2015; Han and Li, 2015; Othman, Mansor and Kari, 2014).

H1*: Learning and growth aspect is positively associated with internal business process aspects*

H2: *Learning and growth aspect is positively associated with financial aspects*

The internal business processes perspective is concerned with the operations in the organisations (Coe and Letza, 2014; Hoque, 2014). Results from empirical studies show that intellectual capital elements (human, innovation, process and customer capital), directly affect business performance (Kalkan, Bozkurt and Arman, 2014; Wang and Chang, 2005). The study conducted by Hejazi, Ghanbari, and Alipour, (2016) on the profit-making organisations found that innovation capital affects process capital, which in turn influences customer capital who for this case are members.

H3*: Internal business process aspect is positively associated with members' aspect*

Customer/member perspective identifies future wants and creating value in terms of time, quality and service. It can be measured by market share, customer retention, acquisition, satisfaction and profitability (Coe and Letza, 2014). Innovation capital affects process capital, which in turn influences customer capital. Finally, customer capital contributes to financial performance (Hejazi *et al*., 2016). However, co-operatives are as good as members make them (Borda and Vicari, 2014). It means the more you have good members the more you have the good co-operative society.

H4*: Member's aspect is positively associated with financial aspects*

The financial perspective examines whether the organisation's strategy will contribute to the bottom-line improvement of the organisation (Amaratunga and Baldry, 2002; Kaplan and Norton, 1996). The common financial measures used in the financial perspective are revenue growth, costs, profit margins, cash flow, net operating income assuming that AMCOS focus on the maximization of profit and net price (Royer, 2004).

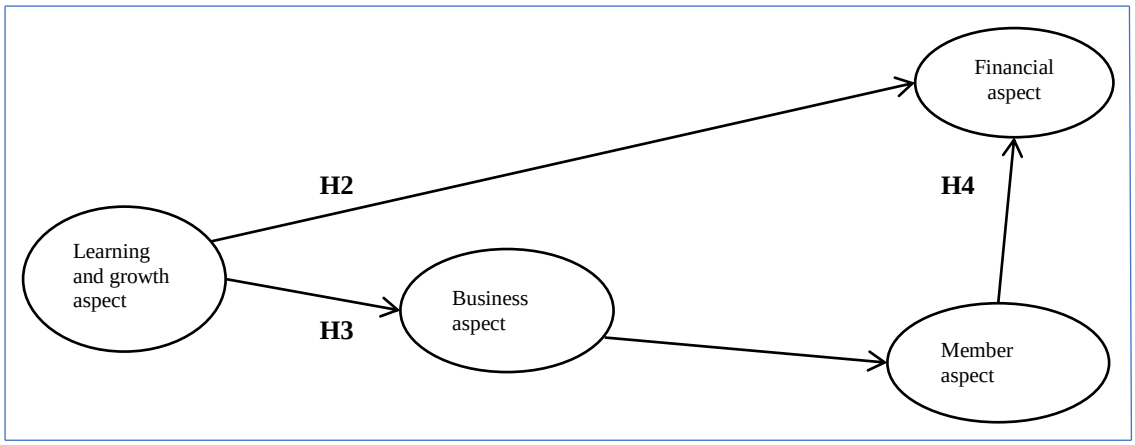

Figure 3. 1 : Co-operative performance measurement conceptual framework

3.4 Methodology

The study was conducted in Kilimanjaro where Rombo District was selected purposively because 100 percent (16 AMCOS) of the primary AMCOS were active. Also, they were doing business on their own with little dependence on the secondary co-operative which is Kilimanjaro Native Co-operative Union (KNCU). Having been active and doing business by their own, it was possible to have reliable information rather than using the co-operatives which are still using traditional models by depending on KNCU in doing their business. The co-operative societies were also purposively selected. The study design was a cross sectional where survey approach was employed.

The sample size used in this study was 334 respondents obtained by using rule-of-thumb. The rule of thumb technique was used because there were no reliable statistics of the active members by using the criteria of those selecting members who sold coffee through their co-operative for the last three years consecutively. Therefore, neither finite population formula nor infinite population formula for sample size could logically fit for these circumstances. Some researchers such as Hair *et al*, and Tatham, 1998, Williams, Onsman, and Brown, 2010 suggest a rule of 10 variables per observation to be applied which for this case is 10 times 22 indicators (220) or a rule of thumb of 100 participants and above. Generally, for factor analysis a rule of thumb suggests having at least 300 sample size as adequate (Tabachnick, Fidell, and Ullman, 2007; Van and Morgan, 2007).

A questionnaire was developed ensuring that no ambiguity in concepts and items by pre-testing and respondents were informed about the anonymity as well as the

confidentiality of the responses, in order to encourage honest answers. A total of 22 items: financial 6, member 5, internal 5, learning 6, were assessed. Likert scale statements were developed ranging from 1 to 5 (ranging from 1→ strongly disagree; 2→ disagree; 3→ agree nor disagree; 4→ agree; 5→ strongly agree) to assess respondents' perceptions on how they agree the selected items to be used in their AMCOS as the important items for measuring their performance. The study used members of the co-operative society as a unit of inquiry since some scholars recommend that, to understand the performance of the co-operative, ask members (Mayo, 2011). The emphasis in co-operative society is on members' value because these institutions are owned by members. Active members were obtained on the criteria that, they have sold coffee through their co-operatives for the past three years were chosen. Systematic sampling was involved where the first member was picked randomly and then the others were picked using K^{th} formula depending on the list of members available in a specific AMCOS.

Data were analysed through descriptive statistics for preliminary analysis, as well as, inferential statistics for detailed analysis. Reliability using Cronbach Alpha was tested before proceeding with further steps. The overall reliability of 0.939 which is above minimum required of 0.7 was achieved. Inferential statistics was done stepwise: 1. Factor analysis using Principal Component Analysis (PCA) was conducted to reduce redundant items and to increase the reliability of each aspect. According to Hair (2010), the exploratory analysis procedure is a powerful tool that can address a wide range of theoretical questions, hence allows the multivariate relationship. At this stage, the study was able to assess the convergent and discriminant validity. 2. Thereafter, the Partial Least Square Structural Equation (PLS-SEM) by using SMART-PLS 3.0 software was used in order to test the hypothesis in the model.

SEM was chosen because it tests multiple regression models in a single analysis at once and has become popular technique to the researchers in social sciences (Hooper, Coughlan, and Mullen, 2008). PLS-SEM is flexible to permit examination of complex associations and can handle various types of data (Wolf *et al*, 2013) and it also combines factor analysis and linear regression (Hair *et al*, 2016). It also addresses the problem of measurement error by removing it and therefore having a good estimation of relationship. The PLS-SEM method was further used because it is designed as a

prediction-oriented approach to SEM. PLS-SEM path modelling using SMARTPLS is appropriate to carry on the confirmatory factor analysis which is more reliable and valid (Afthanorhan, 2013) by combining principal components analysis with regression-based path analysis. In avoiding the inherent problem in empirical social science data which are characterised by non-normal data, PLS-SEM was suitable to solve this problem (Hair *et al,* 2014). The two stages were involved in application of PLS-SEM as one of the requirements (Chin, 2010) (1) the assessment of the measurement model which includes the individual item reliability, internal consistency, and discriminate validity of the measures, and (2) the assessment of the structural model.

3.4.1 Multicollinearity, reliability and validity test

To assess the multicollinearity problem, variance inflation factor (VIF) was inspected. Table 1 indicates that all VIF are below 10 as suggested by Chin (2010) meaning that multicollinearity problem does not exist. Cronbach's Alpha (Cronbach, 1951) is one of the widely used measures of reliability in the social sciences (Loewenthal and Lewis, 2018; Diedenhofen and Musch, 2016; Bonett and Wright, 2015; Cronbach, 1951). Reliability of data was conducted in order to assess the internal consistency of the aspects through Cronbach's Alpha and was significant at an Alpha of 0.939 (see Table 3.1). Then, the aspects tested scored the reliability above 0.7 which indicates a very strong consistency among aspects (Prajogo and Sohal, 2003). The results gave a support to use factor analysis to determine whether some items could be removed and to capture the meaning of the framework accurately.

Bartlett's test of sphericity and Kaiser- Meyer- Olkin (KMO) measure of sampling adequacy were tested in order to evaluate the appropriateness of the data for factor analysis. Bartlett's test was significant at $p < 0.001$ level, indicating that there is association among variables since the matrix is not identity matrix. Besides, the KMOs in Table 3.1 are higher than the threshold of 0.5 (Darko *et al*., 2017; Williams, Onsman, and Brown, 2010), indicating that sample is acceptable for factor analysis.

Factor Analysis was performed through principal component for the perspectives with a total of 22 items/indicators by using a principal component extraction and Varimax rotation. The eigen value for each aspect was above 1.00. Financial aspect gave six indicators explaining a 54.584% of total variance whereas member aspect has five indicators explaining a 60.911% of total variance. For the internal business there are

five indicators explaining a 52.262 % total variance whereas learning has six indicators explaining 50.554% total variance. The total variance explained is within acceptable range of 50% for social sciences. The entire factor loadings were above 0.50 which is acceptable (Hair *et al*, 2010), hence no item was deleted at this stage.

Table 3. 1 : Testing for Multicollinearity and Reliability of data.

Aspect	Cumulative variance	Cronbach's Alpha	VIF	KMO	Bartlett's Test
Financial	54.584%	0.861	1.499	0.894	P<0.001
Member	60.911%	0.839	1.750	0.854	P<0.001
Internal business	52.262%	0.847	1.655	0.875	P<0.001
Learning	50.554%	0.859	1.774	0.870	P<0.001
Overall reliability		0.939			

NB: Determinants for the correlation matrices was > 0.00001 indicating absence multicollinearity.

Construct validity was measured in two aspects that are, convergent and discriminant validity. These examine the extent to which measures of a latent variable shared their variance and how they are different from others (Alarcón, Sánchez, and De Olavide, 2015). The Composite Reliability (CR) was used in order to overcome some traditional CA's deficiencies. The CRs in this study are in an acceptable range of above 0.80. The last measure was a convergent validity to measure the degree to which individual items reflects a perspective convergent in comparison to items measuring different aspects. Convergent validity was achieved since the factor loadings were above 0.6 (see Table 3.2). This is a good threshold for convergent validity (Park and Gagnon, 2006). The Average Variance Extracted (AVE) from this study as recommended by Fornell and Larcker (1981), is above 0.5 indicating that convergent validity was adhered.

Table 3. 2 : Factor loadings, Average Variance Extracted and Composite reliability

Construct	Indicators	Factor loadings	VIF	AVE	Cronbach's alpha	Composite Reliability
MA/CA	CU1	0.781	1.747	0.611	0.841	0.841
	CU2	0.795	1.851			
	CU3	0.815	1.942			
	CU4	0.732	1.539			
	CU5	0.783	1.673			
FA	F1	0.721	1.627	0.573	0.851	0.890
	F2	0.767	1.773			
	F3	0.781	1.957			
	F4	0.758	1.709			
	F5	0.727	1.549			
	F7	0.786	1.879			
IBPA	I1	0.723	1.396	0.577	0.817	0.872
	I2	0.710	1.543			
	I3	0.766	1.701			
	I4	0.774	1.758			
	I5	0.819	1.879			
LGA	L1	0.723	1.633	0.560	0.842	0.884
	L2	0.812	2.127			
	L3	0.710	1.553			
	L4	0.774	1.860			
	L5	0.712	1.667			
	L6	0.754	1.802			

MA: member aspect; FA: Financial Aspect: IBPA: internal business Aspect; LGA: learning Aspect: F1: profitability; F2:price; F3: revenue growth; F4: return on investment; F5: share increase; F7: cost reduction; L1: competency; L2: employee satisfaction; L3: employee retention; L4: training and education; L5: employee skills; L6: number of employees; I1: quality of service; I2: Sufficient facilities; I3: use of information technology: I4: new product development; I5: quick service delivery; CU1: member satisfaction; CU2: member retention; CU3: market share increase; CU4: member profitability; CU5: members increase

Discriminant Validity was tested according to Fornel and Larker (1981) criteria, that requires the square root of AVE to be greater than the correlations among the constructs. All square root of AVE in Table 3.3 that appear in the diagonal for the model's constructs are greater than the inter-construct correlations, hence indicate that there is no problem with discriminant validity.

Table 3. 3 : Discriminant validity test for measurement model in PLS

	FP	IBP	LG	MP
FP	**0.757**			
IBP	0.684	**0.759**		
LG	0.556	0.721	**0.748**	
MP	0.679	0.586	0.544	**0.782**

MA: Member aspect; FA: Financial Aspect: IBA: Internal Business Aspect; LGA: learning Aspect:

3.5 Findings

To assess the structural model, two measures were used namely: statistical significance (t- test) of the estimated path coefficient (β), and the coefficient of determination (R^2) which explain the ability of the model to explain the variance in the dependent variable. The hypothesis model was tested by using PLS method to confirm the relationship

between the constructs within the model. The paths in the model were tested to determine their significance. Therefore, in order to assess the model, the squared multiple correlation (R^2) was examined in each construct. Then the significance of the paths was also evaluated.

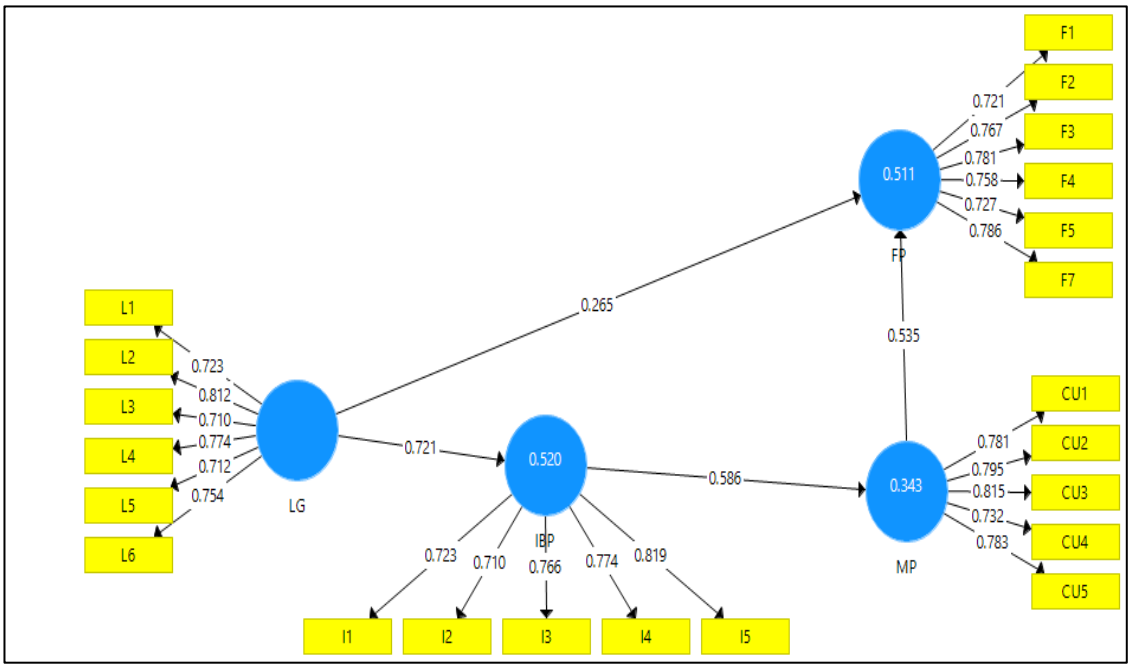

Figure 3.2: The PLS-SEM results

R^2 was assessed according to Chin (2010) who suggested that, values of approximately to 0.190 are weak, values of 0.333 are moderate and 0.35 are substantial. Figure 3.2 shows that, 52.0% (R^2) ^{of} the variance in internal business is explained by learning aspect. 34.3% in member aspect is explained by internal business while 51.1% of the financial aspect is explained by member aspect. All the R^2 are substantial according to Chin (2010).

Table 3. 4 : Partial least square results for model testing

Construct	*β*	*T-value*	*P*	Remarks
H_3: IBP -> MP	0.588	12.669	0.000	Supported
H_2: LG -> FP	0.267	5.591	0.000	Supported
H_1: LG -> IBP	0.723	21.022	0.000	Supported
H_4: MP -> FP	0.536	9.711	0.000	Supported

The significance test of the hypotheses, the t-value > 1.65 is significant at 0.05 level, and t-value >2 is significant at 0.01 level (Martinez and Aluja, 2009; Sarstedt *et al*, 2014; Teo *et al*, 2015). Table 3.4 shows the results of the structural model test where, the null hypotheses were rejected at $p < 0.01$ significant level and therefore support the

relationship assumed. Therefore, it indicates that learning and growth aspect ($\beta = 0.723$, $p < 0.01$) has positive effect on internal business operations; learning and growth aspect ($\beta = 0.267$, $p < 0.01$) on financial aspect; internal business aspect ($\beta = 0.588$, $p < 0.01$) on member aspect; and, member aspect ($\beta = 0.536$, $p < 0.01$) on financial aspect.

Given the results from the hypotheses testing in Table 3.4, it shows that learning and growth in terms of competence, satisfied employees, training and sufficient staff has a positive relationship with internal business operations in terms of quality of services offered and quick service delivery. H_2 was also supported because results indicate that internal business aspect has a positive relationship with members' aspect in terms of members' satisfaction, members' retention, market share increase and membership increase. More over results show that member aspect has a positive relationship with financial aspect in terms of co-operative profit, good price and cost reduction. However, it was found that learning has a direct positive relationship with financial performance.

3.6 Discussion

The findings show that when co-operatives have invested in learning and growth especially in terms of competence, satisfied employees, training and sufficient staff there is a positive relationship with internal business operations in terms of quality of services offered and quick service delivery. These will help the co-operatives to achieve their visions, in order to sustain their abilities to change and improve over the period. Learning and growth improves the efficiency in governance within the co-operative through participation in economic and decision making. The result is supported by the study conducted by Cardemil and Shadbolt (2006a) which found to have a causal linkage between attracting and retaining quality staff resulting to good performance.

3.7 Conclusion and recommendations

This study has provided an empirical evidence of the causal relationship between the co-operative performance measurement aspects by adopting the BSC model which maintains the causal relationship within the aspects. The study found that learning and growth aspect (in terms of competency, employee/staff satisfaction, retention, training and education, skills and number of employees), is the base of the AMCOS and has a significance influence on both internal business process and financial performance. It further found that there is a statistical significance influence of the internal business process (quality of service, sufficient facilities, use of information technology, new

product development, quick service delivery) and the members aspects. Then it was also found that there is a significant influence of member aspect (member satisfaction, member retention, market share increase, member profitability, members increase) to the financial aspect. However, there were a direct causal linkage between the learning and growth and the financial performance.

Since the findings shows the linkages in these aspects, the study recommends that so long as learning and growth appear to influence all the other aspects, policy makers should put much efforts in developing human capital through emphasizing trainings and employing skilled and competent staff. The priority given in this aspect should not suppress the other aspects rather, others should be considered while looking the capacity available in the learning and growth. The study is also recommending that members should make sure, the training fund which is set aside according to the Co-operative Act and regulations, should be utilised to all levels i.e., members, board members and staff so as to have competent persons in all levels.

Given that members need to receive services which meet their expectations, it is recommended to those in charged with internal business processes to use the expertise and skills they have to come up with innovative ideas to foster quality services to members. Also, since there is a significant association between members and financial aspect, it is recommended to the members that each member should make sure that he/she participate fully economically by selling the products through co-operative and contribute to build capital.

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CHAPTER FOUR

4.0 Factors for the Performance of Primary Agricultural Marketing Co-operative Societies in Rombo District, Tanzania.

Victor Shirima[1], Henry Chalu[2] and Benson Ndiege[3]

[1]Department of Banking, Accounting and Finance, Moshi Co-operative University, Tanzania, P.O.Box 474, Moshi, Tanzania

[2]Department of Accounting, University of Dar es Salaam Business School, P. O. Box 35046, Dar es Salaam, Tanzania

[3]Tanzania Co-operative Development Commission (TCDC), P.O. Box 201, Dodoma, Tanzania

4.1 Abstract

This paper explored the Success Factors (SFs) for the primary Agricultural Marketing Co-operatives Societies (AMCOS) in Rombo District. The Eleven SFs were tested through questionnaire in the survey by exploring the 334 members. Qualitative data were also obtained in order to validate the quantitative data. Data from survey were analysed by factor analysis in order to have factors which were mostly accepted by the AMCOS members and regression was conducted to assess their influence on the performance. Qualitative data were analysed using content Analysis by the help of ATLAS Software. The study established Eleven (11) SFs that are categorised into: commitment (use of personal skills, members' control and promotion), governance (measurement system, governance structure, leadership support, and transparency), strategy (self-evaluation, objective development, strategy focused, to live the vision). The study found the SFs to have positive influence on the primary AMCOS performance. The study concludes that members of the primary AMCOS have the factors which they believe to be key for the success of their institutions. The study recommends that, the established SFs to be implemented in primary AMCOS by prioritising them during planning so that to have strong institutions.

Keywords: Success, Factors, AMCOS, Co-operative, Performance

4.1 Introduction

Co-operative institutions have been the important vehicle towards improving the social economic development in many countries (Allen and Allen, 2015; Ezekiel, 2014; Adebayo *et al.*, 2010; Allahdadi, 2011; Adrian and Green, 2001). There are various types of co-operative, operating in various sector of the economy. Primary Agricultural Marketing Co-operative Societies (AMCOS). Primary AMCOS have been operating in the area of production, processing, transporting and marketing (Anania and Rwekaza, 2016). However, they have been facing challenges which lead to underperformance in the recent years. Underperformance of primary AMCOS has raised concerns by various stakeholders such as government and co-operative supporting institutions towards improving the situation (Bharadwaj, 2012; Birchall and Simmons, 2010). Vanpoucke, (2011), Howell, (2009), Veen-Dirks and Wijn (2002) suggest that in order for the organisation to improve and succeed, it should be able to define issues that must go right known as Critical Success Factors (SFs). The SFs as defined by Veen-Dirks and Wijn (2002) are limited number of areas in which results ensure competitive performance for the organisation and therefore help the business to succeed. They urged that; the few defined factors are called the success factors that help to achieve the organisation's objective. The success factors are the essential elements which must be considered in order for the co-operative to perform and therefore when adopted, they help to achieve consistent success.

Each organisation depending on its environment have different perceived Success Factors (SFs) influencing performance (Aquilani*et al.*, 2016). Likewise, in primary AMCOS, members are user-owners and controller. Therefore, they have their perceptions on the factors to be considered and monitored consistently depending on the nature of their institution. Co-operative members are required to have a profound understanding and a clear focus of what they need their co-operative to be. Members should be ready to involve themselves in their co-operative transactions taking into consideration that they are operating under very competitive environment. Members as the user-owner and controller of the co-operative institution, should be able to own their co-operative, have strong attitude towards their institution and readiness to involve in democratic management (Golovina and Nilsson, 2008).

Organisations rely on SFs in order to define what must go right in order to achieve their purpose, mission, or objective (Howell, 2009). It is in this perspective that co-operative

members should understand clearly what is supposed to be done right in order to meet their purpose. Failure to do so, they will not be able to manage their institution since they don't have the clear direction. Worldwide identification and focus on the SFs have brought positive changes in the organisations hence improving the organisational performance (Aquilani *et al.*, 2016; Jabbour *et al.*, 2018). The very important benefit of identifying the SFs in an organization is the best allocation of resources.

Some SFs have been identified by other scholars such as, leadership, member participation and commitment, financial stability, co-operation with other institutions and quality of produce (Alfoqahaa,2018). A study by Carlberg *et al.* (2006) , suggested the SF to base on local leader and committee, planning and product quality. Furthermore, the study conducted in China to assess factors for successful development of farmer co-operatives found legal environment, a dedicated leader, government financial and technical support and members' understanding and participation to the co-operative activities to be of importance (Garnevska *et al.*, 2011). Members' commitment, openness, trust and government support have found by researchers to have influence in co-operatives performance (Emmanul and Nhlanhla, 2014). Emmanul and Nhlanhla (2014) study was from the co-operative Union where structure and operation vary from the primary AMCOS that are doing business without depending their co-operative unions.

There are some varying SFs such as business volume, training, hiring, sufficient total equity and marketing agreements (Bruynis *et al.*, 2000). However, these factors were assessed from the emerging primary AMCOS that might vary from those of this current study given that they have been operating for many years. The study was conducted in US that also might bring a mismatch interms of operating environment. Another study by Corcoran and Wilson (2010), identified sufficient capital, technical assistance, co-operative structure and government support as the SF in workers' co-operatives. Although the institution studied was a co-operative, the factors may vary between the primary AMCOS and other wokers co-operatives which are different from the primary AMCOS. Another study by Malamsha and Kayunze (2014) assessed the general success factors for SACCOS. Again, SACCOS operates differently from the primary AMCOS.

Howel (2009) also categorised the SFs into three: industry, strategic and environmental, however, they are general just general SFs for any business

organisation. Given the reviewed empirical studies having conflicting views concerning with SFs and being generic without reflecting specifically the Tanzanian primary AMCOS context, there is a need to explore the ones specific for primary AMCOS in Tanzania. This study considers operating environment, social characteristics of the members in establishing the SF_S. Therefore, this study explores and establish the SFs as well as their influence on primary AMCOS performance.

4.2 Guiding theory and hypotheses development

The study adopted a Critical Success Factors Theory (CSFT) developed by Daniel (1961). CSFT can considered in two perceptive: strategy formulation and strategy formulation. The study is taking the CSFT in the perceptive of strategy formulation because it is able to define few things that must go well to ensure success in the primary AMCOS. It can also be defined as the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation (Dinter, 2013; Boynton and Zmud, 1984). The CSFT is useful in this study to understand the importance of process of improvement for the primary (Luthra, *et al*, 2018; Haleem, Qadri, and Kumar 2012). In facilitating decisions in order to achieve a desired goal, in any organisation can be a complex task (Shankar, Gupta, and Pathak, 2018). The SF theory helps to simplify this complexity by enabling the organisation to focus on the most important SFs. Therefore, this study has used this theory to identify the few factors which members have agreed to be of most important to focus and establish them as SFs for a primary AMCOS.

From the literature discussed above, the current study can group the SFs into three: commitment, strategy and governance and structure**.** However, each SF has its effect or contribution on the co-operative success (Jussila *et al.*, 2012; Veen-Dirks and Wijn, 2002). Previous studies found members' commitment, openness and trust and government support to have influence in co-operatives performance (Birchall and Simmons, 2004a; Emmanul and Nhlanhla, 2014; Jussila, Byrne, and Tuominen, 2012).Therefore, two hypotheses are developed in this perspective:

H1:*Members comitment (use of personal skills, members' control and promotion) have a positive effect on the primary AMCOS performance.*

H2:*Governance (measurement system, governance structure, leadership support and transparency) has a positive effect on the primary AMCOS performance.*

Co-operative should be able to develop the objectives according to the purpose of its existence through proper planning and implementations (Brown *et al*., 2015). Generally, it should be able to live its vision and all the members should know the requirements within the vison of their institution. Furthermore, they should be able to evaluate themselves so as to come up with the feedback on where and how to improve. Developing objectives, living the vision and self evaluation can be named as co-operative strategy. Therefore, the following hypothesis can be developed:

H3:*Strategy (self-evaluation, objective development, strategy focused, to live the vision) has a positive effect on its primary AMCOS performance*.

4.4 Methods and tools of data gathering and analysis

The study was conducted in Rombo District in Kilimanjaro region. Rombo district was selected among other Districts in Kilimanjaro purposively because of proportionally, having more active primary AMCOS compared to other Districts. Also, the primary AMCOS in Rombo are engaging directly in coffee business, compared to other districts in Kilimanjaro region. By the time of study all the primary AMCOS in Rombo were active, though with variability. The method used to know the activeness of the co-operative was through using the list of co-operatives from the Assistant Registrar's office which has column indicating 'Active' and 'Dormant'. The study selected 8 primary AMCOS purposively.

Moreover, these co-operatives were doing business by themselves through going direct to the auction market with little dependency from the Union. The co-operatives which engage direct to the business might be more aware on co-operative operations rather than those waiting for the co-operative Unions to do for them. Having these characteristics, it was possible to have reliable information. Sample size was calculated using the Cochran (1977) formula as discussed by Bartlett, Kotrlik and Higgins (2001) and Adam (2020) states that:

$$n_o = \frac{t^2 * s^2}{d^2} \quad \text{.....(4.1)}$$

Where t = value for selected alpha level

s = estimate of standard deviation in the population

d = acceptable margin of error for mean being estimated

According to the Cochran (1977), the alpha level of 0.5 of the t-value of 1.96 is used for the sample size above 120. Acceptable margin of Error is 3% for the continuous and

scaled (Likert scale) data kind of data. Therefore, the true mean of a five scale is within plus or minus 0.15 (5 times 0.03).

Variance of a scaled variance (S) = $\frac{number\ of\ points\ on\ the\ scale\ (5)}{number\ of\ standard\ deviations\ (4)}$……..(4.2)

= 1.25

$n_o = \frac{1.96^2 * 1.25^2}{5 * 0.03^2}$ = 266.79/0.8 =334……(4.3)

Since there is no fraction respondent the required minimum sample is 267. It was assumed that the respondent rate to be 80%. Therefore, the new sample could be recalculated to 267/0.8 = 334. Williams, Onsman, and Brown, (2010) suggest a rule of 10 variables per observation to be applied which for this case is 10 times 11 indicators (110) while, others suggest a rule of thumb of 100 participants and above. Generally, according to Hair *et al.* (2010), a rule-of-thumb of at least a sample size of 300 is adequate (Tabachnick, Fidell, and Ullman, 2007; Van and Morgan, 2007). Therefore, the study collected data from 334 respondents through questionnaire which was administered by the researcher. Key Informants Interview was conducted with 10 key informants selected basing on their experiences on AMCOS operation and coffee business through co-operative channel. The KII was appropriate in order to validate the SFs obtained from the survey. The KII were thoroughly engaged through in-depth interviews.

Data were analysed through descriptive statistics as well as inferential statistics. Reliability was tested before proceeding with further steps. Inferential statistics were done by Factor analysis. Multiple regression was used to assess the contribution of the established SFs to the performance of the primary AMCOS. It used the multiple independent variables with mean scores of commitment, strategy and governance as the independent variable and the overall mean scores performances as the dependent variable.

$y = a + b1x1 + b2x2 + b3x3 + e$ … (4.4)

Where: y = overall performance mean scores

$x1, x2\ and\ x3$ = commitment, governance and strategy mean scores respectively

a = constant or intercept of the equation

$b1$…….. $b4$ = regression coefficients

e = error term

Multicollinearity was tested by Variance Inflation Factor (VIF) where they all were below 5 indicating that there were no coefficients greater than 0.8 among the independent variable hence no multicollinearity identified. Performance was measured subjectively by using the statements which the respondents were supposed to give their level of agreeability on the performance in each statement given. Chong (2012) argued that although performance can be measured in traditional criteria such as return on assets (ROA), profit margins, it can be also measured using intrinsic factors such as members' satisfaction, members retention and loyalty. The subjective approach was used because of its ability to assess the success of business and become the best way to obtain information that would otherwise be very difficult to gather (Alfoqahaa, 2018; Perez and Canino, 2009). Hypotheses were tested using a multiple regression analysis.

Content analysis was used to analyse qualitative data from the Key Informants by using ATLAS software. The first step was coding data, and then categorized, sorting and retrieving. Transcribing was done from the recorded information to the text. Also, the notes which were written in the notebook were also transcribed in the word text. Then the coding was done from the text where the sentences which share the same idea were coded the same. After coding, there was a need to give them themes and sub themes. The theme was developed depending on the objective of the study. In this case commitment, strategy and governance were the main categories.

Reliability of data was conducted in order to assess the internal consistency of the aspects through Cronbach's Alpha of 0.803 (Table 4.3). Then the aspects tested scored the reliability above 0.7 which the cut-off point is indicating a very strong consistency among the SFs. However, it was important to test the internal consistency of the data by using Cronbach's Alpha. The Cronbach's Alpha indicates a strong internal consistence of the data by having the Alpha greater than 0.7. George and Mallery (2003) provide the following rules of thumb: "> 0 .9 – Excellent, > 0.8 – Good, > 0 .7 – Acceptable, 0 .6 – Questionable, > 0.5 – Poor, and < 0.5 – Unacceptable" (Gliem and Gliem, 2003). The current study had an Alpha score ranging from 0.782-0.863 which were within the good and excellent cut-offs.

An evaluation of the correlation matrix was conducted to confirm the significance of the factor loadings using Kaiser-Mayer-Olkin (KMO) and Bartlett's test (Table 3). The result shows that the KMO was greater than the recommended KMO of 0.60 (0.810),

which is acceptable (Williams, Onsman, and Brown, 2010), indicating that sample used in the study was adequate. Bartlett's test was $p < 0.001$, a significant probability level indicating that there is association among variables since the matrix is not identical and therefore, it was suitable to proceed with factor analysis. The entire factor loadings were above 0.50 which is acceptable (Hair *et al.*, 2010).

In assessing the validity, the Composite Reliability (CR) was also used in order to overcome some traditional Cronbach Alpha's (CA) deficiencies. It is recommended by some scholars (Padilla and Divers, 2016; Valentini and Damasio, 2016) to use CR as a measure. The CRs in this study are in an acceptable range of above 0.80. The last measure was a convergent validity to measure the degree to which-to-which individual items reflects a perspective convergent in comparison to items measuring different aspects. The Average Variance Extracted (AVE) from this study as recommended by Fornel and Lacker is above 0.5 indicating that convergent validity was adhered. All AVE results for the model's constructs are greater than the squared inter-construct correlations that indicate that there is no problem with discriminant validity. Therefore, data can be used for further analysis at this stage.

The total of 11 items was rotated by using Varimax to determine the factors which are perceived by the co-operative members as critical to their co-operative success. The items were rotated to form three constructs/components which are; commitment (3items), strategy (4 items) and governance (4 items). Factor loadings were above 0.6 (0.757-0.859) indicating a relatively high level of internal consistency among items.

4.5 Results and Discussion

4.5.1 Demographic characteristics of the respondents

The study intended to assess the differences in perception between sexes and education level. Therefore, there was a need to analyse the demographic data on sex and education levels before further analysis.

Table 4. 1 : Sex of the respondents

Sex	Frequency	Percentage
Male	247	74
Female	87	26

Table 4.1 shows that 74% of the respondents were male while female is 26%. This is a normal situation in areas where the culture of land ownership is male dominance. Hence then, men are mostly the ones who join the AMCOS in these areas. By doing so even in the meeting it is possible that men will be more than women.

Education level is skewed to the primary education (75.7%) and secondary education (21.3%). Only few members have non-degree education level (2.7%) and degree level (0.3%) education implying that most members in AMCOS have low level of education compared to those with high level of education.

Table 4. 2 : Education level of the respondents

	Frequency	Percent (%)
Primary level	253	75.7
Secondary level	71	21.3
Certificate and Diploma	9	2.7
Degree	1	0.3

4.5.2 Success factors among primary AMCOS

In order to establish the SF, the Principal Component Factor analysis was conducted to determine the number of factors to be extracted. The eleven items were tested and rotated to form groups (components) named commitment, strategy and governance. No item was dropped in the analysis since all of them meet the threshold of factor loadings above 0.6 and they had an Eigen value greater than one.

Table 4. 3 : Success Factors among Primary AMCOS

	Mean (n=334)	Rank	Components Items Rotated Component Matrix[a]					
			1	2	3	CA	AVE	CR
Commitment								
Members use their skills to for co-operatives benefits	3.88	2			0.838			
Members control their co-operative	3.75	3			0.796	0.782	0.673	0.86
Members are responsible for promoting their cooperative	4.01	1			0.826			
Strategy								
Self-evaluation/assessment	4.04	4	0.850					
Objective development	4.07	3	0.821					
Ability to be a strategy focused organisation	4.09	2	0.859			0.863	0.54	0.89
Ability to live the vision of the co-operative	4.14	1	0.757					
Governance								
Develop measures throughout all levels in order to get feedback	4.19	3		0.846				
Create good governance structure	4.08	4		0.792		0.811	0.502	0.87
Leadership and government support	4.37	2		0.770				
Transparency	4.41	1		0.759				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.810					
Bartlett's Test of Sphericity Approx. Chi-Square			1449.208					
Sig. 0.000								
Extraction Method: Principal Component Analysis.						CA Cronbach's Alpha		
Rotation Method: Varimax with Kaiser Normalization.						AVE Average Variance Explained		
Total items (11 items) Cronbach's Alpha 0.803						CR Composite Reliability		

Table 4.3 show that, in the part of governance, transparency within the co-operative has taken by the members as the very important factor in ensuring governance is practiced. It is followed by the leadership and government support. This tells that for the primary AMCOS which have support from the leaders as well as the government, members have confidence to their institution. Government support is in terms of putting conducive environment for the primary AMCOS to operate. It is also shown that commitment is led by the ability and willingness of members to promote their primary AMCOS in the community.

The study also shows that another important factor is for members to conducive use their skills for their primary AMCOS to prosper. Every member in the co-operative has unique skills that can help the primary AMCOS to move in a proper direction. Members should be committed to use their skills for the benefits of their co-operative. Moreover, it is emphasised that apart from using the skills they have, they are also needed to participate economically and in decision making. This means a total control and patronisation of their co-operative societies by deciding what exactly they want from their institutions. The findings concur with other scholars by supporting that member's

participation should be done by making sure, every member take part in any activity of the society (Dorgi and Gala, 2016). Bijman and Verhees, (2011) also found that, members commitment influence participation which in return can strengthen governance in the co-operative.

Moreover, the findings established that, members should be able and be devoted for the promotion of their co-operatives and co-operative ideology within and outside the co-operative. Promoting their AMCOS, will attract more members and then increase sales through their AMCOS. Promotion should be done by all members but it requires the ability to express or communicate properly about them to other non-members. The findings were also validated through interviews with some key informants:

> "*The co-operative is there but members should not step aside…they should have a spirit in terms of involvement in all co-operative activities. It has been always that some of the members are committed but others are not. But in order our co-operative to be vibrant, members should be committed and own the co-operative*" (KII, 28 June, 2018).

Results also showed that co-operative should have an ability to focus on the strategy which will contribute much on the performance improvement. The ability of the co-operative and its members to live the vision of their institution has perceived to be the major factor. The vision of the primary AMCOS should be understood to every member so as everyone live the vision. Developing organisational objectives which are achievable, although challenging, lead to the improvement in the co-operative success. Furthermore, the co-operative should be able to evaluate itself against their objectives and the feedback should go to the responsible persons. This is also supported by the study of Trechter *et al.* (2002) who claimed that co-operative strategies which are under the direct control of co-operative might influence member commitment. The findings were validated by the interview from the Key Informants:

> "*We are supposed to have strategies formulated clearly. That is very important. But the problem is some co-operatives do even prepare the strategic plans and put them in the shelves because of the inability to implement them because of low skillsand fund.…. The need to live the vision is important through setting and implementing short term, medium term and long-term objectives. (KII, June, 2018).*

Governance has been found as the major SF for the co-operative performance through creating a good governance structure which will oversee the activities of the primary AMCOS. It correspondingly, found that top leadership support is a very important area. One of the key informants argued that; *"...members need feedback through the Annual General Meeting. They need to assess the management and board on the implementations of the aged plans (KII, June, 2018)*. The findings corroborate the findings from Rajaratnam *et al* (2010) that insisted the important of good leadership in cooperative organisations. However, in primary AMCOS board members, although elected by the members in the Annual General Meeting they should make sure they support their members in empowering them in order to be able to manage their co-operative. Government should also support AMCOs although the support should not jeopardize their independency or autonomy. The co-operative should also develop measures through all levels in order to have feedback. Above all, the study found that transparency to be a major element in the governance. Given the nature of the institution, transparency when taken seriously can solve most problems associated with group-kind of institutions like co-operative. When members know what is going on in their primary AMCOS it will build trust and improve members' participation. By considering the SFs discussed above, it is evidence that, when each one of the SF is followed properly, it can have a direct or indirect impact to another. For example, when the governance is good through transparency, it can lead to the high commitment of members since they have trust to their institution. The findings conform with the SF theory by establishing the few things or areas which primary AMCOS should put efforts in order to perform well.

4.5.3 The effect of the perceived SFs on AMCOS performance

In order to analyse the effect of SF on the primary AMCOS performance the study used the predictive power (R-square). The predictive power of the model R-square value, was used to access the overall predictive power of the model. It explains how much independent variables explain the dependent variable. The model fit is proved by the two-way ANOVA at a significant level of $p < 0.05$ (Table 4.5). The model fit is proved by the ANOVA at a significant level of $p < 0.05$. Multicollinearity was checked through Variance Inflation Factor (VIF) and tolerance where the results indicate that there is no multicollinearity problem (VIF > 1) as shown in table 4.5.

Table 4.5 also shows that, AMCOS performance was explained by governance and structure, member's commitment and strategy with a moderate R-square of 0.412. The R-square values can be interpreted as 0.19 = weak, 0.33 = moderate and 0.67 = strong (Ferguson, 2016; Hair Jr, Sarstedt, Hopkins, and Kuppelwieser, 2014; Sullivan and Feinn, 2012). Although the value of R-square is moderate, it is enough to explain the effect of the independent variable in the social sciences. All coefficients are statistically significant at $p < 0.05$ level indicating that the contributions of SFs to the performance of AMCOS are statistically significant.

Table 4. 4 : The Influence of SFs on the primary AMCOS performance

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	20.199	7.416		2.724	0.007		
	members commitment	1.017	0.327	0.140	3.113	0.002	0.878	1.139
	strategy focused co-operative	3.482	0.299	0.543	11.655	0.000	0.823	1.216
	governance and structure	0.849	0.352	0.106	2.408	0.017	0.928	1.078
	Two-way ANOVA: R 0.642 ; R Square 0.412; Adjusted R Square 0.406; F 77.20; Sig. 0.00							

a. Dependent Variable: overall performance

The contribution in each aspect of SF was assessed through Beta coefficients. The contribution of members commitment was found to be statistically significant ($t = 3.113$, $p < 0.05$). Although some of the studies claim that sometimes strong member commitment has some disadvantages by having a negative impact because it may lead to reluctance to exit even if the co-operative does not deliver economic benefits (Jussila, Byrne, *et al*., 2012; Birchall and Simmons, 2004b), this is not the case for the current study. The current study supports the findings from previous studies that active participation and loyalty among the co-operatives members will determine the success of co-operative societies (Mahazril'Aini, Hafizah, and Zuraini, 2012). The results suggest a resultant model to be:

$$y = 20.199 + 1.017x1 + 3.482x2 + 0.849x3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4.5.1)$$

4.6 Conclusion and recommendation

The paper has explored the SFs which help primary AMCOS to operate with a focus on the important issues which make them to prosper. After literature review and component analysis the SF were grouped into Eleven (11) SFs categorised into three: commitment (use of personal skills, members' control, and promotion), governance

(measurement system, governance structure, leadership support, and transparency), strategy (self-evaluation, objective development, strategy focused, to live the vision). The study concludes that primary AMCOS still insisting on the members commitment, strategy focused and good governance as their important success factor categories which should be monitored properly. Also, it concludes that the established SFs shows a positive contribution to the overall performance of the primary AMCOS. Therefore, SFs identified reflect the perceptions of the primary AMCOS members and Key Informants on how to make the co-operative vibrant as evidenced on the positive effect they have on the cooperative performance. It is recommended that the primary AMCOS should constantly manage the SFs established by this study in order to improve performance. This can be done through electing visionary leaders and constantly learning so as to be able to manage strategies and governance within their institution. Also, in order to increase commitment, members should be motivated according to the commitment shown by each individual. It is also recommending that Government should support primary AMCOs without jeopardising their independency or autonomy. This can be done through participative approach so that the two parts will have mutual understanding. Since the SFs suggested by members have the positive effects on the primary AMCOS, it is recommended to members, to put more efforts on the same and making sure leaders elected and staff, manage them properly. This can be done by putting them clearly in their plans and set the priorities on how to implement them. It is recommended also to the government to give supports in line with the identified SFs in order to have harmony in performing their activities in their primary AMCOS.

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CHAPTER FIVE

5.0 Performance of Primary Agricultural Marketing Co-operatives in Rombo District Tanzania: Application of financial and non-financial measures

Victor Shirima[1], Henry Chalu[2] and Benson Ndiege[3]

[1]Department of Banking, Accounting and Finance, Moshi Co-operative University, Tanzania, P.O. Box 474, Moshi, Tanzania

[2]Department of Accounting, University of Dar es Salaam Business School, P. O. Box 35046, Dar es Salaam, Tanzania

[3]Tanzania Co-operative Development Commission (TCDC), P.O. Box 201, Dodoma, Tanzania

5.1 Abstract

Studies on co-operatives have been evaluating performance by considering the financial performance and ignore the non-financial performance something which might give bias conclusion. This study aimed at evaluating the performance of the primary Agricultural Marketing Co-operative Societies (AMCOS), by using Balanced Scorecard approach integrating both financial and nonfinancial measures. Specifically, the study assessed both no-financial and financial performance of the primary AMCOS; the mean difference between the financial and non-financial performance and the contribution of non-financial performance aspect on financial performance. The study used the balanced scorecard approach by involving five aspects; social, learning, internal business process and financial. Questionnaire was distributed to 334 respondents who are the owners and decision makers of the primary AMCOS. Key Informants Interview was conducted to collect the qualitative data. Data were analysed descriptively to assess the performance while inferential statistics were done using paired T-test and multiple regression analysis to assess the mean differences and relationships. The results show that financial performance in primary AMCOS was found to be average (M = 3.3) while non-financial was above average (M = 3.9) indicating that primary AMCOS are doing better in the non-financial aspect than in the financial aspect. The results showed that there was a statistical mean difference in performance scores between the perception on financial and non-financial performance. The study concludes that it is perceived that, primary AMCOS are doing better in nonfinancial performance than in the financial performance. It further concludes that both financial and non-financial performance are of the same importance. The study recommends that more efforts should be directed to

the financial aspect, but without impairing the non-financial aspect, so as to balance between financial and non-financial performance. It is also recommended, that both economic and social performance should not be separated in decision making as emphasised by the Dual Motive theory. The study also recommends the use of Modified Balanced Scorecard in assessing the primary AMCOS performance.

Key word: Co-operative, Performance, Balanced Scorecard

5.2 Introduction

Co-operative institutions have spread worldwide to solve members problems including poverty alleviation (Popker, 2016; Sumelius, Tenaw, Bee, and Chambo, 2015; Ezekiel, 2014). Co-operatives operate under a unique environment by having multiple goals of economic and social needs. They possess dual purpose, meaning that, on the one hand they are business driven by economic incentives and on the other, they are association with a social purpose (Novkovic, 2012). Novkovic (2012) emphasise that, the strength of co-operative businesses, is in achieving social aims with economic means and balancing the same. The unique feature of possessing both business and social purpose is one of the things that differentiate a co-operatives and other conventional firms. The dual nature of the co-operative needs a balancing model when measuring co-operative performance, so that both social and economic aspects are to be evaluated. Furthermore, co-operatives are formed by members voluntarily, the same members are the one to run the organisation together with all the activities to serve them (Ishak, 2020). Members' return and continuity should be viewed as at the core of the objectives of the co-operative. A meaningful empirical evaluation of the co-operative's performance should address the dual objective nature of the organization (Soboh, Lansink, Giesen, and Van Dijk, 2009).

Members have ownership role but also have the transactional relationship and responsibility role with their co-operative which, contrary to other firms where the owners are not necessarily the users of the services provided by their firm (Marwa, 2014). Co-operative members own the co-operative and the same time patronize it (Rwekaza, Kayunze, and Kimaryo, 2019). This characteristic has an impact on how members evaluate the performance of their co-operative since on the one hand they need financial gains as owners but on the hand members' benefits as members. Any decision in either part, being financial or non-financial, has an impact on the overall

members' interests that requires members' ability to evaluate performance (Peng, Liang, Deng, and Hendrikse, 2020; Liang and Hendrikse, 2013; Nilsson and Hendrikse, 2011). Literature agrees that, a co-operative is as a (members) user-owned and (members) user-controlled organisation that aims to benefit its (members) user (Soboh, 2009) and therefore, evaluating primary AMCOS as if they are profit oriented firms mislead about the real co-operative's performance. He urged that, there is a need to consider that co-operatives' performance is influenced by organisational characteristics and members objectives.

Some studies on co-operative performance have been focusing mostly on the available financial accounting measures such as return on assets and profit margins, that are commonly used to evaluate investor-owned firms (Ishak, 2020; Bond, 2009; Tilahun, 2007; Azzam and Turner, 1991). They have been assessing the financial performance which is just economic part and leave apart the nonfinancial part which constitutes the social aspect. This means, they assess business performance without considering the views of the members who are both the owners, users and decision makers of co-operative services. Although co-operatives have board members, yet the financial decision is given by the members during the Annual General Meetings. The repercussion of relying on only financial aspect, is that, the co-operative can be reporting a good financial performance while members' value is deteriorating which in the long run affects membership growth. On the other hand, there are studies which insist on the use of both financial and non-financial measures. For example, Shamsuddin *et al.,* (2018) used some of the financial measures such as the liquidity, solvency, profitability and non-financial such as customer satisfaction, qualified employees, employee retention and member satisfaction. The study insisted that in measuring the performance of a co-operative aspects related to member benefits should be covered. Mayo (2011) also urged the measures such as member engagement, training and education are very important to be used in measuring the co-operative performance. However, these studies have not been comprehensive enough to capture all aspects of social performance. Therefore, this paper is going to assess the performance basing on the members perceptions and also considering a more inclusive approach through adapting a Balanced Scorecard (BSC). The approach is consistent with the dual objectives of the co-operative form since it covers both financial and non-financial

aspects in a more comprehensive dimension (Muda, Roosmawati, Siregar, Manurung, and Banuas, 2018).

Studies (Norvic 2012; Kaplan and Norton, 2001) recommend a comprehensive approach specifically the BSC when evaluating performance in co-operatives because of its ability to combine both financial and non-financial aspects. There is evidence that co-operatives use all the dimensions available in the BSC framework although they might not have adopted the framework. The dimensions which this study is going to use have been adopted as suggested from the Balanced Scorecard model (Kaplan and Norton, 2001) and the Dual Motive theory (Norvic 2012) which are summarised as, social, learning, internal business process, members and financial aspect. The first four dimensions are termed as the nonfinancial aspects. Irrespective of the primary AMCOS being small or large, aligning the strategy in those dimensions and assign the priorities can help the co-operatives to have good performance (Cardemil-Katunaricand Shadbolt, 2006). In order to capture the performance in all five aspects, the subjective measures were used instead of the objective measures to distinguish between alternative performances within the aspects (Amene, 2017).

The subjective measurement method is preferred to objective method because it is difficult to quantify the non-economic performance. Subjective performance measures are the substitute of the objective performance because of the obstacles facing small and medium firms like primary AMCOS in revealing the actual performance to the public. Primary AMCOS sometimes have financial statements which are unaudited, hence lack credibility. Furthermore, members are able and willing to provide the performance data subjectively because they will evaluate their primary AMCOS depending on how they perceive their needs are satisfied (Zulkiffli, 2014) and therefore making comparison across the primary AMCOS to be possible (Peng *et al*., 2020). It is stated by Parnell (1995) that: “The only reality that counts the perception that people hold about your organisation”. Later on, Hind (1999) in supporting Parnell (1995), urged that, since relying on the financial measures such as profit misleads and sometimes obtaining the secondary data is difficult, perception approach is more suitable in assessing member’s benefits.

Sigh *et al.,* (2016) conducted a study using the subjective measures which concluded that subjective measures were positively related to the objective measures and

subjective measures were reliable across countries studies. Ishak *et al* (2020) argued that the cooperative performance should evaluated by both financial and nonfinancial measures. The current study extends to use both the perceptions and the financial data obtained from the Audited financial reports of the primary AMCOS. The study addresses the methodological and theoretical gap regarding performance measurement of primary AMCOS to measure the performance of the primary AMCOS by considering both financial and non-financial aspects and evaluate how the non-financial aspects influence the financial aspect. The study hypothesised that there is no statistical mean difference in perceived performance between the financial and non-financial performance measures. It also hypothesised that non-financial performance does not affect the financial performance of the primary AMCOS. This study has aimed at providing knowledge about the performance of the AMCOS through members' perceptions on both financial and non-financial aspects.

5.3 Guiding theory

This study is guided by the Dual Motive or Meta -economics approach (Levine, 2006; Lynne, 2006) and the Balanced Scorecard Model (Kaplan and Norton, 2006). The two approaches are used together to complement each other because the first is talking the duality nature and the latter is talking about the need to balance all the financial and non-financial aspects of the organisation. The theory suggest that personal gain and social gain are pursued jointly (economic and social), therefore, in primary AMCOS members personal gain and social gain are inseparable. It needs a bit sacrifice of one once pursuing the other. It emphasises the sacrifice is not about trade-off, rather combining the two lead to higher quality outcome (Novkovic, 2012). The duality of having the economic and social character, is one of the uniqueness of the co-operatives and the two are entwined by the co-operative definition. Co-operatives have to balance between the financial and also provide the social value. Separating social performance from the financial performance leads to non-cooperative practices and give the results which are not the full reflection of the co-operative performance.

The Balanced Scorecard is a tool that translates an organisation's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system (Hill and Powell, 2005). This model was developed by Kaplan and Norton (1992) after realising that relying solely on the financial measures is not suitable for the management of an organisation. Therefore,

Kaplan and Norton designed this performance measurement tool in order to capture both financial and non-financial measures in performance measurement (Becsky, 2011; Řehoř and Holátová, 2013). Kaplan and Norton did put BSC in terms of perspectives (Kaplan and Norton, 2001). The perspectives which make strategic BSC settings are: financial and non-financial (customer, internal processes, learning and growth). The developer of BSC model insisted on the need to adopt it by considering the nature of the organisation. Therefore, the perspectives are not limited to four rather it depends on the nature of the organisation. Therefore, the study had adopted this model in order to capture all aspects of the primary AMCOS in evaluating performance.

5.4 Methodology

5.4.1 Data collection

The study was conducted in Rombo District in Kilimanjaro region. Kilimanjaro was selected because of its historical background on AMCOS operations. Rombo district was selected among other Districts in Kilimanjaro purposively because of proportionally, having more active primary AMCOS compared to other Districts. Also, the primary AMCOS in Rombo are engaging directly in coffee business, compared to other districts in Kilimanjaro region. By the time of study all the primary AMCOS in Rombo were active, though with variability. The method used to know the activeness of the co-operative was through using the list of co-operatives from the Assistant Registrar's office which has column indicating 'Active' and 'Dormant'. Also, another criterion was the amount of shares the co-operative has as well as the number of employees. Moreover, these co-operatives were doing business by themselves by going direct to the auction market with little dependency of the Union. The co-operatives which engage direct to the business might be more aware on co-operative operations rather than those waiting for the co-operative Unions to do for them. Having these characteristics, it was possible to have reliable information.

The study collected data from 334 respondents, in 8 primary AMCOS through questionnaire which was administered by the researcher. Although the unit of observation was individuals (members), the unit of analysis was the primary AMCOS since the study is interested with the average score that will be taken for each performance aspect at an AMCOS level to determine how the co-operative is

performing. Sample size was calculated using the Cochran (1977) formula as discussed by Bartlett, Kotrlik and Higgins (2001) and Adam (2020) states that:

$$n_o = \frac{t^2 * s^2}{d^2} \quad \text{.....(5.1)}$$

Where t = value for selected alpha level

s = estimate of standard deviation in the population

d = acceptable margin of error for mean being estimated

According to the Cochran (1977), the alpha level of 0.5 of the t-value of 1.96 is used for the sample size above 120. Acceptable margin of Error is 3% for the continuous and scaled (Likert scale) data kind of data. Therefore, the true mean of a five scale is within plus or minus 0.15 (5 times 0.03).

Variance of a scaled variance (S) = $\frac{number\ of\ points\ on\ the\ scale\ (5)}{number\ of\ standard\ deviations\ (4)}$ .....(5.2)

= 1.25

$$n_o = \frac{1.96^2 * 1.25^2}{5 * 0.03^2} = 266.79/0.8 = 334 \quad \text{.....(5.3)}$$

Since there is no fraction respondent the required minimum sample is 267. It was assumed that the respondent rate to be 80%. Therefore, the new sample could be recalculated to 267/0.8 = 334. Hair *et al*. and Tatham (1998) and Williams, Onsman, and Brown (2010) suggest a rule of thumb of 100 participants and above. Systematic sampling was involved where the first member was picked randomly and then the others were picked using K^{th} formula depending on the list of members in a specific AMCOS. Key informants Interview was conducted with 10 key informants selected basing on their experiences on AMCOS operation and coffee business through co-operative channel. The KI was appropriate in order to validate the data from the survey on the perceived performance of the primary AMCOS. The key informants were thoroughly engaged through in-depth interviews.

5.4.2 Data analysis

Data were analysed through descriptive statistics in determining the mean scores of the performance in each aspect. The study by using the suggestion from the Dual Motive theory and Balanced Scorecard on the need to evaluate both financial and non-financial performance in an organisation, it used 10 indicators in social performance, 11 indicators in learning aspect, 9 indicators in internal business, 8 indicators for member aspect and 9 indicators for financial performance (Table 5.1).

Table 5. 1 : Performance Aspects and their performance metrics

Social aspect	Learning aspect	Internal business	Member aspect	Financial
Concern for community	Fund for training	Obtain credit	Fetch new market	price increase
Control their purpose	Training for members	Research and development	Members satisfied	Satisfactory Profit
Use skills	skilled staff	New product development	Inform the general public	Profit compared to capital
Promotion	Training for managers	Member receive education	Respond to members needs	Profit compared to sales
Strong solidarity	Training for board	Actively participating in policies	Satisfied with services offered	Profit compared to assets
Equality	Capacity growth	Obtain professional requirement	Fetch new market	Sales growth is achieved
Collective interest	Employee satisfied	Professional mgt	Members satisfied	High marketability due to quality produce
Independent	Employee turnover	Sell all the produces	Inform the general public	Liquidity is satisfactory
Equity	Democratically control capital	Buy all members' produces		Use money efficiently
Treated fairly	Economic participation absenteeism			

Likert Scale ranging from very poor/low (1) to very good/high (5) was used to measure the performance. The mean scores for each aspect were determined using the descriptive analysis. The decision rule for the performance using the mean scores were: Mean response of 1-2.49 (below average) is lack of performance; 2.50-3.49 (average) is an average performance and above 3.50-5.00 (above average) is considered as high performance (Aliyu, 2015). Then, using the mean scores from each aspect it was possible to test the mean differences in performance between the performance aspects by using a Paired sample T-test. Paired sample *t* test is used because it was able to assess the difference between the financial performance mean scores and non-financial mean scores (Kimi, Park and Wang, 2018; Wilkerson, 2008). As long as all measures used the same scales (1 to 5), the same respondent was ranking the performance both financially and nonfinancially and the mean difference was assessed. Paired sample t test can be used to compare between two measurements, two conditions and two time points (Kimi, Park and Wang 2018). The purpose of the test was to know whether a person's perception on co-operative performance differs among two measures.

It was also necessary to assess on how the non-financial aspects influence the financial aspect. This was done through employing the multiple regression where the independent variables were social performance, learning performance, internal business process performance and member aspect. Multiple Regression analysis was conducted to assess the influence of non-financial performance on the financial performance with the given formula as:

$y = a + b1X1 + b2X2 + b3X3 + b4X4 + e$ ……. (5.4)

Where: Y = financial performance mean scores

$X1, X2\ and\ X3$ = social performance, learning performance, internal business performance and member performance mean scores respectively.

a = constant or intercept of the equation

$b_1 \ldots b_4$ = regression coefficients

e = error term.

Multicollinearity was tested by Variance Inflation Factor (VIF) where all were below 5 indicating that there was no coefficient greater than 0.8 among the independent variable hence no multicollinearity identified. In order to enrich the analysis, objective measures were used in assessing the financial performance such as net profit margins, ROI, ROE, liquidity ratio, capital growth and sales growth. The aim was to validate the results from the subjective measures of financial performance.

5.4.3 Reliability and validity test

Reliability of data was conducted in order to assess the internal consistency of the aspects through Cronbach's Alpha and was above 0.7 which is the cut-off point indicating a very strong consistency among aspects (Prajogo and Sohal, 2003). Cronbach's Alpha (Cronbach, 1951) is one of the widely used measures of reliability in the social sciences (Loewenthal and Lewis, 2018; Diedenhofen and Musch, 2016; Bonett and Wright, 2015; Cronbach, 1951). Construct validity was achieved by ensuring reliable literature and theoretical information reviewed. Information was then contrasted with the empirical data generated through the use of the questionnaire. Internal validity was achieved through causal relationship in testing the hypothesis. External validity is also achieved because the findings from this study can be generalized to other primary AMCOS operating in the same kind of business.

5.5 Findings and discussions

5.5.1 The mean performance of the primary AMCOS

The results from Table 5.1 show the performance in five aspects of the primary AMCOS. For the subjective measures, the decision rule of the analysis is that, any mean response of 1-2.49 (below average) are considered as lack of performance; 2.50-3.49 (average) considered average performance and above 3.50-5.00 (above average)

considered as high performance (Aliyu, 2015). For the objective measure of the financial performance, the mean, maximum and minimum was used to inform the financial performance of the surveyed primary AMCOS.

Table 5. 2 : Performance mean scores among the performance aspects

Subjective Performance Performance aspect	**Mean**	**Rank**	**N**	**Std. Deviation**	**Std. Error Mean**	**Cronbach alpha**
Non-financial performance (NFP)	**3.7883**	**N/A**	**334**	**0.7112**	**0.0389**	**0.951**
Social performance (SP)	4.0018	1	334	0.7340	0.0406	0.875
Learning performance (LP)	3.7210	3	334	0.8126	0.0445	0.903
Internal business process (IBP)	3.7040	4	334	0.7662	0.0419	0.830
Member performance (MP)	3.7263	2	334	0.9156	0.0501	0.833
Financial performance (FP)	**3.3037**	**5**	**334**	**0.8640**	**0.0473**	**0.872**
Objective financial performance						
	Mean	**Minimum**	**Maximum**	**Std**		
Net profit over sales (%)	-23.62	-90.24	35.72	40.89		
Return on investment (%)	-4.33	-19.80	5.07	7.53		
Return on equity (%)	-0.63	-11.65	7.99	7.21		
Debt equity ratio (%)	-0.05	-2.27	1.21	1.16		
Liquidity ratio	1.93	0.04	7.04	2.65		
Capital growth (%)	4.99	-10.43	32.93	13.25		
Sales growth (%)	27.95	-8.66	110.21	37.03		

The non-financial performance shows mean scores of 4.002, 3.721, 3.704 and 3.7263 for social performance (SP), Learning (LP), internal business process (3.704) and member performance (MP) respectively. All scores are above 3.5 indicating that primary AMCOS perform higher in all the non-financial aspects at above average which is the threshold proposed by Aliyu (2015). This is contrary to the study done by Tilahun (2007) who found that in the primary AMCOS studied, all of them were performing below average. The study also found that within the non-financial performance, the social performance scored higher (Mean = 4.0) compared to other non-financial performance which scores the average of 3.70. It indicates that although the primary AMCOS are not performing well financially as evidenced in Table 5.1, both subjectively and objectively, but they are socially benefiting and help others. The findings are validated through an interview with a key informant:

> *".....we do not have much to offer to our members and community, but the little we have we try……as we are speaking, we have two students who are in secondary school sponsored by our AMCOS…we feel that this is our role to build members value as well as supporting the community'' (KI, May, 2018).*

The findings imply that co-operatives are aware of the social role they play for the members and the community. The results support the Dual Motive Theory, that the co-

operative should deal with dual nature without separation between the economic and social roles.

Comparably, it is evidenced from the findings that the overall non-financial performance (3.788) is higher than perceived financial performance (3.30) which is just an average performance. This indicates that members perceive their primary AMCOS to focus more on non-financial objectives than financial performance. Therefore, members still have trust on their co-operatives on how they are offering the non-financial benefits. The findings show also that the social performance is the leading aspect indicating that there are many benefits they are getting regardless of the challenges available in the sector. The findings corroborate with Bazaz (2015) study, which found that agricultural co-operatives were doing better in social performance than in economic performance. The findings are supported by the findings from one of the Key Informant:

> *"……Not only we are benefiting from the price of our coffee, but sometimes we are getting new ideas when we meet in groups…sometimes we are called for training in various areas you find some new knowledge and learning how to face new challenges which are in our areas. Some of our members were even afraid to participate in meetings, or in elections but currently they have been empowered through our co-operative and other now they think of even to extend their leadership to the community."(Interview 20, June 2018.*

The subjective results on the financial performance concur with the objective measures where by it is shown that sales growth, capital growth and liquidity level are reporting the positive trend. However, the liquidity profit ratios are showing a negative mean average which was due to some primary AMCOS to have previous losses carried forward over years. Having members who perceive their primary AMCOS performing well in non-financial aspects than in financial performance, it means they are still have hope to benefit from their primary AMCOS. Therefore, any improvement on the financial aspect will lead to the vibrant primary AMCO. The results justify the need to assess the primary AMCOS holistically as the evidence in this study is showing, that members are still perceiving their institutions as performing good in other aspects, that could not be captured using the financial indicators only.

Table 5. 3 : Mean difference between performance aspects in AMCOS

Paired Sample t- test								
	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
SP---- LP	0.2808	0.7116	0.0390	0.2042	0.3574	7.211	333	0.000
SP---IBP	0.2979	0.6094	0.0333	0.2323	0.3635	8.933	333	0.000
SP----MP	0.2754	0.7582	0.0415	0.1938	0.3571	6.640	333	0.000
SP-----FP	0.6980	0.8757	0.0479	0.6038	0.7923	14.568	333	0.000
LP---IBP	0.0171	0.5344	0.0292	-0.0404	0.0746	0.584	333	0.559
LP----MP	-0.0053	0.5449	0.0298	-0.0640	0.0533	-0.179	333	0.858
LP-----FP	0.4173	0.6520	0.0357	0.34711	0.4875	11.698	333	0.000
IBP--MP	-0.0224	0.6076	0.0332	-0.0878	0.0429	-0.674	333	0.501
IBP---FP	0.4002	0.6886	0.0377	0.3261	0.4743	10.621	333	0.000
MP---FP	0.4226	0.7241	0.0396	0.3447	0.5005	10.667	333	0.000
FP--NFP	-0.4845	0.6303	0.0345	-0.5524	-0.4167	-14.049	333	0.000

SP-Social performance; LP-Learning performance; IBP-Internal business process; MP-Member performance

After having the mean scores of the performance, there was a need to find out whether there is a statistical mean difference between the performances among the aspects. T-test was conducted in order to assess the mean difference among the performance aspects in primary AMCOS. The results in Table 5.2 indicate that there is statistical mean difference between the financial performance and Non-financial performance ($t = 14.049$; $p < 0.05$) indicating that the difference which has been evidenced from Table 5.1 above is proved to be statistically significant. The implication here is that the primary AMCOS are focusing more in no-financial aspects than on the financial aspect. This is not also good practice because when dealing with dual aspects in co-operative there must be a balance between the two. The results are failing to support the dual motive theory by relying mostly on the nonfinancial aspect especially in the social aspect. Balancing between the financial and non-financial performance is inevitable and therefore, efforts should be put to both aspects.

Results also show that there is no statistically significant mean difference between leaning aspect performance and internal business aspect performance ($t = 0.584$; $p < 0.05$); learning aspect performance and member aspect performance ($t = -0.179$; $p < 0.05$); internal business performance and member aspect performance ($t = -0.674$; $p < 0.05$). It means the primary AMCOS are more or less the same performing in the mentioned three aspects. The three aspects namely; learning, internal business and members are considered to be balanced in the primary AMCOS which is good practice for the institution. However, they should go together with the financial performance and social performance. Furthermore, there is a statistically significant mean difference

between the financial aspect performance and social performance ($t = 14.57$, $p < 0.05$); learning aspect performance ($t = 11.70$, $p < 0.05$); internal business performance ($t = 10.67$, $p < 0.05$) and member aspect performance ($t = 10.67$, $p < 0.05$). These inferential findings are supported by the descriptive findings from Table 5.1 which shows that all the non-financial aspects scored higher means for social ($M = 4.00$), learning ($M = 3.72$), internal business ($M = 3.70$) and customer ($M = 3.73$) compared to the financial performance ($M = 3.30$).

5.5.2 Effect of non-financial performance on the financial performance

In order to assess the effect of the non-financial performance on the financial aspect, the multiple regression was conducted where the four non-financial aspects were the independent variable with their mean scores, and financial performance as the dependent variable with its mean scores. Results in Table 5.3 shows the adjusted R square value of 0.538 indicates that, 53.8% of variation in the dependent variable (Financial performance) was as a result of the independent variables (member performance, social performance, internal business process, learning performance). This result shows that, the non-financial performance has a significant contribution in the financial performance. It means that, in order for the primary AMCOS to perform well financially, it must invest a lot in the non-financial aspects in order to work as a driving force towards financial performance. The results disagree with the other studies (Muda et al., 2018) found non-financial aspect to have no significant effect to the financial aspect in terms of market price. However, the study is supported by Hadizadeh, Bouzarjomehri, Shayan and Novghani (2015) who claimed that, there is positive influence between the social performance and financial performance. It is also supporting the Balanced Scorecard model which assumes the influence of the non-financial aspects to the financial aspects.

The ANOVA (Table 5.3) findings show a significant level $p < 0.001$, therefore, the F-statistics F-statistic is large enough to indicate that the model concerning the non-financial performance (member performance, social performance, internal business process, learning performance) and financial performance in AMCOS is highly fitted.

Table 5. 4 : Contribution of non-financial performance aspects on financial performance

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.484	0.189		2.567	0.011	0.301	3.327
	Social performance	-0.157	0.060	-0.133	-2.604	0.010	0.530	1.887
	internal business process	0.295	0.076	0.262	3.890	0.000	0.306	3.269
	learning performance	0.391	0.074	0.368	5.275	0.000	0.285	3.510
	member performance	0.241	0.064	0.256	3.763	0.000	0.301	3.327
	Model summary: R 0.738; R square 0.544							
	ANOVA Results: F 98.139; sig. 0.00							

a. Dependent Variable: financial performance

Table 5.3 (coefficients) shows t-values of social performance, internal business, learning and member performance by having 2.567, -2.604, 3.275, 5.275 and 3.763 respectively against the financial performance, that are greater than the critical value (1.96) at a significant level $p < 0.05$. Therefore, the hypothesis which states that non-financial performance has no impact on financial performance in AMCOS is rejected and therefore support that, non-financial performance has impact on the financial performance. Results show that learning contribute much on the financial performance ($B = 0.391$, $p < 0.05$) compared to other aspects. However, the social performance has a negative contribution to the financial performance. This is against the dual motive theory because it is indicating that the co-operatives have failed to balance the two. Also, it is against the BSC model because the aim of the model is to insist on the balancing of organisation resources to have a balancing performance. This is consistent with other studies (Amene, 2017; Mayo, 2011b) that recommend the co-operatives to engage on learning (training, skills etc) aspects in order for the co-operative to succeed.

5.6 Conclusion and recommendations

The aim of this study was to evaluate the performance of primary AMCOS. The study used both financial and non-financial metrics measuring the performance of primary AMCOS. The study used a Dual Motive theory which emphasise on the balancing between the economic and social performance without trade-off between the two and the Balanced Scorecard approach which insists the balancing of financial and non-financial aspects in assessing the performance of the organisation. The study asses the performance of five aspects: social, financial, learning, internal business process. The findings indicate average financial performance and above average in non-financial performance. Therefore, it indicates that primary AMCOS are doing better in non-

financial aspects than in the financial aspect. Furthermore, the results showed that there was statistical mean difference in performance scores between the financial and non-financial performance. The study concludes that, although primary AMCOS might have low financial performance, members can still be satisfied with other non-financial aspects, and this can be known when a comprehensive approach is used to assess the performance. The study recommends that efforts should be directed to the financial aspect, but without impairing the non-financial aspect, so as to balance overall performance and hence to comply with the duality nature of the co-operative of socio-economic. This can be done through ensuring that AMCOS get good price for their products, properly utilising the assets they have to generate income and increase production so as to increase the sales volume.

The findings also show that there is a positive relationship among the individual aspects within non-financial performance aspects. This also indicates that there is no trade-off between the non-financial aspects that means, all the non-financial aspect should be considered concurrently. However, social performance aspect has reported the negative contribution to the financial aspect, therefore, the study recommends that a careful plan should be done to manage spending on social performance to avoid impairing the financial performance as emphasised by the Dual Motive theory. The study also recommends a Modified Balanced Scorecard to be used in assessing the primary AMCOS performance.

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CHAPTER SIX

6.0 SUMMARY OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of the key findings

6.1.1 Factors for a comprehensive performance evaluation framework

After thorough and extensive literature, the conceptual framework with five aspects was developed. The factors from the framework were examined by interviews, focus group discussions and documentary review, then tested in the survey for validation. The study established five core aspects for co-operative performance evaluation: financial aspect, member aspect, internal business process, human capital, and social aspect. Each aspect was accompanied by its respective measurement indicators.

6.1.2 Relationship among performance measurement system aspects

The study examined the causal relationships among performance measurement system aspects in primary AMCOS. Specifically, the paper examined the relationship between learning, business process, member and financial aspects. The study adopted a cross sectional design, where 334 respondents were involved. Structural Equation Model (SEM) was conducted to test the hypothesis. The findings revealed that: learning has a positive significant relationship with internal business process, internal business process is significantly related to member aspect and member aspect with financial aspect. It also established a positive significant relationship between the learning aspect and financial aspect.

6.1.3 Success factors and performance

The paper explored the SFs which can help primary AMCOS to operate with a focus on the important issues which make them to prosper. Eleven items were identified as the SFs and are categorised into three: commitment (use of personal skills, members' control, and promotion), governance (measurement system, governance structure, leadership support, and transparency), strategy (self-evaluation, objective development, strategy focused, to live the vision).

6.1.4 Members' perception on co-operative performance

The study evaluates the performance of primary AMCOS by using both financial and non-financial metrics. The study used a balanced scorecard approach with five aspects, namely; social, financial, learning, internal business process. The study used 46 metrics in measuring performance. The results show that the financial performance was average, while the non-financial performance was above average. Furthermore, the results showed that there was statistical mean difference in performance scores between the financial and non-financial performance. The findings also show that there is a positive correlation between nonfinancial performance and financial performance. Moreover, it shows that, there is a positive relationship between the non-financial performance aspects.

6.2 Conclusions

6.2.1 Factors for a comprehensive performance evaluation framework

The study established five aspects that can be applied in the performance measurement system for primary AMCOS in order to capture both the economic and social performance. Therefore, the five aspects established were: Financial Aspect, Member Aspect, internal business process, human capital, and social aspect. Therefore, the study concludes that these aspects are able to capture the financial and non-financial performance of primary AMCOS.

6.2.2 Relationship among performance measurement system aspects

The study concludes that there is a relationship between the learning aspect and the internal business process, business process and member's aspect, member's aspect and financial aspect. Also, it concludes that learning influence financial performance. That's means there should be efforts in ensuring that the co-operative utilize the education fund set aside in their budgets for training members, leaders, and staff. Then will lead to best practices in the operations which will give better results to members' hence financial performance.

6.2.3 Success factors and performance

The study established eleven (11) SFs that were grouped into three categories; commitment, strategy and governance. It also concludes that SFs affects positively the performance of co-operatives. Therefore, co-operatives as any other organisations need

to find ways of positioning themselves in the business environment by re-introducing member commitment, strategy focused, as well as having strong governance which works properly according to the government and organisation structure.

6.2.4 Members' perception on co-operative performance

The study concludes that there is an average financial performance and above average non-financial performance. The meaning is members are more satisfied with the non-financial performance than the financial performance in primary AMCOS. Furthermore, the results showed that there was no statistical mean difference in performance scores between the financial and non-financial performance. The findings also show that there is a positive correlation between nonfinancial performance and financial performance. Moreover, it shows that there is a positive relationship among the non-financial performance aspects. The study concludes that members perceive both non-financial performance and financial performance to be of important to them.

6.3 Theoretical reflection and contribution of the study

In line with the cooperative theoretical framework that stress for considering the multiple objectives, the study was guided by Balanced Scorecard model which insists on the holistic view of the organisational performance. The traditional Balanced Scorecard has four aspects called the perspectives. These are: learning and growth, internal business process, customer perspective and financial perspective. However, it allows adoption while modifying the perspectives depending on the nature of the organisation. Correspondently, the current study found the need to increase the fifth aspect namely social aspect (see figure 6.1). The study also was able to establish indicators which are specific for primary AMCOS therefore it contributes to the co-operative theory. BSC also assume the causal relationship between the perspectives. The current study has confirmed the model BSC assumption. However, it has showed a direct relationship from the learning aspect to both business process and financial aspect that is different from the conversional BSC. In order to have an integrated measurement, the study has come up with the SF using the CSFT specific to the primary AMCOS.

Ability, Motivation and Opportunity to participate Theory assumes that for an organisation to attain good performance they must have a human capital with skills, abilities, motivated and given the chance to execute their knowledge and skills. The current study has confirmed with the theory as the findings show that there is a positive

relationship between the learning and growth with financial aspects and the internal business operations which leads to the co-operative performance. Also learning and growth in primary AMCOS has shown to be the base for the other aspects. The established framework insists the need to have enough skilled, competent and well-trained personnel in primary AMCOS as the base for other aspects to function well. The personnel are expected to plan well in the area of internal business process as well as proper management of finance, which leads to members satisfaction, retention and members increase. This in turn will attract finance in the primary AMCOS hence improve the financial performance. It expected the social aspect to be improves when either members aspect is improved or financial aspect or both. Although it will be more suitable if both member and finance are improved because there is a risk of impairing one of them not especially the finance aspect. Therefore, the study has contributed to the body of knowledge on the co-opetative theoretical framework for a performance measurement system that reflect a comprehensive performance of the primary AMCOS.

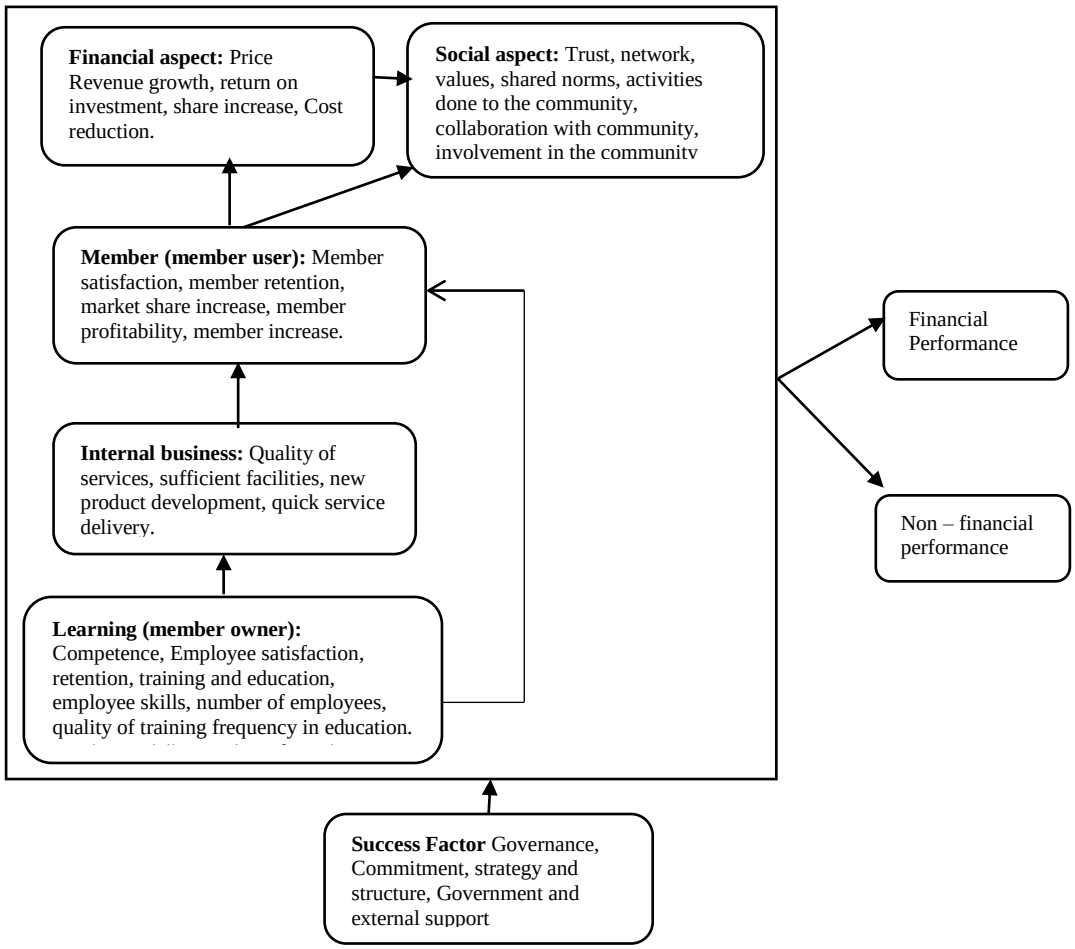

Figure 6. 1 : The developed performance measurement System framework for AMCOS.

From the framework established, the overall performance of the AMCOS can be calculated as the function of financial and non-financial performance as explained in the formula below:

AMCOS performance = *f* (NFP, FP) …….... (6.1)

NFP = Non-financial Performance

FP = Financial performance

Where Non-financial Performance =*f* (LP, IBP, MP, SP) …….....(6.2)

LG = Learning Performance

IBP = Internal business process performance

MP = Member performance

SP = Social Performance

6.4 Recommendations

6.4.1 Factors for a comprehensive performance evaluation framework

These factors and indicators are useful to the performance system of the primary AMCOS in order to improve. The study recommends the application of five aspects with their indicators in the performance evaluation system. It results to a holistically performance, hence a comprehensive approach. This can lead to a robust primary AMCOS, since monitoring and management of the primary AMCOS from time to time in all aspects will be enhanced, thus, providing quality services to their members.

6.4.2 Relationship among performance measurement system aspects

The study is recommending that members should make sure, the training fund which is set aside according to the Co-operative Act and regulations, to be utilised to all levels i.e., members, board members and staff so as to have competent persons in all levels. Given that members need to receive services which meet their expectations, it is recommended to those in charged with internal business processes to use the expertise and skills they have to come up with innovative ideas to foster quality services to members. Also, since there is a significant association between members and financial aspect, it is recommended to the members that each member should make sure that he/she participate fully economically by selling the products through co-operative and contribute to build capital.

6.4.3 Success factors and performance

Co-operatives as any other organisations need to find ways of positioning themselves in the business environment by re-introducing member commitment, be a strategy focused, as well as having strong governance which is accordance to the government and organisation structure. Therefore, the study recommends to policy makers to prioritise and put efforts on the SFs as emphasized by members who know what is going on at the ground, so as to have a direct impact on the performance of the primary AMCOS. This can have a positive impact since it is what they see as the members can move them from one point to another and hence a possibility of high commitment when it comes to implementation.

6.4.4 Primary AMCOS performance evaluation

The study recommends that in order to know the overall performance of the primary AMCOS the use of integrated financial and non-financial performance is very important. So long as members' benefits from both financial and non-financial, primary AMCOS should make sure they balance this situation in order to benefit members and become competitive in the market as well as differentiate themselves from other institutions. Integrated model like BSC give an overall performance of primary AMCOS by considering both financial and nonfinancial objectives therefore, it is recommended the developed framework to be taken as a be applied in primary AMCOS as a performance evaluation framework.

APPENDICES

Appendix 1 : The survey questionnaire

Researcher: Victor Shirima- PhD candidate

Mobile: 0762961869/0713949221

Email: evishi5@gmail.com/victor.shirima@mocu.ac.tz

S/No	*Item*	*Response*
1.	Questionnaire No.	

A: Respondent Profile

1. *Gender:* Male [ ] Female [ ]
2. *Age (years):……..*
3. *Name of Co-operative……*
4. *Membership duration:……..*
5. *Average sales volume per year (kgs)……*
6. *Education level (Tick as applicable)*

Primary school [], Ordinary Level secondary school [], Advanced Level Secondary school [], Certificate [], Diploma [], Bachelor/Advance diploma [], Master Degree [] others, specify…….

7. *What is your academic qualification?*

   Accounting [], Finance [] business administration [], marketing [], human resource [], others, specify ……

8. What is your professional qualification?

   CPA (T) [], Advocate [], Banker [], Teacher [] others, specify…….

9. *Your position in this co-operative*

   Manager [], Accountant [], marketing manager [], production manager [], ICT manager [], others, specify …….

10. *What is your experience in this position?*

    0-5 year [], 6-10 years [], 11-15 years [], 16-20 years [], above 20 years []

B: Structure of Performance Measurement

11. **Performance measurement system is very crucial to the organization**. In achieving this, some aspects are very important. You are requested to weigh each aspect basing on your perception on the extent to which they contribute to the overall co-operative performance. **The total weighting must sum to 100%.**

Item	***Perspectives:*** *Description*	***Weight (%)***
FP	**Financial Aspect:** establishes the long- and short-term financial performance objectives expected from the co-operative's strategy and simultaneously describes the economic consequences of actions taken in the other three perspectives	
CP	**Customer/member aspect:** defines the customer/member and market segments in which the business unit will compete and describes the way that value is created for customers/members	
IBP	**Internal Business process aspect:** describes the internal processes needed to provide value for customers and owners	
LG	**Employee Learning and Growth aspect:** defines the capabilities that co-operative needs to create long-term growth and improvement	
SP	**Social aspect:** concerned with all social aspects which a co-operative undertakes e.g., concern for community	
ENV	**Environment aspect**	

12. **Please rate the involvement of different actors in strategy reviews process**; *(4=Always; 3= Very Often; 2= Sometimes; 1=Rarely; 0= Never)*

Item	***The following are highly involved in the strategy review process***	***0***	***1***	***2***	***3***	***4***
Bo	Board members	0	1	2	3	4
Me	Members	0	1	2	3	4
Ma	Top managers	0	1	2	3	4
Em	Employees	0	1	2	3	4
Com	Committee members	0	1	2	3	4
Cof	Co-operative officers (i.e., DCO, RCOs Registrar….)	0	1	2	3	4
Fu	Funders	0	1	2	3	4
Cons	Consultant (e.g., University, other experts...)	0	1	2	3	4

13. **Co-operative principles/values and ethics*:*** *To what extent do you agree on the following statements below Rank them on a scale of 1 to 5? (1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	***Values***	***1***	***2***	***3***	***4***	***5***
Self-help	Members are ready to use the skills they have for helping the cooperative	1	2	3	4	5
	All members strive to control their purposes	1	2	3	4	5
Self-responsibility	Members do have the responsibility of promoting their cooperatives among their families, friends and acquaintances	1	2	3	4	***5***
	Members ensures that their cooperatives remain independent	1	2	3	4	5
Equality	All members are equal without depending social and economic status	1	2	3	4	5
Equity	Members are treated equitably according to their participation	1	2	3	4	***5***
Solidarity	Co-operative members have strong solidarity	1	2	3	4	5
	The co-operative has a collective interest of its members	1	2	3	4	5
	People associating with this co-operative are treated fairly	***1***	***2***	***3***	***4***	***5***
Item	***Basic requirements for Agri.Coop***	1	2	3	4	5
Marketing	Members do sell all the produces to the coop	1	2	3	4	5
	The cooperative has an ability to buy all the produces from the members	1	2	3	4	***5***
Supply	Members obtain professional requirements from the cooperative	1	2	3	4	5
Credit	Members obtain credit from the cooperative	1	2	3	4	5
Guidance	Members receive education, training and extension services from the cooperative	1	2	3	4	***5***

14. **Strategy focused co-operative**: To what extent do you agree that the following below are normally adhered by your cooperative? Rank them on a scale of 1 to 5? *(1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	***Our co-operative normally does the following:***	***1***	***2***	***3***	***4***	***5***
SF1	Translate the strategy to operational terms (through creating a common understanding for all co-operative units' employees and members)	1	2	3	4	5
SF2	Align the co-operative to the strategy (members, units, departments, functions strategies are aligned with the overall union strategies)	1	2	3	4	5
SF3	Make strategy everyone's job (all employees understand the strategy and conduct their day-to-day business in ways that contribute to the success of the union strategy	1	2	3	4	5
SF4	Make strategy a continuous process (link strategy to the budgeting process, simple management meeting to review strategy and learning on how to adapt the strategy)	1	2	3	4	5
SF5	To mobilize change through executive leadership (through recognizing that strategies must continually evolve to reflect changes in the competitive environment)	1	2	3	4	5

15. To what extent do you agree that the categories of measures listed below are normally used by your cooperative to measure performance? Rank them on a scale of 1 to 5*? (1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	***The following are the measures our co-operative may usually use***	***1***	***2***	***3***	***4***	***5***
Financial Aspect measures:						
F2	Measures that reflect profitability growth	1	2	3	4	5
F3	Price of the commodity	1	2	3	4	5
F4	Sales/revenue growth	1	2	3	4	5
F5	Return on investment	1	2	3	4	5
F6	Share increase	1	2	3	4	5
F7	Dividend to members	1	2	3	4	5
F8	Cost reduction	1	2	3	4	5
Customer/member Aspect						
CU1	Member/customer satisfaction	1	2	3	4	5
CU2	Customer/member retention	1	2	3	4	5

CU3	Market share increase	1	2	3	4	5
CU4	Customer/member profitability	1	2	3	4	5
CU5	Membership increases or number of members	1	2	3	4	5
Internal business process Aspect						
I1	Measures that reflect quality of services offered	1	2	3	4	5
I2	Sufficient facilities in the cooperative	1	2	3	4	5
I3	The use of ICT in marketing	1	2	3	4	5
I4	Measures that reflect product development	1	2	3	4	5
I5	Quick serving of members/primary cooperative	1	2	3	4	5
I6	Measure that reflects the operational efficiency	1	2	3	4	5
I7	Number of sales contracts done in a year	1	2	3	4	5
Learning and growth aspect:						
L1	Measures that reflect employee competence	1	2	3	4	5
L2	Measures that reflect employee satisfaction	1	2	3	4	5
L3	Measures that assess employee retention	1	2	3	4	5
L4	Measures that assess quality of employee training	1	2	3	4	5
L5	Measures that asses employee skills	1	2	3	4	5
L6	Number of employees/ sufficient staff	1	2	3	4	5
L7	Measures that assess number of training per period	1	2	3	4	5
L8	Frequently members education	1	2	3	4	5
Social aspect:						
SO1	Number of activities done in the community	1	2	3	4	5
SO2	Involvement in the community issues	1	2	3	4	5
SO3	Collaborations with other development actors	1	2	3	4	5

C: The Purpose of Performance Measurement

16. *To what extent is the performance measurement system used by your cooperative union is for the following purposes on a scale of 1 to 5? (1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	***The performance measurement we use in our co-operative serve the following purpose***	***1***	***2***	***3***	***4***	***5***
PPS1	Eliminate short term mindset	1	2	3	4	5
PPS2	Balance financial and non-financial goals	1	2	3	4	5
PPS3	Translate the strategy into comprehensive set of goals and targets	1	2	3	4	5
PPS4	Collaborate with external stakeholders	1	2	3	4	5
PPS5	Embed sustainability into performance and control	1	2	3	4	5
PPS6	Make strategy as continuous process	1	2	3	4	5
PPS7	Improve depth and quality of strategic planning	1	2	3	4	5
PPS8	Focus on continuous anticipation/preparation on uncertain changes	1	2	3	4	5
PPS9	Drive high performance	1	2	3	4	5
PPS10	Balancing short term performance with long-term success	1	2	3	4	5
PPS11	Achieving transparency and fairness of incentives and compensations	1	2	3	4	5
PPS12	Balancing benefits for all stakeholders	1	2	3	4	5
PPS13	As a means for communication within the cooperative units and departments	1	2	3	4	5
PPS14	To motivate responsible persons and other employees	1	2	3	4	5
PPS15	To determine the bonus/honoraria to be awarded	1	2	3	4	5
PPS16	To motivate responsible persons and other employees	1	2	3	4	5

17. Are you satisfied with the performance measurement system in this co-operative?
    a) Yes
    b) NO

18. Please indicate your satisfaction on the following developments on your co-operative: *(1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	*I am satisfied on how the co-operative have been doing on the following*	***1***	***2***	***3***	***4***	***5***
S1	Performance measurement system	1	2	3	4	5
S2	Strategic objectives development	1	2	3	4	5
S3	Being the strategy focused organization	1	2	3	4	5
S4	Ability to live the vision and mission	1	2	3	4	5

Strategy formulation

19. To what extent do you agree on the following statements concerning the strategy formulation in your co-operative union? *(1=strongly disagree (SDA), 2=Disagree (DA), 3=neither Disagree nor agree (NDNA), 4=Agree (AG), 5= strongly agree (SA))*

Item	***In the strategy formulation in our co-operative union:***	***1***	***2***	***3***	***4***	***5***
STR1	I participate in the co-operative's strategy process	1	2	3	4	5
STR2	The strategy is communicated in the whole co-operative	1	2	3	4	5
STR3	Key measures support the co-operative's strategy	1	2	3	4	5
STR4	Key measures translate strategy into action	1	2	3	4	5
STR5	The co-operative structure support strategy	1	2	3	4	5
STR6	The key strategies are discussed in the organization and everybody see the results	1	2	3	4	5

D: In this section, could you please provide your opinion on a number of performance measurement system (BSC) items?

20. **Financial aspect:** Indicate (by ticking) your level of agreement on the following sentences on how your co-operative put emphasize on the given activities. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

Item	*The following issues are done in our co-operative:*	*1*	*2*	*3*	*4*	*5*
A1	Our co-operative strives to improve shareholders/members value	1	2	3	4	5
A2	We are much concerned with revenue growth in our co-operative	1	2	3	4	5
A3	Management of operating costs has been our major concern	1	2	3	4	5
A4	We put more priority to co-operative profitability than other objectives	1	2	3	4	5
A5	We use to set strategies to achieve high profitability in our co-operative	1	2	3	4	5
A6	We have good plans on how we can effectively utilize the co-operative assets like buildings, estates etc.	1	2	3	4	5
A7	The co-operative has policies for managing financial risks	1	2	3	4	5
A8	We take it seriously when it comes the issue of reducing operation costs	1	2	3	4	5
A9	The co-operative has the financial regulation explained to staff, managers and board members	1	2	3	4	5
A10	The investment we have are clearly stated in the investment policy	1	2	3	4	5
A11	We have a well-articulated financial planning	1	2	3	4	5

21. **Customer/member aspect:** Indicate (by ticking) your level of agreement on the following sentences on how your co-operative put emphasize on them. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

item	*The following practices are done in our co-operative:*	*1*	*2*	*3*	*4*	*5*
B1	We put the interest of customer/members ahead in planning and making decisions	1	2	3	4	5
B2	Our co-operative plans to penetrating the market	1	2	3	4	5
B3	We have good plans to make sure our members are accessed with agriculture facilities	1	2	3	4	5
B4	Our co-operative has been able to put retention efforts to its members	1	2	3	4	5
B5	We have good member promotion strategies in our co-operatives	1	2	3	4	5
B6	We focus to achieve high member satisfaction	1	2	3	4	5
B7	Membership increase is one the co-operative focus	1	2	3	4	5
B8	Member satisfaction survey is one of the things we have been doing	1	2	3	4	5
B9	We build image and reputation of our co-operative	1	2	3	4	5
B10	There is a well-defined strategy to communicate with the buyers of our products	1	2	3	4	5
B11	The co-operative has programmes to ensure timely delivery of services to its members	1	2	3	4	5

22. **Internal business process aspect:** Indicate (by ticking) your level of agreement on the following sentences on how your co-operative put emphasize on them. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

Item	*The following are supposed to be done in our co-operative:*	*1*	*2*	*3*	*4*	*5*
C1	The co-operative value much on improving the quality of the crop producing by the member	1	2	3	4	5
C2	The co-operative value much on improving the quality of the service given to its members	1	2	3	4	5
C3	The co-operative emphasizes on improving the communication to its members	1	2	3	4	5
C4	The co-operative emphasizes on improving the communication between management and external buyers	1	2	3	4	5
C5	The co-operative has good accounting system which give as financial reports promptly	1	2	3	4	5
C6	The co-operative has good plans on making sure we save our customers as quick as possible	1	2	3	4	5
C7	Plans for having effective collection centres are set	1	2	3	4	5
C8	The co-operative has business plans	1	2	3	4	5
C9	The co-operative is well structured that can measure performance of entire value chain	1	2	3	4	5
C10	The co-operative has a strategic plan	1	2	3	4	5

23. **Learning aspect:** Indicate (by ticking) your level of agreement on the following sentences on how your cooperative put emphasize on them. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

Item	*The following are done in our co-operative:*	*1*	*2*	*3*	*4*	*5*
D1	The co-operative emphasizes on the employee satisfaction	1	2	3	4	5
D2	Co-operative emphasize on the skills of the employees	1	2	3	4	5
D3	The co-operative strives to have a minimum number of employees	1	2	3	4	5
D4	The co-operative does plan to have as many trainings as possible	1	2	3	4	5
D5	The co-operative has plans to motivate its employees	1	2	3	4	5
D6	Employment is made by considering the strategy of the co-operative	1	2	3	4	5
D7	Employee retention programme are prepared	1	2	3	4	5
D8	The basic values of this co-operative include learning as key to improvement	1	2	3	4	5
D9	Our co-operative has a plan to supports employees to pursue further	1	2	3	4	5

	education					
D10	Our co-operative involves all levels in the planning of education and training	1	2	3	4	5
D11	Co-operative offers suggestions on how employees can improve their performance	1	2	3	4	5
D12	The co-operative empowers its members on how to analyse co-operative performance	1	2	3	4	5

E: Success Factors

24. Please indicate by ranking the critical success factors which can help your co-operative to have a good performance measurement system. Indicate (by ticking) your level of agreement on the following sentences. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

Item	***The following are the critical success factors to our co-operative:***	***1***	***2***	***3***	***4***	***5***
S1	Ensure the credibility of the process and honesty in reporting	1	2	3	4	5
S2	Align systems: tie them to the co-operative's planning, measurement, and budget cycles	1	2	3	4	5
S3	Create a communications campaign that explains how a performance measurement system both reflects and drives a focus on mission.	1	2	3	4	5
S4	Start development of measures at both the top and bottom of the co-operative and cascade them in both directions.	1	2	3	4	5
S5	Design the system to follow the actual work of the co-operative	1	2	3	4	5
S6	Create a governance process that engages key stakeholders	1	2	3	4	5
S7	Gain top leadership support; it helps if there is a 'burning platform' for change	1	2	3	4	5
S8	Create transparency of information that is as real-time as possible; this is key to its credibility and usefulness to both senior and frontline managers	1	2	3	4	5
S9	Align incentives: link rewards to performance through effective evaluation and performance appraisals.	1	2	3	4	5
S10	Government support	1	2	3	4	5
S11	Co-operative/organisation structure	1	2	3	4	5
S12	Government structure	1	2	3	4	5
S13	Members are ready to use the skills they have for the cooperative	1	2	3	4	5
S14	All members strive to control their purposes	1	2	3	4	5

S15	Members do have the responsibility of promoting their cooperatives among their families, friends and acquaintances	1	2	3	4	5
S16	Members ensures that their cooperatives remain independent	1	2	3	4	5
S17	All members are equal without depending social and economic status	1	2	3	4	5
S18	Members are treated equitably according to their participation	1	2	3	4	5
S19	Co-operative members have strong solidarity	1	2	3	4	5
S20	The co-operative has a collective interest of its members	1	2	3	4	5
S21	People associating with this co-operative are treated fairly	1	2	3	4	5

F: Factors affecting co-operative measurement system

25. Tick the following factors as the one affects your co-operative performance measurement system. Indicate (by ticking) your level of agreement on the following sentences. *(1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4= agree; 5= strongly agree)*

Item	***The following are the factors that affect the performance measurement system in our co-operative***	***1***	***2***	***3***	***4***	***5***
AF1	Lack of Efficient Data Collection and Reporting	1	2	3	4	5
AF2	Too much internal focus rather external focus	1	2	3	4	5
AF3	High levels of bureaucracy	1	2	3	4	5
AF4	Lack of understanding on how the measurement tool should be undertaken	1	2	3	4	5
AF5	Lack of a formal review structure	1	2	3	4	5
AF6	Low professionalism guidance and direction during implementation	1	2	3	4	5
AF7	Expense incurred during implementation	1	2	3	4	5
AF8	Poor top management guidance	1	2	3	4	5
AF9	Incompetent board members	1	2	3	4	5
AF10	Low member participation	1	2	3	4	5
AF11	Level of education of the participants	1	2	3	4	5

G: Performance Evaluation

26. **: How do you evaluate your co-operative on the following statements in terms of performance?** Indicate (by ticking) your level of agreement on the following sentences. *(1=very low/poor; 2=low/poor; 3=adequate(satisfactory); 4= High (good); 5= very high/very good)*

Item	***Financial performance: What is your perception on the performance of your co-operative financially?***	***1***	***2***	***3***	***4***	***5***
FP11	The co-operative has been able to get profit as per its projections	1	2	3	4	5
FP12	The price of our crops has been high compared to other buyers	1	2	3	4	5
FP13	The co-operative liquidity level is satisfactory	1	2	3	4	5
FP14	The cooperative use money efficiently to obtain the better results	1	2	3	4	5
FP15	Marketability level is very high due to the quality of our crop and other products	1	2	3	4	5
FP16	Our focus on the sales growth is always achieved	1	2	3	4	5
FP17	The co-operative is getting high return/profit in relation to the capital it has.	1	2	3	4	5
FP18	The co-operative is getting high return/profit in relation to the assets it owns.	1	2	3	4	5
FP19	The profit obtained by the cooperative is reasonable compared to the sales the co-operative is making.	1	2	3	4	5

Item	***Non-financial performance: What is your perception on the performance of your cooperative non-financially?***	*Rate your opinion*				
NFP11	The co-operative is operating under professional management	1	2	3	4	5
NFP12	We have skilled staff for every department and section	1	2	3	4	5
NFP13	Co-operative members are satisfied with the operations and services	1	2	3	4	5
NFP14	The co-operative is experiencing a satisfactory growth in terms of membership	1	2	3	4	5
NFP15	Members are participating highly on the co-operative economic activities	1	2	3	4	5
NFP16	Generally, employees of this co-operative are satisfied	1	2	3	4	5
NFP17	The co-operative is not facing employee turnover problem (turnover is fare)	1	2	3	4	5
NFP18	Staff are attending job/office with almost no absenteeism	1	2	3	4	5
NFP19	Members are actively participating in setting policies and making decisions	1	2	3	4	5
NFP20	Members democratically control the capital of the co-operative	1	2	3	4	5
NFP21	Adequate resources are allocated for training	1	2	3	4	5
NFP22	The co-operative provides education and training to members	1	2	3	4	5
NFP23	Co-operative provides education and training for board members	1	2	3	4	5

NFP24	Co-operative provides education and training for managers and employees.	1	2	3	4	5
NFP25	Members are able to inform the general public about the benefits of co-operatives.	1	2	3	4	5
NFP26	Our co-operative has been designing and developing new products	1	2	3	4	5
NFP27	We have been able to fetch new market for our products	1	2	3	4	5
NFP28	We have been involving for research and development	1	2	3	4	5
NFP29	Our co-operative has been doing good in concerning for community	1	2	3	4	5
NFP30	The co-operative responds quickly to the need of members	1	2	3	4	5
NFP31	You are satisfied with the services offered by your co-operative	1	2	3	4	5

Please rate the overall performance of your co-operative union for the current year. ***Please circle number***

Terrible	Extremely poor	Very Poor	Poor	Mildly poor	Neither	Mildly good	Good	Very Good	Extremely good	Absolutely outstanding
1	2	3	4	5	6	7	8	9	10	11

Appendix 2 : Interview guide

1. Do the co-operatives have vision?
2. Do they have strategic plan?
3. How these co-operatives will operate without strategic plans
4. How the co-operatives evaluate themselves?
5. What comes first between the need to co-operate and the need to solve challenges?
6. What comes first between the spirit of working together and Need of working together
7. What is the aim of starting the co-operative? the co-operative to help the members or members to use the co-operative to solve their problem?
8. How do you assess the commitment in the co-operative?
9. What is your view on how the co-operative performance is assessed?
10. Is there a need to have a comprehensive approach in measuring co-operative performance?
11. Do the measures relate to the strategy of the co-operative?
12. What measures do you think are important about social perspectives?
13. What measures do you think are important about Learning and growth**?**
14. What measures do you think are important about Business process**?**
15. What measures do you think are important about Financial perspective?
16. What are the strategies suitable for these five perspectives?
17. What are important areas should be considered when measuring co-operative performance?
18. Can the co-operative set objectives to measure performance but fail to measure?
19. What do member exactly follow in the meetings?
20. Doe the co-operative model which we have still relevant to our community?

Appendix 3 : Focus group discussion

1. Do the co-operatives have vision?
2. Do they have strategic plan?
3. How these co-operatives will operate without strategic plans
4. How the co-operatives evaluate themselves?
5. What comes first between the need to co-operate and the need to solve challenges?
6. What comes first between the spirit of working together and Need of working together
7. What is the aim of starting the co-operative? the co-operative to help the members or members to use the co-operative to solve their problem?
8. How do you assess the commitment in the co-operative?
9. What is your view on how the co-operative performance is assessed?
10. Is there a need to have a comprehensive approach in measuring co-operative performance?
11. Do the measures relate to the strategy of the co-operative?
12. What measures do you think are important about social perspectives?
13. What measures do you think are important about Learning and growth**?**
14. What measures do you think are important about Business process**?**
15. What measures do you think are important about Financial perspective?
16. What are the strategies suitable for these five perspectives?
17. What are important areas should be considered when measuring co-operative performance?
18. Can the co-operative set objectives to measure performance but fail to measure?
19. What do member exactly follow in the meetings?
20. Doe the co-operative model which we have still relevant to our community?

Appendix 4 : Summary of the literature on the Co-operative performance system

Objective	*Cooperative type and area of study*	*Indicators used*
to identify important core organizational capacity indicators needed for the cooperatives to survive and live up to their role as effective partners in improving the welfare of their members (Deriada, 2005)	Agricultural cooperative-Philipines	Savings mobilisation, sufficient budget, innovativeness, entrepreneurial skill deveolpment, members'participation, continuous training and educations
to examine the growth of DCCBs in India through selective indicators(Kanchu, 2012)	Co-operative bank-India	Deposits, Credits and C/D Ratios, working capital,growth of investment, cost of management
to measure 'sustainable social economy' performances advocated by the cooperatives' philosophy	Wineco-operative-Languedoc-Roussillon	COOPERFIC©'s financial indicators
to analyze the economic and financial performance of the larges Brazilian credit cooperatives(Da Silva, Leite, Guse, and Gollo, 2017)	Brazilian credit cooperatives	Camel model (adequacy Capital,Asset quality, Management expertise Liquidity and Sensitivity to market risk)
to assess the factors influencing the performance of agricultural cooperative members in Gatsibo District Rwanda(Mubirigi, Shukla, and Mbeche, 2016)	Agricultural cooperative-Rwanda	Youth participation, land use consolidation policy, input savings mechanism, knowledge on action plan and budget, level of accountability and transparency ,value addition, members productivity
an evaluation of the efficiency and performance of a European cooperative banks (Doumpos and Zopounidis, 2012)	Cooperative banks-Germany, France, Italy, Spain, and Austria	loan/assets, equity/assets and ROA ratios
to identify and recommend different indicators for measuring performance of financial cooperatives in Nepal(Simkhada, 2017)	Financial co-operative-Nepal	Earnings, Liquidity, Efficiency, Productivity, Healthy capital structure, Assets quality, Net growth, Targeting, and Self-governance (ELEPHANTS)
the financial growth and performance of the Ramanathapuram District Central Cooperative Bank Ltd (RDCCB)	Cooperative bank-India	Membership, Deposits, Loans and Advances, Net Profit, Reserves, Investment, Working Capital and NPA
Evaluating the Performance of Agricultural Cooperative Boards of Directors(Henehan and Anderson, 1999)	Agricultural Cooperative-USA	board operations and process, director proficiencies, clarifying the mission, strategic planning, effectiveness of the chair, minimizing politics and conflicting interests, understanding and maintaining director role, board-management relations
examined the performance of multi-purpose cooperatives in Swaziland (Masuku et al., 2016)	multi-purpose cooperatives-Switzland	Democracy,Participation, Transparency,Education and Training, financial performance

Appendix 5 : Summary of the Documentary Review

	Aspects of concern during Annual General Meeting (AGM)				
AMCOS	**Financial**	**Human capital**	**Business process**	**Member/customer**	**Social**
Mamsera	profit, return from investment (building)	employment	internal control, communication, budget preparation, input supplies, networking, fraud management	farm campaigns, prize award for the best farmers, extension services	Sponsoring students
Makiidi	financing, price, share contribution, internal capital		external auditor, new projects, forming committee, networking, financial statements, increase production, budget preparation		
Keni	selling, financing through loan	employment, regular seminars, employee remuneration	Budget preparation, external auditor, communication, attending meetings, promotion, quality	members benefits, agricultural inputs, training to member, extension services	
Tarakea	bonus, shares, renting, budgeting	Staff training	quality, networking, auditors, networking	paying members, training, farm visits	
Mashima	loan problems, financing issue	human resource	increase production, theft reduction	Members education, promotion, subsidies, Membership change	
Kirwa KeniMrere	Selling, budgeting, price, financing		auditor, networking	supply of seedlings	
Ushiri	ROA, collection, financing, price fixation		Networking	members shifting	
Mahida	Share, budgeting, price, capital growth, profit increase	empowerment and training	Investment, business plan, technology use, networking	Loyalty, membership promotion, increase, members	

Appendix 6 : Sample size detail from each AMCOS

District	Number	members	shares	share per cop	>1000,000	%	Active	%
SAME	11	4069	21416000	1946909	1	9	10	91
SIHA	11	5374	24083750	2189432	5	45	11	100
MWANGA	8	878	2696000	337000	0	0	2	25
MOSHI DC	37	39361	236207741	6383993	25	68	35	95
HAI	26	18230	118350521	4551943	8	31	25	96
ROMBO	16	27695	84744592	5296537	11	69	16	100

Appendix 7 : The status of primary AMCOS in Kilimanjaro Region district wise dealing with coffee crop as April 2for the year 2018

Name of co-operative	Frequency	Percent
Mamsera AMCOS	40	12.0
Makiidi AMCOS	33	9.9
Ushiri AMCOS	41	12.3
Mrao AMCOS	42	12.6
Kirwa Keni AMCOS	40	12.0
Mahida AMCOS	39	11.7
Mashima AMCOS	43	12.9
Tarakea AMCOS	56	16.8
Total	**334**	**100.0**

Appendix 8 : Permission letter

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

MKOA WA KILIMANJARO
Anwani ya Simu: 'REGCOM' KILIMANJARO
Simu Na: 027-2754237/2752184
Fax Na: 027-2753248
E-Mail: raskilimanjaro@tamisemi.go.tz
Unapojibu tafadhali taja:

OFISI YA MKUU WA MKOA
S.L.P. 3070,
MOSHI.

Kumb.Na. FA.228/276/03/52

23 Januari, 2018

Mkurugenzi Mtendaji,
Halmashauri ya Wilaya,
SAME, MWANGA, ROMBO,
MOSHI, SIHA NA HAI

Mkurugenzi,
Manispaa ya Moshi

Yah: KIBALI CHA KUFANYA UTAFITI

Tafadhali husika na somo tajwa hapo juu.

Napenda kumtambulisha kwako **Bw. Victor E. Shirima** ambaye ni Mwanafunzi wa Chuo Kikuu cha Ushirika Moshi.

Bw. **Victor E. Shirima** atafanya Utafiti juu ya ***"Balanced Scorecard Perspectives, Critical Success Factors and Organisational Performance"*** anatarajia kufanya zoezi hilo kuanzia tarehe **12/12/2017 hadi 30/12/2022**.

Hivyo unaombwa kumpokea na kumpa ushirikiano ili aweze kufanikisha kufanya Utafiti huo kwa ajili ya kuandaa taarifa yake. Sheria, Kanuni na taratibu za nchi kwa kipindi ilichoomba zizingatiwe.

Asante kwa ushirikiano.

Sebastian Masanja
Kny KATIBU TAWALA MKOA
KILIMANJARO

KATIBU TAWALA WA MKOA
KILIMANJARO

Nakala: Katibu Tawala Mkoa
KILIMANJARO – ***Aione kwenye jalada***

Mkuu wa Chuo,
Chuo cha Ushirika Moshi

Bw. Victor E. Shirima
Mwanafunzi