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THE INFLUENCE OF COOPERATIVE STRUCTURE ON MEMBER COMMITMENT, SATISFACTION AND SUCCESS: THE MURANG'A NUTRIBUSINESS COOPERATIVE IN KENYA

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ABSTRACT

THE INFLUENCE OF COOPERATIVE STRUCTURE ON COMMITMENT, MEMBER SATISFACTION AND SUCCESS: THE MURANG'A NUTRIBUSINESS COOPERATIVE IN KENYA

This study focused on an examination of member commitment, member satisfaction and success in the Murang'a Nutribusiness Cooperative. A subsidiary purpose was to assess the organizational structure of the cooperative in conducting its daily activities. Previous research documented that affective commitment contributes positively to the success of an organization while continuance commitment does not. Individuals with affective commitment remain in the organization because they want to while those with continuance commitment remain because they have to. Member commitment and member satisfaction are documented key factors critical to the success of cooperatives (Bhuyan & Leistriz, 2001; Bruynis et al., 2001; Cotterill, 2001; Fullerton, 2005). These three factors influence and are in turn influenced by the structure of an organization.

This study used the Allen and Meyer (1990) measure of organizational commitment to examine how committed Murang'a Nutribusiness Cooperative members are to their organization. For this study, commitment was further operationally defined as including affective commitment (Cronbach's alpha reliability=0.9) and continuance commitment (Cronbach's alpha=0.8). Participant responses to each of the items on the two commitment subscales were recorded using a 5-point, Likert response scale (1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree). Thus the higher mean summated value represents greater level of commitment.

Results revealed that Murang'a Nutribusiness Cooperative members overall affective commitment was 3.5 on a 5-point Likert response scale. Continuance commitment overall was 3.0 on a 5-point Likert response scale. Examining results by position, affective commitment of board members (M=4.8, SD=0.1) was much higher than that of members (M=3.2, SD=0.8).

Continuance commitment was also higher for board members (M=3.6, SD=1.2) than for general members (M=2.9, SD=0.6). Both affective and continuance commitment were positively related to satisfaction and position. Although success was related to position, there was no relationship between success and commitment. Success of the cooperative was also unrelated to satisfaction.

Primary factors that influence satisfaction are organizational factors, operating management factors and cooperative principles (Bhuyan & Leistriz, 2001; Bruynis et al., 2001). Results of the current study reveal relatively low satisfaction with the cooperative of general members (M=2.1, SD=1.3 on a 5-point Likert scale) compared to that of board members (M=3.6, SD=1.0 on a 5-point Likert scale). Perceived cooperative success by members (M=2.5, SD=1.3) was found to be much lower than that of the board (M=3.8, SD=0.7).

This study used institutional economics theories of transaction costs, property rights and agency theory (Schmid, 2004; Chaddad & Cook, 2004; Zeuli, 2004; Royer, 2004; Coltrain, Barton & Boland, 2000; Illiopoulos & Cook, 1999) to identify a preliminary optimal structure for Murang'a Nutribusiness Cooperative. Additionally, the New Generation Cooperative structure, one of the alternative cooperative structures identified by Chaddad and Cook (2004) was used to offer further insights into a structure that the Murang'a Nutribusiness Cooperative membership may want to consider to enhance commitment and member satisfaction.

The researcher postulates that the Murang'a Nutribusiness Cooperative requires a structure with well defined property rights to increase member incentives and consequently enhance member commitment. Member business volume and participation in the cooperative's activities are currently low. The researcher suggests the cooperative needs capacity strengthening to address management, organizational and operational factors. To develop capacity, the cooperative members may require training and education on technical and non-technical skills including leadership and group dynamics, management training for the board, developing

business plans and marketing strategies. The cooperative members may also require education on cooperative principles to enable them to fulfill their roles, responsibilities and obligations to the cooperative. A support network of government, non-governmental and private sector development practitioners and other stakeholders would be beneficial to help the cooperative grow and become sustainable for the benefit of members and society.

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CHAPTER 1

Introduction

Nutribusiness Cooperatives in Kenya process and market culturally appropriate, shelf-stable complementary weaning mixes. These nutribusinesses are women's cooperatives whose shareholders derive income from the sale of their farm products and the processed commodity (Maretzki, 2007). Beginning in 1991, two nutribusiness cooperatives were initiated in Kenya through collaboration with Penn State University, Tuskegee University and the University of Nairobi. The United States Agency for International Development (USAID) provided the funding for the projects that was matched in kind by the three universities. The universities provided technical support needed to ensure that the ingredients selected by the local women for the weaning mixes were combined and processed to produce a safe and nutritious product.

The nutribusiness cooperative initiative had a dual purpose: to improve the nutrition of young children and to provide economic activity for rural women. The two projects were completed in 1999 and gradually handed over to the women during a period of three years. Later, USAID established two more nutribusiness cooperatives. A systematic evaluation of the nutribusiness cooperatives is necessary to establish their effectiveness and generate knowledge to guide policy makers in supporting such entrepreneurial initiatives. A pilot evaluation conducted in 2008 to determine the status of the nutribusiness initiatives revealed that one cooperative, Murang'a Nutribusiness Cooperative, is currently in operation and sells the processed product to local community members and to retail supermarkets in the nearby town of Thika and the city of Nairobi.

In evaluating the value and impact of cooperatives, structure of the organization is one of several critical factors. The structure of an organization influences relationships among members. These relationships in turn affect commitment and satisfaction with consequences on performance (Schmid, 2004). This study focuses on the current structure of the nutribusiness cooperative to examine how the structure affects member commitment, satisfaction and success. The study also proposes a cooperative structure which may enhance the value and impact of the nutribusiness enterprise.

The nutribusiness model addresses two primary U.N. Millennium Development Goals: 1) to reduce poverty and extreme hunger and 2) to decrease child mortality. The persistent high levels of poverty in many developing countries, particularly in Sub-Saharan Africa, create an urgent need for concerted efforts in poverty alleviation. Better targeted approaches are required to enhance efforts already in place if the Millennium Development Goal (MDG) to reduce poverty and extreme hunger and the goal to decrease child mortality by 2015, are to be realized (UN Millennium Project, 2005). The cooperative approach is one such effort. Although the MDG literature does not make any explicit mention of cooperatives, the UN recognizes the contribution of cooperatives in poverty reduction (Birchall, 2004). Cooperatives are established not only for the interest of members but also to respond to the needs of the wider community (ICA, 2009; Zeuli & Deller, 2007). Therefore, the cooperative approach may be of use to individuals in local communities, entrepreneurs, policy makers, development organization personnel, and researchers in their efforts to reduce poverty and create sustainable livelihoods in rural communities.

Diverse sources of income for women create opportunities to improve nutrition in households (Babinard & Pinstrup-Andersen, 2001). Innovative technologies and opportunities to market produce to enhance incomes for women could contribute to reduction of poverty and hunger (Braun et al., 2005). An evaluation study carried out on an antipoverty intervention

program “PROGRESA” in Mexico established that mothers used their resources for immediate family needs (Skoufias & McClafferty, 2001). Income generating activity focusing on boosting the income of women is likely to improve food and nutrition security of targeted households.

Malnutrition affects nearly half of the world’s population and results in more than half of the deaths of children worldwide (FAO, 2005). Insufficient consumption of food containing micronutrients such as zinc, iron, iodine and vitamin A results in malnutrition. Undernourishment is an underlying factor contributing to most diseases in the world. Malnutrition is most prevalent in developing countries and is most severe in South Asia and Sub-Saharan Africa (SCN, 2004). Undernourished children account for 17 percent of the world’s approximately 800 million underfed people (Braun et al., 2005). According to the Kenya Demographic Health survey (GOK, 2004) one in every three children suffers from malnutrition. Children are particularly vulnerable to malnutrition from the age of six months to three years, the period during which they are weaned (UNICEF, 1998).

Malnutrition hampers cognitive development, physical growth and development and leads to morbidity and mortality. Women who were malnourished as infants have a high probability of giving birth to malnourished and underweight babies. Low birth weight increases the risk of infections and disease and death of babies (SCN, 2004). Lack of good nutrition is an underlying factor in many diseases and undermines the productivity of individuals as a result of poor health. A one pound increase in birth weight is associated with a seven percent increase in lifetime earnings (SCN, 2004). As a result of reduced human capacity, malnutrition endangers the productivity of entire nations. Interventions focused on child nutrition to improve human capacity are necessary to break the intergenerational transition of poverty caused by malnutrition.

The decision on what is to be eaten by household members is often the domain of women. Similar to many developing countries, diversity of diet in Kenya is mostly limited to

staple cereal crops (Alderman, Behrman & Hoddinott, 2004). Maize-based gruels, sometimes fortified with other cereals, are predominantly used to wean children. These maize-based gruels are of low dietary value and are often fed to children in inadequate quantities (Tou et al., 2007). Improving knowledge, availability, and use of complementary foods are effective ways to combat child malnutrition (Alderman, Behrman & Hoddinott, 2004).

Enhanced knowledge of the benefits of various local foods and the quantities a child requires of each to meet nutritional needs is important especially to women, who in the majority of cases, are involved with caring for young children. Through participatory activities to identify the ingredients for the weaning mixes, the nutribusiness initiative equips the cooperative members with additional knowledge on child nutrition to enable them to provide balanced diets to their children. Nutrition based income generating activity would serve the dual purpose of providing a nutritious product for households and enhancing food security. Evaluation and documentation of income generating nutrition programs in Africa is of paramount importance to guide policy action in order for successful programs to be expanded or replicated (SCN, 2004).

Livelihoods of about half a billion people in the world depend on cooperatives (ICA, 2009). According to the Kenya Ministry of State for Planning, National Development and Vision 2030, cooperatives are responsible for 45% of the GDP (GOK, 2007b). The International Cooperative Alliance (ICA) notes that one in every five people in Kenya is a member of a cooperative. More than one-half of the Kenyan population derives direct or indirect benefits from cooperatives. About 67% of Kenyans live in the rural areas and carry out subsistence farming (GOK, 2005). Nearly 20% of Kenyans live below the poverty line (GOK, 2007b). The cooperative approach, therefore, can be significant in efforts to eradicate poverty and reduce hunger in the country.

Cooperatives involved in value-added enterprises are currently not widespread. However, Kenya has recently adopted strategies to promote cooperative ventures and value-added activities to help farmers enhance their incomes (GOK, 2007a). Farmers, particularly women farmers, currently possess limited information on how cooperatives work, for the majority of cooperative members in Kenya are men. Cooperatives traditionally have a single vote for each household. As result, many of the members are male, leaving women with limited experience and knowledge about cooperatives (FAO, 2005). Kenyan cooperatives in the past were initiated and controlled by the state which contributed to negative attitudes towards cooperatives. Like in many developing countries, membership was not voluntary, and cooperatives were often used for political purposes (Birchall, 2004). Later, in the 1990s, the government withdrew support for cooperatives. As a result, many cooperatives ceased to exist. Birchall (2004) observed that similar to Kenya, only cooperatives with strong leadership and management continued to survive in developing countries. The FAO underscores the need to assist and strengthen producer groups through assessing the present status, problems and external needs of farmers' organizations (FAO, 2005). The World Food Summit Action plan in 2002 documented the need to help small scale farmers establish their own cooperative businesses (FAO, 2005).

By pooling resources, cooperatives raise capital for a value-added enterprise that an individual farmer could not afford alone (Merrett & Walzer, 2004). A great deal of literature exists on cooperatives that have been successful over time and others that have gone out of business (Birchall, 2003; Daoust, Fairbairn, Bouchard, Champagne, & MacPherson, 2003; Ikäheimo & Makinen, 1999). To cope with current economic changes, some cooperatives may need to be restructured to meet the economic goals of members.

Traditionally, cooperatives were formed to fulfill diverse economic and societal goals. Cooperatives formed to maximize profits require a different structure than that of traditional cooperatives, because ownership alone provides no benefits (Zeuli, 2004). Thus traditional cooperative members have no incentive to invest with their own cooperative. New Generation Cooperatives with well defined property rights encourage members to invest, making them more appropriate for value-added enterprises (Leathers, 2006; Chaddad & Cook, 2004). Value-added enterprises require greater capital investment than traditional cooperatives. Traditional cooperatives are exposed to governance and investment challenges as a result of ill defined property rights (Merrett & Walzer, 2004; Chaddad & Cook, 2004). Ownership through well defined property rights provides incentives for cooperative members to invest (Somerville, 2007; Merrett &Walzer, 2004; Leather, 2007; Chaddad & Cook, 2004). The desire to create incentives for members to invest has led to evolution of the cooperative structure. To analyze and characterize these alternative cooperative organizational structures, Chaddad and Cook (2004) use ownership structure, member policy, voting rights, governance, and residual claim rights, distribution of benefits and the strategy-structure interface to categorize alternative cooperative structures. They argue that alternative cooperative structures differ primarily in the definition and distribution of ownership rights to members, patrons and investors.

Schmid (2004) identifies "structure" as a major organizational variable in analysis of alternative institutions. Through their structure, institutions give order to human transactions. According to Schmid (2004), structure determines distribution of rights and orders relationships among members of an organization. To make the choice of an alternative organization, analysis of the "Situation" and "Performance" is crucial. Situation refers to the inherent characteristics of the good and the environment that affect human relationships. Inherent characteristics refer to sources of human interdependence such as whether the cooperative has an open membership

policy or a closed one. An open membership policy cooperative in which members can join and exit the cooperative as they wish provides a different set of relationships from those experienced in closed membership cooperatives. Efficiency of the organization depends on identified interests that set the performance goals. Institutional structure influences performance. For example, one type of institution can create more incentives and contribute to increased member commitment compared to another.

Structure, through property rights allocation, influences relationships within organizations and determines opportunity sets (Schmid, 2004). An example of property rights is delivery contracts cooperatives give members for purchase of commodities. Delivery contracts determine the relationships that exist in the cooperative such as who has what to sell to the cooperative and the prices set for specific commodities. People make choices regarding alternative organizational structures that influence whose interests count. The cooperative structure affects membership and the success of the cooperative through influencing member commitment and satisfaction.

Various studies have identified membership commitment and satisfaction as central for a cooperative to achieve its goals and objectives (Bhuyan & Leistriz, 2000; Bruynis et al., 2001, Goldsmith, Hahn & Taylor, 2001; Chaddad & Cook, 2004; Cotterril, 2001; Royer, 1999). This study focuses on the influence of the cooperative structure on member commitment. The Situation, Structure and Performance theoretical framework for institutional analysis by Schmid (2004) is used in this study to analyze the performance of the nutribusiness structure in relation to member commitment. To identify the most efficient structure for the nutribusiness initiatives, the current Murang'a Nutribusiness Cooperative structure is compared with the New Generation Cooperative typology model proposed by Chaddad and Cook (2004).

Justification

Scholars and other stakeholders in the community require information on the cooperative to help them understand the cooperative form of organization and offer appropriate support to enhance success (Zeuli & Deller, 2007). The need for solid case studies of real world situations is acknowledged in the "general overview of cooperatives research" report (Daoust et al., 2003) and also by Cotterill (2001) as he discusses the emerging cooperative models. Policy makers, community practitioners and cooperative organizations have revived interest in cooperatives for social and economic development.

The large membership in Kenya cooperatives provides a natural choice for social economic development. However, Kenyan cooperatives have a history of being both successful and unsuccessful. While several factors contribute to the success or failure of a cooperative, the structure of any organization is important in determining relationships within the organization and whether members perceive that they receive social and/or economic benefits. Subsequently, structure determines whether an organization achieves its performance goals. Cooperatives and their support organizations need information that may help them identify optimal cooperative structures and develop suitable policies to support them.

A study of the Murang'a Nutribusiness Cooperative to understand the current structure which has evolved since inception and its influence on the performance of the cooperative is, therefore, crucial. Results from a study of the current structure will help to identify a cooperative structure that may be optimal for success of a future nutribusiness cooperative initiative. The nutribusiness cooperatives can contribute towards enhancing women's incomes and their knowledge of nutrition in the communities where the cooperatives are located and elsewhere in the country. Members of the Murang'a Nutribusiness Cooperative and other stakeholders may not be aware of the shortcomings or success of the cooperative unless an evaluation is completed. An

evaluation will help policy makers make decisions regarding allocation of scarce resources to support the nutribusiness cooperatives. Evaluation results will also be useful to guide the decision making of cooperative members on ways to improve or modify the cooperative to increase success and sustainability.

Evaluation research on cooperatives has direct implications for agricultural production and marketing, income generation, and infant nutritional security. Many children in Kenya suffer from malnutrition and any development program focusing on malnutrition and increased incomes of households is of great importance. The nutribusiness cooperatives have the potential to increase income levels of women and create marketing opportunities for women. Women's knowledge of nutrition is particularly important in the fight against malnutrition.

Processed food for the growing urban population is on the increase in Kenya and the rest of Sub-Saharan Africa. The nutribusiness cooperative initiative opens markets for agricultural produce, traditionally grown by women, through a processed healthful food product for children and income for women. Increased production of agricultural commodities utilized in making the weaning mix is anticipated as a result of increased market demand. The processing technologies employed are simple and provide a straightforward way to create income using skills of the women who manage the technologies. The nutritious weaning mix produced is also made available for children in the community. Additionally, the weaning mix has a fairly long shelf-life and can be used during the off season after the season's harvest has been exhausted. This kind of initiative, well managed, can create considerable income for women involved through the processing activity and sale of surplus farm produce. However, a study to establish whether the nutribusiness cooperative actually benefits members and the local community is necessary.

The final outcome of the nutribusiness cooperative evaluation will be to identify a structure most suitable for the Murang'a Nutribusiness Cooperative that may be subsequently

scaled up in Kenya and in other developing countries with a similar context. Plans to establish new nutribusiness initiatives in Kenya and Tanzania are currently being explored by Penn State faculty (Mills, Seetharaman, & Maretzki, 2007). An evidence-based structure for a sustainable nutribusiness cooperative model is urgent as a way to address the UN Millennium Development Goals in Sub-Saharan Africa. The study will also identify a cooperative structure that may be most advantageous to achieve the goals of members and meet local societal needs through improved infant and child nutrition and successful income generating activity for the women. Further, identifying successful factors for a specific cooperative structure can be used as a model to establish similar initiatives in other parts Kenya and developing nations.

Limitations of the study

Although transferability of study results is possible because of similar characteristics across nutribusiness cooperatives, one should exercise caution in generalizing to other types of cooperatives because of the context of the cooperative studied in the case study. Due to limited time and resources, the sample size for the study was quite small. Although the interviews in this study were done to a point of redundancy by use of the snow ball method, the sample size for the general members could be increased and a more intensive qualitative study done to capture nuances and emerging trends not previously identified. This study looked at the perspectives and opinions of the cooperative members and not the efficiency of the cooperative.

CHAPTER 2

Review of Literature

This chapter starts with a discussion of the establishment of nutribusiness cooperatives in Kenya, the institutional setting for the Murang'a Nutribusiness Cooperative, and the results of a pilot study conducted on the Murang'a Nutribusiness Cooperative. The relevant literature for the key variables commitment, satisfaction and success is then summarized. The conceptual framework for this study is then presented. The cooperative structure, its benefits, women cooperatives, and the Emerging New Cooperatives are subsequently discussed. The chapter ends with a discussion of principles of cooperatives and a comparison between Traditional Cooperatives and New Generation Cooperatives.

Nutribusiness Cooperatives in Kenya

Malnutrition is particularly severe in Sub-Saharan Africa. At least one-third of the children less than five years of age in Kenya suffer from moderate to severe malnutrition (GOK, 2004). To address the nutritional deficiency problem at weaning and create a source of livelihood for rural women, two nutribusiness project sites were established in Kenya between 1992 and 1999 with funding from United States Agency for International Development (USAID). The projects had two broad, complementary objectives (Maretzki, 2007).

1. Community Development: To utilize the universities' resources and technical expertise to assure the safety and nutritional quality of nutribusiness products and to develop women's food processing, business management and marketing skills.

2. Internalization: To provide faculty, staff and students at the collaborating universities, in cooperation with NGO/PVO personnel, with the opportunity to learn how to carry out

participatory research activities in a naturalistic setting, involving beneficiaries of the results of these studies.

The universities collaborated with local women in a participatory process to develop a complementary weaning food that resembled the traditional weaning gruel (uji) yet contained a combination of ingredients resulting in a nutritionally-enhanced product. Processing, using their own farm products, and marketing was to be done by the women. Two nutribusiness cooperatives were established to process and market the product. In 1999, the projects were transferred from the university collaborators to the nutribusiness cooperatives. The Kenya Agricultural Research Institute (KARI) was charged by USAID with the responsibility of providing continued technical support to the cooperatives.

Institutional Setting of the Murang'a Nutribusiness Cooperative

Based on the conceptual framework for this study, a brief discussion of the institutional setting of the Murang'a Nutribusines Cooperative is important. Organizations do not operate in isolation and the institutional environment is, therefore, important in their success. Cooperatives are institutions that maximize the welfare of members and benefit the local community. These contributions to local economic and social development make cooperatives a special interest to the government and other local development partners. Social, historical, economic, educational, emotional, political and personal factors all contribute to the commitment of members to their cooperative.

The Murang'a Nutribusiness Cooperative is located in the central province of Kenya and processes its Nutri-Mix product, a complementary weaning food known as BASCOT, using locally grown agricultural commodities (Maretzki, 2007). Members of the cooperative are

located in three different regions. The product is composed of bananas, maize, beans and leafy vegetables. The diversity of raw material commodities and member heterogeneity as a result of the different areas from which the women come has the potential to create pricing difficulties and increase transaction costs. Member heterogeneity makes member commitment vital to the cooperative to help reduce transaction costs.

Members of the cooperative are subsistence farmers and sell their farm surplus locally. Farmers often lack a market and receive low prices for their farm products during the harvesting season. Off-season provides good prices and a ready market for commodities. Good storage facilities and processing of products to lengthen shelf life and make them available during the off-season is important. The Murang'a Nutribusiness Cooperative provided farmers a market for their surplus farm produce and to increase their income through value-addition.

Government support to cooperatives is usually targeted at organizational capacity strengthening. The Kenyan Ministry of Co-operative Development registers groups as cooperatives and provides training on various topics including learning about the cooperative movement, cooperative principles, and business and management skills. The Ministry of Agriculture trains, advises and informs farmers on good agricultural practices through extension workers. The Ministry often develops programs targeted at specific enterprises. Training for farmer groups includes information on nutrition and value addition, record keeping, and developing business plans for entrepreneurial activities. The Ministry of Gender and Children Affairs helps farmers to form groups for various purposes such as income generation initiatives. The Ministry of Gender and Children Affairs registers self-help groups and also provides capacity building in areas such as leadership, group dynamics, and conflict resolution.

The local administration officials hold meetings to sensitize community members on various important issues. They are also involved in implementation of government policies and in conflict resolution. Local leaders such as church elders also inform the community members of various issues. Local leaders are held in high regard in the community.

The Pilot Study

A 2007 pilot study was conducted by the investigator to establish the status and the prevailing challenges of the Murang'a Nutribusiness Cooperative. The pilot study revealed that the Murang'a Nutribusiness Cooperative was the only one of the four nutribusiness initiatives that continues to process and sell the nutritious weaning mix developed with the universities' collaboration. This cooperative is also the only one that engages the services of a private marketing agent. The participation of members in the cooperative's activities and decision-making processes was found to be low. Knowledge of the cooperative members about the cooperative was also found to be limited, raising the issue of general member commitment towards the cooperative. The information gathered from the nutribusiness cooperative members and other key informants helped to focus the evaluation process in the current study. The information was also useful to the current research design and administration of research instruments that were relevant and appropriate to the Kenyan context.

Professor emeritus of food science at Penn State, Audrey Maretzki, implementer of the nutribusiness projects, provided key information on the establishment of the cooperatives. The Murang'a Nutribusiness Cooperative was organized at the village level by involving local administration. At inception, the local administration office (area chief) was used to mobilize the community to form the cooperative (Maretzki, 2007). The chief identified several organized

women groups in three locations. The University of Nairobi primary investigator and a field coordinator for the project contacted each group to explain the purpose of the project and recruit interested individuals to form the cooperative. Organizational workshops were held in each sub-location and nine officials, three from each location, elected to serve on the board. The nine women members on board of directors met and chose the initial executive committee for the Murang'a Nutribusiness Cooperative; a chairlady, vice-chairlady, secretary, vice-secretary, and a treasurer. The initial board was to establish rules for running the cooperative and develop the constitution. Individuals could join by paying the membership fee until the 1st Annual General Meeting (AGM) and membership would then be closed unless rules stated otherwise. The board of directors would appoint a nominating committee to develop a slate of officers to be elected at the AGM. A full-time field coordinator was fully funded by the project for one year to manage the cooperative and the processing and marketing activities. Withdrawal of financial support to pay the manager was gradual at a declining rate of 25% from the previous year's salary. The understanding was that by the end of the project's financial support period, the cooperative would be fully able to absorb the salary of the manager. The project manager and the officials began the process of registering the cooperative with the Ministry of Cooperatives.

Training for the cooperative's leaders focusing on management, leadership, and business skills were conducted (Maretzki, 2007). The cooperative subsequently set the retail price for its wholesale and retail price for the Nutri-Mix product. The cooperative member's expectations were that they would deliver and receive payment for the raw material they sold to the cooperative as well as share in any distribution of the cooperative profits. The members also had the opportunity to purchase the cooperative's processed product at wholesale prices for home use or re-sale in the community. Members of the cooperative were to provide labor for the processing activity. Solar driers were installed for the processing operations.

The pilot study established that the Murang'a Nutribusiness Cooperative developed as a small enterprise with a large membership of about 350 individuals. The cooperative was comprised of producer and non-producer women. The majority of the women were over 55 years of age and a few were over 80. Only a small number of the women were below 55 years of age. None of the cooperative members worked at the cooperative facility except one member who did the actual processing activity with the help of casual labor.

The cooperative's sales were low until the University of Nairobi project implementer linked the cooperative with a marketing agent. Currently, the marketing agent does most of the procurement of raw material and pays the workers at the processing facility in addition to selling the Nutri-Mix. The marketing agent, therefore, acts like a manager to the cooperative. Business volume with members is low as many of them do not sell their raw product or buy the processed commodity from the cooperative. Most of the processed commodity is sold to retailers outside the community. The product was in demand and was sold at about three times the value the cooperative received. The product label did not link the product to the women, however, the contribution and support of the universities in product formulation was acknowledged. A majority of general members had limited information concerning the cooperative's business operations.

A major finding from the pilot study was the importance of focusing on the internal structure of the nutribusiness cooperative. A key problem identified was the limited information members had about the cooperative's activities. Also identified was a clear knowledge and information gap between the cooperative's management board and its general members. This observation raised the issue of member commitment to the cooperative. Member commitment is critical for success of a cooperative. This present study focuses on commitment of Murang'a Nutribusiness Cooperative members with an aim to establish how the current structure influences member commitment.

Cooperative Member Commitment

Commitment defines the relationship among individuals, partners and organizations. Consequently, commitment affects transaction costs (Schmid, 2004). Schmid (2004) contends that when people are committed, they do not make undivided calculations to their best interest, and therefore, act in the best interest of the organization. Commitment is also defined as a force of psychological attachment, the enduring desire to maintain a valued relationship and occurs when the relationship is deemed of value (Mowday, Steers & Porter, 1979; Allen & Meyer, 1990; Morgan & Hunt, 1994; Goo & Huang, 2008). Many view commitment as an attitudinal construct.

Organizational commitment is the strength of an individual's identification and consistent involvement with a particular organization, (Mowday, Steers & Porter, 1979; Allen & Meyer, 1990). Organizational literature views commitment as intentions to continue a relationship and the forsaking of alternatives (Schmid, 2004; Fullerton, 2005; Mowday, Steers & Porter, 1979). Member commitment in a cooperative can be defined as the relationship of members with their cooperative where the member believes the relationship with the cooperative is lasting and of value, and therefore, worth maintaining. Member commitment in a cooperative can also be defined as the preference by members for something that is offered by the cooperative and not by an Investor Owned Firm (Fulton & Adamowicz, 1993). Member commitment is necessary for the success of cooperatives and other business organizations (Schmid, 2004; Ortmann & King, 2007a; Novkovic & Natasha, 2005; Fulton & Giannakas, 2001).

In organizations with high member commitment, the goals of the organization and those of the individual become closely aligned and reduce transaction costs (Mowday, Steers & Porter, 1979; Schmid, 2004). Various studies identify member commitment and satisfaction as critical for cooperatives in achieving their goals and objectives (Bhuyan & Leistriz, 2001; Royer, 1999; Cotterril, 2001; Chaddad & Cook, 2004). Willingness to remain in the organization, willingness

to advocate on its behalf, and belief in and acceptance of its goals and values arise from commitment (Mowday, Steers & Porter, 1979; Allen & Meyer, 1990; Morgan & Hunt, 1994; Powell & Meyer, 2004; Fullerton, 2005; Karim & Noor, 2006; Goo & Huang, 2008). Poor relationships result in high cost of operation and lost business opportunities (Schmid, 2004; Goo & Huang, 2008). Organizations with low member commitment experience high transaction costs.

Relationship benefits, termination costs and shared values influence commitment (Goo & Huang, 2008; Morgan & Hunt, 1994). Commitment is important since it encourages members to maintain relationships with management and the cooperative with consequences to reduce transaction costs. The members desist from switching to attractive short term options in favor of their long-term benefits with their cooperative. The members also participate in collective action and advocate for their cooperative.

The major advantage of the New Generation Cooperative model is it enhances incentives and thus potentially enhances member commitment (Plunkett, Chaddad, & Cook, 2010; Chaddad & Cook, 2004). New Generation Cooperatives ownership rights create incentives in the form of delivery rights that are tradable among a well-defined member patron group. Delivery rights are a form of property rights. Demsetz (1967) defines property rights as the opportunity to use or control a resource. Ownership rights in New Generation Cooperatives are restricted to member-patrons. Members are required to make up-front investments in proportion to patronage, and supply is controlled by marketing agreements (Chaddad & Cook, 2004). Traditional Cooperatives have vaguely defined property rights which create difficulties for governance and investment. As a result, free-rider, horizon, and portfolio problems emerge and are reflected in low liquidity of investment and inadequate returns. Non transferable and non-redeemable property rights with benefits tied to use rather than investment create investment constraints and reduce a cooperative member's incentive to invest with adverse consequences on commitment.

The literature distinguishes at least two components of commitment: 1) affective commitment and 2) continuance commitment (Fullerton, 2005; Karim & Noor, 2006; Powell & Meyer, 2004; Allen & Meyer, 1990; Mowday, Steers & Porter, 1979). Allen and Meyer (1990) view the components of member commitments as attitudinal. Members with higher affective commitment remain in the organization because they want to while those with higher continuance commitment remain because they have to (Allen and Meyer, 1990). Affective commitment and continuance commitment have the opposite effect on an organization. Member commitment in cooperatives has both affective and continuance components that reflect the relationship members have with their cooperative. Mowday, Steers and Porter (1979) note that commitment attitudes develop slowly and consistently over time as members develop closer relationships with the organization.

Careful consideration needs to be made when organizations carry out activities to increase commitment. Some practices instill affective commitment while others may enhance continuance commitment (Powell & Meyer, 2004). For example, opportunities for delivery contracts to supply a cooperative with raw material can be perceived as organizational support, and therefore, lead to affective commitment. Alternatively, the contracts may be perceived as investments that make it more costly to leave the organization and likely to increase continuance commitment. The cooperative, therefore, needs to evaluate their decisions to ensure they achieve the desired form of commitment.

Affective Commitment

Affective commitment is rooted in emotional attachment to the organization and is reflected in shared vision, values and trust. Members with affective commitment have a sense of

belonging and believe in the organization's values and goals (Mowday, Steers & Porter, 1979; Allen and Meyer, 1990; Powell & Meyer, 2004). Such members exert effort on behalf of the organization and desire to remain in the organization because they want to (Allen & Meyer, 1990). Organizational rewards, procedural justice and management support encourage affective commitment (Mowday, Steers & Porter, 1979; Schmid, 2004; Rhoades, Eisenberger & Armeli, 2001). Organizational rewards in a cooperative can be in the form of patronage refunds or favorable delivery contracts. Patronage refunds are payments the cooperative makes to members from the total patronage income or margins (Barton, 1989). The quantity or value of business a cooperative member does with the cooperative determines the amount of patronage refund. Delivery contracts are legal agreements between a member and the cooperative for the supply of commodities.

Procedural justice involves the perceived fairness of means used to determine the amount and distribution of resources (Rhoades, Eisenberger & Armeli, 2001). Also called interactional justice, procedural justice is determined by the organizational structure; the formal and informal rules that affect the decision process such as the democratic process and choice of whom gets to make the rules, actual decisions and communication of information (Rhoades, Eisenberger & Armeli, 2001; Schmid, 2004). Informal rules involve interpersonal interactions and concern culture, society norms and values. To reciprocate for the procedural justice, members are obliged to care for the organization's welfare and help the organization to achieve its goals. The ability to share in profits through dividends and the ability to purchase inputs through the cooperative contribute to member commitment (Fulton & Adamowicz, 1993). Early distribution of member benefit enables cooperatives to secure affective commitment (Fullerton, 2005). This observation agrees with findings of a study on business development support services required for small scale producer organizations (Dawson, Kapila & Mead, 2002). Tangible and intangible support to

small-scale producer organizations at early stages of growth is essential. Governmental agencies, non-governmental organizations, cooperative associations and other stakeholders can help provide capacity building, marketing, material, credit or financial support to enable cooperatives to achieve early member benefits.

The organizational structure influences affective commitment. In his study "How commitment both enables and undermines marketing relations", Fullerton (2005) found that affective commitment has positive effects on advocacy intentions and negative impact on switching intentions. Fullerton contends that affective commitment is independent of quality of service provided. Following this argument, cooperative members with affective commitment identify with their cooperative and advocate for it. Individuals with affective commitment enhance the efforts of their organization and are less likely to leave the relationship.

Continuance Commitment

Associated with switching costs, sacrifice, lack of choice and dependence, continuance commitment is less desirable in an organization although it can contribute to less member turnover (Fullerton, 2005; Karim & Noor, 2006; Allen & Meyer, 1990). Members with continuance commitment remain in the organization because they need to (Allen & Meyer, 1990). These members find it difficult to leave the organization or discontinue an activity. Continuance commitment reduces the positive effect of affective commitment. While commitment is desirable, it is necessary to distinguish the type of commitment present in an organization. Continuance commitment develops as a result of investments or side-bets made with the organization and perceived lack of alternatives (Powell & Meyer, 2004; Allen & Meyer, 1990; Mowday, Steers & Porter, 1979). Side-bets increase the cost of discontinuing an activity. The likelihood that

members remain in the organization is positively related to investments or side-bets individuals make. For example, in a processing cooperative, members who learn the skills to process may acknowledge that these skills are not transferable to another cooperative and are therefore making a side-bet that the time and energy they spend with the cooperative will pay off. Alternatively, members may produce crops that are specific to a cooperative's processing requirements and may not be able to sell elsewhere. Cooperative members invest in membership and supply commodities which sometimes makes it difficult for them to leave, and therefore, a source of continuance commitment. Cooperative members with continuance commitment feel trapped in the cooperative because leaving the cooperative would involve social or economic costs.

Member Satisfaction

Satisfaction in this study is defined as contentment with success of the cooperative. Member satisfaction is identified as one of the key factors that determine the success of cooperatives (Bruynis et al., 2001). Satisfaction of members of an organization generally leads to higher levels of commitment and positive attitudes towards the organization (Morgan & Hunt, 1994). Cooperative principles and organizational and operating management factors influence member satisfaction (Schmid, 2004; Bruynis et al., 2001; Bhuyan & Leistriz, 2000). Cooperative principles are unique to cooperatives and include member equity, return on member investment, patronage refund, democratic voting, and open membership (Bruynis et al., 2001; Barton, 1989). Organizational factors comprise factors that include the use of startup resource people, producer initiatives, producer expectations, total equity, size of business volume, key management person, previous board and management personnel experience with cooperatives, and training (Bhuyan & Leistriz, 2001; Bruynis et al., 2001). The operating management factors that enhance member

satisfaction include timely board meetings, use of strategic resource people, business plans, financial information, member-board relations, governance and linkages with external organization (Bruynis et al., 2001; Bhuyan & Leistriz, 2001).

Satisfaction affects both affective and continuance commitment (Powell & Meyer, 2004). Affective member satisfaction can be enhanced through good communication and efforts to align the interests of members to those of the cooperative. Accurate financial records distributed on a regular basis contribute to member satisfaction (Bruynis et al., 2001). Contracts to secure enough business volume from members are also essential not only for full capacity of the cooperative's operations, but also to assure members of a ready market for their produce (Zeuli, 2004; Royer, 1999). Other factors necessary for a cooperative's member satisfaction are member business growth and profitability (Bruynis et al., 2001).

Cooperative Success

Cooperative success can be defined as attainment of the cooperative's social and economic goals. A broad overview of research conducted on cooperatives notes that success factors of cooperatives are closely linked to a cooperative's structure (Daoust et al., 2003). Membership type, commitment and satisfaction are important in organizational success (Schmid, 2004; Gurung & Unterschultz, 2007; Ortmann & King, 2007a; Bhuyan & Leistriz, 2001; Bruynis et al., 2001). Literature on vertical integration farmer cooperatives such as those engaged in processing activities identifies restricted membership as necessary for success (Chaddad & Cook, 2004; Royer, 1999; Bruynis et al., 2001; Merret & Walzer, 2004). However, a study conducted by Bhuyan & Leistriz (2001) establishes that open membership policy cooperatives have higher

success rates than closed membership cooperatives. The ability for the cooperative to enhance member welfare is the true measure of a cooperative's success.

Balancing member interests is essential for the success of a cooperative. Bhuyan and Leistriz (2001) emphasize that the relationship between cooperative members and management is important. The authors contend that "cooperatives cannot afford to alienate members and still succeed as businesses" (p. 58). When a cooperative is perceived as alienating members, over time the members may distance and separate themselves from the organization affecting success of the organization (Bhuyan & Leistriz, 2001; Hafer & Martin, 2006). Balancing member interests is better achieved in cooperatives with good relationships among members, cooperative boards, and management.

Organizational capacity strengthening contributes to success of the cooperative. Most challenges that cooperatives face, including low member commitment, are often addressed through capacity strengthening. An informed membership aware of the roles, responsibilities and obligations of the members, the board, and management is more capable of achieving the cooperative's goals. Support programs to cooperatives usually involve capacity strengthening through training of management, board, and members as well as technical assistance such as developing business plans and marketing strategies. Skills of the manager that match the cooperative's needs such as marketing or purchasing are essential (Bruynis et al., 2001). However, private consultants such as accountants and marketing agents may be useful in providing skills that are beyond the ability of members and management.

Other factors that may affect the success of cooperatives are identifying member leaders, unique products, and a good location for the processing facility (Bhuyan & Leistriz, 2001). Developing effective leaders requires training on leadership and group dynamics. A feasibility study may be necessary to identify the location where a processing facility may be located

(Bruynis et al., 2001; Bhuyan & Leistriz, 2001). Unique products or services in the market have been found to be useful in providing the cooperative with a competitive edge (Dobrohoczki, 2006). Member participation and support is important in identifying and maintaining a marketing niche. To become successful and sustainable with high member commitment, cooperatives require strategies to develop support at various stages of organizational growth (Bhuyan & Leistriz, 2001; Dawson, Kapila & Mead, 2002).

The Conceptual Framework

Based on Schmid's (2004) theoretical framework of institutional analysis, this study examines member commitment in Murang'a Nutribusiness Cooperative. A growing body of research on economic analysis of cooperatives emphasizes use of new institutional theories (Lounsbury, 2008; Schmid, 2004; Mooney, 2004; Chaddad & Cook, 2004; Merrett & Walzer, 2004; Sykuta & Cook, 2001; Daoust et al., 2003; Royer, 1999). The Schmid (2004) situation, structure, and performance (SSP) theory integrates key concepts of transaction costs and property rights into a comprehensive framework for analysis of institutions. The theory identifies key variables useful in institutional analysis. One of the alternative structures Chaddad and Cook (2004) propose, the New Generation Cooperative, is likely to increase success, member satisfaction and member commitment.

The SSP theory explains the interaction among institutional variables. Schmid (2004) observes that institutions provide order to human relationships through their structure to produce a specified performance. The SSP theory shows the relationship among situation, structure and performance variables. Situation refers to the inherent characteristic of the goods and environment and is the source of human interdependence. An analysis of character of the good

(situation), formal and informal rules (structure) and the performance outcomes of institutions provide information necessary to make a choice among alternative institutions. To identify the most efficient structure that increases member commitment to the nutribusiness initiative, the current Murang'a Nutribusiness Cooperative structure will be compared with the cooperative typology model of New Generation Cooperative (NGC) proposed by Chaddad and Cook (2004).

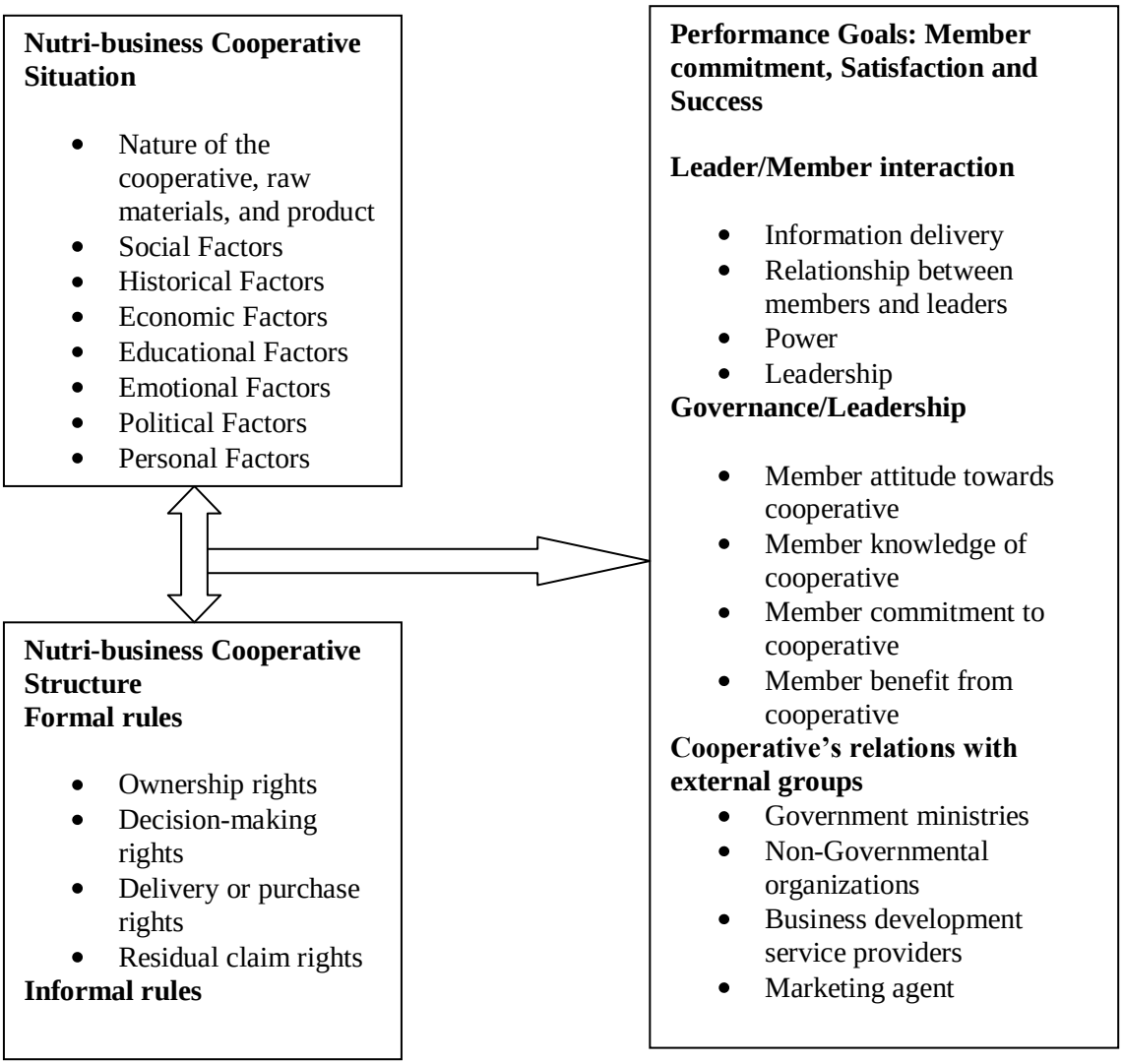


Figure 2.1. Conceptual Framework Based on Schmid (2004).

Commitment Y=f(a,b,c,ab,ac,bc,abc) where a is leader/member interaction, b is governance/leadership, c is cooperative's relations with external organizations

Situation

Situation variables include the degree of incompatibility, exclusion cost, cost to provide the goods to another user, costs to produce another physical unit, and various kinds of transaction costs. The kinds of institutions that affect performance based on the character of the good are identified and hypotheses suggested regarding how alternative institutions facilitate certain identified interests. Incompatible use good means that the opportunity given to one individual creates freedom for that individual but is a constraint on another individual who must do without. Property rights are incompatible use goods. For example in a cooperative, if A has the delivery right to supply a commodity, the opportunity for B to supply the same commodity is limited. A's right to deliver a commodity is a cost member to B who becomes a buyer of the opportunity. Delivery rights in a cooperative are a form of property rights tied to membership and are incompatible use goods.

High Exclusion Cost (HEC) goods refer to goods that are difficult for one party, the owner, to exclude others from enjoying the same good. Membership in a Traditional Cooperative is HEC good. In a Traditional Cooperative, membership in the cooperative is open and voluntary. Individuals can, at their convenience, join or leave the cooperative which encourages free riders who want to use the cooperative but do not want to pay for membership. Common pool resource (CPR) goods are those that people use jointly. CPR goods require sustainability and decisions on who pays for the good is pertinent. For example, cooperative land apportioned to members requires sustainable use. Institutions have to decide who pays for the soil conservation measures on the land. How will the members who take care of soil erosion on their farms be compensated?

Another type of good is that which the cost to another user is zero; additional users will not affect the cost. For example, if a processing facility can process ten kilograms of flour in one cycle and the manager of the cooperative processes six, then the manager can add another member's four kilograms without any extra cost.

Transaction costs reflect the costs of organizing and transacting in exchange for goods or services. Transaction cost interdependencies include cost of negotiation, enforcing contracts, and information asymmetry. Coase (1937) in his classic seminal paper on "the Nature of the Firm" was the first to describe transaction costs. The opportunity for one party to take advantage of another in a transaction creates an opportunity cost (Coase, 1937; Schmid, 2004; Royer, 1999). Costs are incurred in an effort to prevent this opportunistic behavior and its consequences. When transaction costs are high, it becomes less costly to operate in a firm rather than the spot market (Schmid, 2004; Royer, 1999). Individuals form cooperatives mainly to reduce transaction costs. Some transaction costs are subject to economizing or reducing total costs while other transactions can only be shifted among parties, a power issue (Schmid, 2004; Novkovic & Power, 2005).

High trust levels between management and members create good information flow and lower the cost of negotiating and enforcing contracts. In a cooperative with good communication practices, risks and uncertainty primarily brought about by information asymmetry are reduced (Drivas & Giannakas, 2008). Information asymmetry occurs when transacting parties do not have equal access to information. Although contracts reduce the cost of bargaining, they are necessarily incomplete. Adverse selection and moral hazard exist through self selection of parties with hidden information (Schmid, 2004; Royer, 1999). Adverse selection is associated with hidden information such as preferences, technology and risk that could be relevant to the contract's performance. Royer (1999) describes moral hazards as actions that cannot be included in contracts because parties are secret about their risk taking behavior which cannot be verified.

For example, if a processor makes contracts for purchase of a high-quality commodity, the processor could underreport quality and pay the price of a lower grade product if the producer is unable to verify the quality. The high cost of ensuring fair measurements by growers may prevent them from monitoring the processor (Royer, 1999). Contracts must, therefore, identify criteria for satisfactory performance as well as measure performance. Contracts lower transaction costs because they define rights, responsibilities and obligations of transacting parties. Contracts depend on completeness and enforcement to deter opportunistic behavior. The limited capacity of the brain to process information and to assess all possible alternatives results in incomplete contracts (Schmid, 2004; Royer, 1999). Incomplete contracts create room for opportunism and increased transaction costs. High transaction costs also make it difficult to write complete contracts.

Asset specificity increases transaction costs. Five types of assets are identified in the literature; site specificity, physical asset specificity, dedicated assets, human asset specificity, and temporal specificity (Schmid, 2004; Royer, 1999). Site specificity is associated with the location of assets in order to minimize costs of transportation or inventory or to achieve processing efficiencies. Physical assets specificity refers to assets tailored to a particular transaction. Dedicated assets are exclusive to the needs of a customer and may not find alternative use elsewhere. Human asset specificity refers to the skills and knowledge associated with a particular relationship and may be redundant in any other relationship. Perishable agricultural products are an example of temporal specificity. Temporal specificity in an agricultural processing cooperative is important because of hold-up problems caused by perishability of agricultural produce. Farmers may deliver to the cooperative when there is a glut on the market and take their products to alternative markets when there is a shortage of the commodity. Parties in an asset specific relationship cannot abandon the relationship without incurring some loss. Asset specificity creates

what is known as a hold-up problem where one party takes advantage of another's vulnerability in the relationship. A producer of horticultural commodities required to sell to a specific processor may not be able to sell the product elsewhere. A processor relying on a specific producer for his processing may not get the raw material from another source. Both the producer and the processor may create hold-up problems to each other under varying circumstances. A governance structure to sort out the interdependencies in the relationship is necessary. Vertical integration is used to prevent the hold-up problem. A cost alternative to market transactions, vertical integration reduces the cost of exchange and thus transaction costs (Williamson, 1985; Coase, 1937; Royer, 1999). However, vertical integration confounded by member heterogeneity and lack of contracts can cause conflicts and increase transaction costs. Additionally the cost incurred in professional services to write delivery contracts can be high.

Transaction costs are low when members have an affective commitment to their cooperative because costs of negotiating the contracts are minimal due to reasonably quick agreement on terms. Therefore, lower costs of bargaining and contract enforcements are experienced. Members agree on prices of their commodities that are for individual benefit but also act in the interest of the cooperative.

Structure

Structure of an institution refers to formal and informal rules that influence relationships among people (Schmid, 2004). Formal and informal institutions give rights to individuals and consequently determine interactions among people. Structure determines whose right is a cost to another. Formal institutions include laws, rules, and regulations. Legal systems, governments and other third parties enforce formal laws. Informal institutions are customs, norms, and values.

Customs are widespread regularities in behavior. Organizations reduce transaction costs caused by risk and uncertainty through standard operating procedures. Habitual routines become custom and make predictability of others' actions possible. Knowledge on sources of transaction costs interdependencies is essential to identify alternative structures that affect performance and lower transaction costs (Eggertsson, 2009). People in an organization behave in certain ways and they expect others to behave towards them in a predictable manner. Informal institutions are enforced through social pressure and sanction.

Property rights structure interdependencies in an organization and are essential to guide human interactions and resolve conflicts. Structure influences relationships within organizations through property rights allocation and consequently determines opportunity sets (Schmid, 2004; Zeuli, 2004). People make choices regarding alternative organizational structures that influence whose interest counts. The cooperative structure consequently affects membership and the success of cooperatives through influencing member commitment and satisfaction. Ownership and control is central to property rights theory. Cooperatives are guided by constitutions and by-laws. In cooperatives, ownership of assets gives members bargaining power as residual claimants. Property rights theory is built on the premise that contracts are necessarily incomplete. Further, property rights theory acknowledges that all bargaining, before and after investment, is efficient. Parties negotiate the operating decisions. However, Royer (1999) notes that in a member-owned cooperative, opportunity for shirking and other deviations from the neoclassical model are quite pronounced. Property rights constraints reduce free-rider and horizon problems (Reynolds, 2000). New Generation Cooperatives use property rights to address inherent cooperative weaknesses such as free-rider and horizon problems. Additionally, property rights create incentives in a cooperative. Learned preferences and patterns of cognition influence the response of individuals to the incentives.

Contracts and their enforcement are, therefore, essential to order relationships among cooperative members. In New Generation Cooperatives, contracts are the basis for raw commodity supply and offer specific delivery rights. Delivery rights are formal property rights given to an individual to supply the cooperative with a product (Merrett & Walzer, 2004). Delivery rights make the New Generation Cooperative structure different from that of Traditional Cooperatives that do not have well defined property rights. In New Generation Cooperatives, member economic interests and property rights are aligned.

As cooperatives change their reasons to organize, structure also changes. Cooperatives that are entrepreneurial possess a different set of incentives from Traditional Cooperatives. Cooperatives, having social and local benefits as a reason to organize, are also different from investor owned firms. Therefore government agencies and other support organizations have a role in helping cooperatives remain viable. However, cooperative members and the board must make the final decisions on the structure to be adopted.

Performance

Performance of institutions is based on goals to achieve specified ends. The goals of cooperatives are to provide social and economic benefits to individual members and contribute to the well being of the local community. The choice of the institution determines what performance will be achieved and whose interest will be served. To secure member commitment, it is necessary for a cooperative to address the interests of members. Member commitment ensures that individuals act in the best interest of the organization. Poor institutional choices result in high transaction costs and sub-optimal performance. Performance variables identified in SSP theory are efficiency; freedom; democracy and unanimity; minimize transaction cost; Coase rule; and

people as a product of institutions (Schmid, 2004). There are many ways to organize efficiently and institutions determine the performance goals (Schmid, 2004). Performance goals serve particular interests and institutions determine who gains and who loses; whose interest will be served by a particular institution. Institutional choice determines efficiency. Efficiency is described in terms of whom gets what, who is the seller of the opportunity and who is the buyer, who is advantaged and who is disadvantaged. Member heterogeneity makes the task of identifying an optimal cooperative structure difficult because of various tensions emanating from differing interests. Sometimes the interest is in maintaining the status quo. Overall, New Generation Cooperatives enhance member commitment.

Freedom as a performance goal gives individuals power to act within their opportunity set. This power limits the actions of other individuals. Transaction cost as a unit of institutional analysis shows how A's opportunity limits B's freedom in a world of scarcity. If the two parties agree to trade, they will remove barriers that exist (Schmid, 2004). People organize collectively to minimize their transaction costs. Cooperative members negotiate and write contracts that constrain or give freedom to specific members. For example, in a cooperative that does not have delivery rights, cooperative member A may expect that if she has a surplus of vegetables and delivers the surplus to the cooperative before another member B who has little to take to the cooperative but delivers later, the cooperative is obliged to take all of A's produce and decline B's. If the cooperative operates on a first-come-first served basis, whether the rule is formal or informal, members will respect it. However, if B insists on having the cooperative buy her product and other members C and D feel her behavior is justified, they may join her to change the institutional structure and demand delivery rights be bought prior to delivery. The cost of negotiation and contract enforcement (transaction cost) is lower when members have a high

commitment to the cooperative. Committed cooperative members will act in the best interest of the cooperative to achieve common goals and success.

Democracy and unanimity establish whether rules can be worked out, using moral judgment, to determine whose interest counts. Minimize cost variables include institutional arrangements that reduce transaction costs. The Coase rule states that if transaction costs were zero in markets, use of the resource would be the same and it would not matter who owned the resource (Schmid, 2004; Coase, 1937). However, Coase (1937) acknowledges that while resource use would be the same, wealth disparities would still make institutions relevant for directing interdependencies.

People as a product are an institutional variable regarding the type of people in a society. Human welfare is fundamental in economics. Institutions contribute to the kind of people being produced by the economy and if they will live peaceably (Schmid, 2004). Cooperatives have social responsibilities in the local community. Cooperatives create jobs and markets for members, producers and consumers. Many cooperatives also take care of the welfare of others in society, among other activities (Birchall, 2004). The social function of cooperatives makes them important in local communities. The types of people the economy produces are reflected in crimes, dysfunctional families, and are a product of institutions present in society (Schmid, 2004). Typically, investments are secure if people regard them as fairly acquired. Additionally, concern for the welfare of the poor would ensure wealth of the rich is more secure because the poor would feel they are cared for. In every public choice, there exists a moral judgment. Moral choices on public policy are important considerations for institutions and are important considerations in selecting institutional alternatives.

Power as a Function of the Organizational Structure

Organizations, like the economy, and more generally, society can be viewed as dynamic, interdependent systems of power. Power can be defined as the opportunity to visit costs upon others (Schmid, 2004). Power is not apart from human relations. As Schmid (2004) rightly states, power is ubiquitous. People often associate power with victory or ability for one's interests to count. Power can also be described as the ability to achieve common ends for specific entities or organizations. The ability to influence or alter decisions and welfare of others reflects power. Decisions are based on the future individuals anticipate. Powerful individuals make decisions that not only affect their own welfare but also the welfare of many people or organizations. Different groups will not only disagree on rules adopted, but they will also try to influence the policies of the institution, which is a function of power.

Different institutions distribute varying powers to individuals. The power an institution gives to an individual alters with change of institution. Opportunity sets and ensuing power of individual A depend on the type of institution. Individual A can maximize on the power she has through relationships with others. Income and wealth are important in determining choice of institutions. If 'Let the market decide' rule is used, those who have a lot already would use their current opportunity sets to acquire more and further disenfranchise the non-owners. Organizations make rules for members and direct interactions between the organization and other organizational entities. Institutions are important in resolution of conflict and make cooperation possible.

Inherent weaknesses of cooperatives are often a result of power regarding property rights ownership. In a Traditional Cooperative, influence cost problems arise as groups or individuals try to influence a cooperative's decision making in order to advance their own interests. A common observation is that within a large group, a small powerful group and a large relatively

powerless group emerges. Another general observation is that power is usually concentrated at the top of the hierarchy in organizations, particularly if democratic practices are not followed. Concentration of power in organizations is limited by democracy. Exercised at all levels of human relationships, power constrains some individuals and liberates others. Although the one-man-one-vote rule exists to help cooperatives address majority interests, some groups still become powerful enough to influence decision making.

The failure of cooperative members to monitor management can result in power differences. The manager of a cooperative might become powerful and take control of the cooperative if the board or members exercise little influence on decisions made. Consequently, decisions are likely to serve the interest of management rather than members and thus create agency problems. Managers willing to make a difference in the community through achieving cooperatives' success are less likely to be self motivated by personal or monetary reward, particularly if the managers are members of the local community or members of the cooperative. These managers will make decisions in the best interests of the majority, especially if they are motivated by self regard and social status in the community.

The cooperative board is given rights and thus power constitutionally to make decisions on behalf of members. Rights ownership advantages the owner and disadvantages the non-owner. The rights granted to the board are at the cost of members. Rights owners have the opportunity to make their interests count. Additionally, a small group has greater homogeneity than a large group, for example, a small group of people close to management. Board members have more influence on decisions the cooperative makes than the rest of the membership. The cooperative board has considerable influence on decisions made and might have an interest in preserving its status quo. Additionally, the board has the power to alter decisions and to

determine the agenda. Commitment of board members to the cooperative and to member welfare is, therefore, critical.

Another source of differential power in a processing cooperative is heterogeneity of raw material. Producers of different products will tend to differ in preferred prices for the commodities they produce or buy from the cooperative. Price is an institutional artifact and determines the relative power individuals have in relation to their opportunity sets. Prices are institutionally defined and largely are determined through power struggles among different interests. To the extent that cooperative members have different preferences and experiences, the choice of institutions will be central in determining power relations and subsequently who gets advantaged and who gets disadvantaged with alternative institutions.

Individual cooperative members have minimal stake and are difficult to organize to address their interests. Organizing many people to make, accept or reject decisions generates high transaction costs. Eggertsson (2009) notes that high transaction costs undermine collective action and prevent credible commitment. Since the cooperative is a High Exclusion Cost (HEC) good and the processing facility a Common Resource Pool (CPR), difficulties are bound to arise regarding who pays for the cost to organize the majority of members to ensure their interests are addressed. Additionally, geographically dispersed members have little motivation to organize and alter power since their individual stake is small. Free riders who benefit from the cooperative and do not pay for the goods are likely to oppose any change in the institution. Institutional change in cooperatives is a function of power relations among members and management.

To alter institutions is to alter power, making institutional change a power issue. Because institutions apportion power, moral choice is central in institutional choice. If cooperative members do not challenge why the opportunity sets are as they are, the general assumption is that the transactions by the cooperative are voluntary and beneficial to all: members, board and

management. Struggles by groups and individuals to have power within their opportunity set to influence decisions increases transaction costs. Winning coalitions among groups differ with a change in the agenda (Schmid, 2004). Well defined property rights that structure relationships are, therefore, essential to reduce transaction costs for cooperatives.

Institutional Choice is a Moral Judgment

All public choice is a moral choice. Whenever public choice is made some will be advantaged while others will be disadvantaged. Whoever gets to make decisions and the rules followed in order to make rules eventually influences the rules made for the organization. The rules for making rules reflect the interests and experiences of those involved in the process. Institutions distribute power and the choice of institution determines whose interest counts, the agenda and decisions made. Conflicting interests and experiences make choice of institutions a moral issue. In human relationships, someone's interest always prevails. The rich have more property rights that give them greater opportunity sets. The rich can use their greater opportunities at the costs of the poor. The poor have little to offer that would be a cost to others. Since the poor have little to contribute, the rich can dispense relationships with the poor without affecting themselves. Because the stronger power with wealth has the upper hand, they could make decisions without regard for the weaker poor. Those who have more can create greater opportunities for themselves if they have no regard for the poor. Whose interests count requires developing a consensus and involves moral judgment.

Decision making in organizations is tilted towards the powerful. Powerful individuals have more opportunities to make decisions on behalf of others. People make efforts to persuade others to support or accept their perspectives on whom should have opportunities and who is to

bear the cost. Fairness or procedural justice is, therefore, is critical in organizations. Major corporations influence policy decisions that affect their operations. Their decisions affect smaller firms. If the policy is to let the market decide, those who have more are likely to dominate the market and form cartels that dictate prices and consumption. The larger corporation can drop the prices and benefit from scale of production. This action would be a cost to smaller firms who cannot compete in such an environment. Bigger firms could also buy out the smaller firms, further increasing their influence. Costs are institutionally defined and establish whose interests are costs to others. In New Generation Cooperatives, shares are bought up-front. Individual members with money to pay for shares disadvantage those not able to make immediate payments. The rich are able to buy enough shares to cover the sale of all their anticipated production. The poor may find themselves without a market for their produce once the harvest is ready or alternatively forced by the circumstances to maintain small farm production units. Contracts may constrain or liberate either the poor or the wealthy, affecting incentives and consequently commitment of either party.

Policy makers have strong networks with powerful individuals in government and in other private organizations. People and organizations support their preferred policy makers in various ventures. These individuals or organizations in turn benefit from the policy makers who lobby for policies in their favor. A cooperative might seek support for a policy regarding provision of technical support by business service providers or government services. Funds likely to provide other services to all including to non-members might be allocated to provide this service to the cooperative, disadvantaging the non-members. Power in public choice is crucial because individuals and organizations have varying capability to use government. The more powerful will have their interests addressed. Since public choice involves moral choice, self restraint and value judgment on the legitimacy of decision is crucial. Public choice requires

decision makers to frame the issue and address specific interests with adequate information of how the decisions will advantage or disadvantage parties involved. Sometimes it requires those involved to balance their interests against personal values. Adhering to the democratic principle of cooperatives is often a moral issue. The success of a cooperative is based on the democratic principle. Participation of members in decision-making is important. The democratic principle and member participation fosters collective responsibility and commitment in cooperatives.

The Cooperative

The International Cooperative Alliance (ICA) defines a cooperative as "*an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise" (*ICA, 2009*).* In light of the changing social and economic environment, ICA identified seven principles for cooperatives that are widely accepted in most countries (ICA, 2009; Birchall, 2004; Szabó, 2005). These principles are: 1) voluntary and open membership 2) democratic member control 3) member economic participation 4) autonomy and independence 5) education, training and information 6) co-operation among cooperatives and 7) concern for the community. The principles were established to achieve the two main objectives of cooperatives, economic and social benefits. Barton (1989) identified three primary principles that make cooperatives a unique form of business which includes user-owned and user-controlled businesses that distribute benefits on the basis of use.

Cooperatives have the potential to empower individuals and producer groups. Since their inception, cooperatives have grown to control a large share of national incomes (Merrett & Walzer, 2004). This potential was recognized at the World Food Summit Plan of Action in 1996

(FAO, 2002). Five years later, the 2002 World Food Summit emphasized the important role cooperatives play in helping rural inhabitants to become active in decision-making, monitoring and evaluation of rural development programs (FAO, 2002). The need to empower small scale farmers to set up their own cooperatives and businesses was highlighted. Cooperatives are particularly crucial in post-harvest activities (FAO, 2002). Post production activities account for 55% of the economic value of agriculture in developing countries and up to 80% in developed countries. In many developing countries including Kenya, the government has not focused enough on post production activities Wanyama, 2009; FAO, 2002).

Multiple goals rather than one single goal of profit maximization guide cooperatives as they perform economic and societal roles (Merrett & Walzer, 2004; Mooney, 2004; Nippierd, 2002).The economic role of cooperatives includes employment creation, organizing markets and finance. The economic element together with the principles of democracy, self responsibility and concern for community make the cooperative model suitable for local economic and ecological development. The societal role involves delivering social services, providing community services, and protecting/improving the environment. Cooperative history and theory show a close relationship between cooperatives and sustainable development (Goldsmith, 2004; Merrett & Walzer, 2004: Mooney, 2004; Birchall, 2003). A number of studies have also shown the value of self-help groups and cooperatives in environmental conservation (Mooney, 2004; Birchall, 2003; Daoust et al., 2003).

Glenna and Mitev (2009) observe that cooperatives create structures that favor innovation, flexibility and long-term focus in order to serve local needs. Their societal role reflects democratic principles, social dialogue, and representation and empowerment of civil society. The cooperative structure seeks to respond to the common needs of members. Cooperatives are crucial in supplying services when government and investor-oriented firms

(IOFs) have failed the market. The collective action provides strength to act on issues that render individuals powerless. Through a cooperative's presence, consumers are protected against exploitation by monopolies. Although Nourse (as cited in Zeuli, 2004), an economic theorist, believed that cooperatives would form, create market imbalance and die off, cooperatives have persisted over time to make remarkable contributions to the economic development of communities.

Cooperatives in Kenya

The cooperative movement gained momentum in Kenya immediately after the country's independence (FAO, 2002). Cooperatives were set up to implement government policy rather than originating from the common interest of members (Wanyama, 2009; Birchall, 2004)). The government used cooperatives as a rural development tools to provide services such as marketing of farm products, availability of inputs and credit access. As in many developing countries, the Kenyan cooperatives were sometimes used for vested interests and political favors (Birchall, 2004). Today cooperatives cut across all sectors of the economy including agriculture, savings and credit, transport, housing, and employees. The current membership of Kenyan cooperatives has grown from 3.3 million in 2005 to 8.5 million in 2008 (Delvetere, Pollet & Wanyama, 2009). There are currently 12,000 cooperatives in Kenya, providing an estimated Ksh. 170 billion in savings which is about 31% of national savings (GOK, 2010). About 63% of Kenyans are direct or indirect beneficiaries of cooperatives (GOK, 2010). Today the government continues to use cooperatives as vehicles for wealth creation, food security, and employment creation to reduce poverty. Currently, the main aim of the government is to provide cooperatives with an enabling environment (GOK, 2010; Delvetere, Pollet, & Wanyama, 2009). The policy objective of the

Kenya cooperative movement aims to strengthen cooperatives, improve agricultural extension services to cooperatives, and enhance market access (GOK, 2010; GOK, 2007b; FAO, 2002).

Studies conducted in Kenya and other developing countries have found that cooperatives are often managed by village elites who are better educated and have greater access to resources and external linkages (Ikäheimo, & Makinen, 1999; Birchall, 2003). The elites are most likely to represent cooperative members in various forums including meetings called by various development practitioners and government agencies. Better educated individuals and those with greater ability to command resources have potential to establish external linkages that can be useful to the cooperative. Somerville (2007) observes that possibility exists for a cooperative to be controlled by managerial elite who may take advantage of the weakness of members to assure management will prevails.

Cooperative members in Kenya, like in many developing countries, often lack skills and resources to sustain cooperative businesses (Francesconi & Ruben, 2008; ILO & ICA, 2003). In addition, women have limited experience with cooperative institutions since men are often the official registered cooperative members representing their households in cooperatives. The education level of majority of women subsistent farmers is often low. Studies show that many cooperatives fail due to lack of training and poor management (Dawson, Kapila & Mead, 2002, Ortmann & King, 2007a). Strategies for farmer entrepreneurial organizations often combine local/indigenous knowledge, political legitimacy, and endogenous knowledge with effective business capacity (Bacon, Mendez & Brown, 2008; Yu, 2002; Valdivia, Lai, Ngoma, & Odumbe, 2007; ICA & ILO, 2003). Bacon, Mendez and Brown (2008) observe that to cultivate this combination of leadership values, skills and knowledge requires long term partnership with "socially responsible" business, local and international NGO networks organizations.

Both government agencies and non-governmental organizations play an important role in supporting cooperatives (Somerville, 2007). Private businesses, perceiving benefits, may also contribute to sustainability of the cooperative (Ortmann & King, 2007b). Support is usually in capacity-strengthening and in ensuring that cooperatives remain democratic (Dawson, Kapila & Mead, 2002; Somerville, 2007; ILO & ICA, 2009). Training of cooperative members on technical, management and leadership issues as well as exchanges where cooperative members visit other cooperatives, farmer groups, and retailers help strengthen farmer organizations (Bacon, Mendez & Brown, 2008). For greater sustainability, on-going training is desirable (Yu, 2002).

In Kenya support to cooperatives is usually carried out by the Ministry of Cooperative Development. In addition to government support of cooperatives, various non-governmental organizations provide technical and non-technical skills as well as financial support to organized groups. External support, particularly by the government, is often associated with political interference and internal corruption and conflict in cooperatives (Birchall, 2003; Ikäheimo, & Makinen, 1999). To help maintain their identity and autonomy, cooperatives require to be embedded in a wider social, legal, and political institutions as part of an international cooperative movement (Wanyama, Develtere, & Pollet, 2009; Somerville, 2007). This federation also potentially encourages vertical and horizontal networking in cooperatives (Wanyama, Develtere, & Pollet, 2009). In Kenya, cooperatives are usually federated into national apex organizations. These apex cooperative bodies are also part of the international cooperative movement, ICA.

Benefits of Cooperatives

The cooperative structure allows equity retention by cooperatives and ensures economic benefits remain in the community. Additionally, cooperatives shield the local economy from capital flights and job losses that would occur if a large investor owned firm pulled out of the region in times of economic recession or to seek better opportunities elsewhere. Few job opportunities in a community result in low wages, decreased demand for commodity supplies and declining markets. Cooperatives ensure jobs are created and kept within the community. Cooperatives are not necessarily profit maximizing (Glenna and Mitev, 2009). In a recent study of a cooperative in Bulgaria, Glenna and Mitev (2009) discovered that the cooperative goal of social responsibility was more important than that of profit maximization. The study revealed that profits made by the cooperative were used to maintain jobs of workers in an enterprise that was encountering losses. Employment opportunities created by a cooperative can also reduce migration rates to urban centers.

The internal governance of a cooperative is based on the democratic cooperative principle of one member-one-vote. The structure resonates with calls for societies to be more democratic. Cooperatives enhance democratic norms in society. Consequently, cooperatives enhance the capacity of people to negotiate with, influence, control, and hold institutions that affect their lives accountable (Birchall, 2004). For example, sustainable development can be addressed through the collective action of members by appealing to them to adhere to the cooperative principle of social responsibility, thus enabling members to make the moral judgment to participate in local development and ecologically friendly practices. The democratic structure of cooperatives is fundamental to community empowerment because it promotes member participation and social responsibility. Democratic organizational skills obtained through the cooperative experience can help strengthen local governance, governance of development projects, and other institutions.

Examples of the cooperative structure achieving social responsibility are demonstrated in research (Merrett & Walzer, 2004). Recent studies have revealed that cooperatives are also suitable for addressing ecological sustainability. Investor oriented firms are normally focused on profit maximization and often fail to practice environmentally friendly practices. Glenna and Mitev (2009) observe that organizational structure and biophysical conditions can negatively or positively influence social and ecological outcomes of an economic enterprise. They argue that the legal and regulatory framework to foster environmentally friendly practices may not always be successful. Glenna and Mitev (2009) observe that in The Netherlands, legal and regulatory practices for ecological outcomes in local development were not strictly followed. In their study of the Hof farm cooperative in Bulgaria, labor intensive environmental friendly practices were adopted because they created more jobs. The cooperative structure enabled the manager to implement environmentally friendly production strategies. Glenna and Mitev (2009) emphasize the need to integrate global and local influences in sustainable rural development. They conclude that cooperatives can contribute to better environmental sustainability.

The increasing demand by consumers for commodities produced with environmentally friendly practices provides opportunities for cooperatives to occupy these niches. Cooperatives are closely linked to communities, creating possible consumer loyalty for customized products. Information on ecologically friendly agricultural practices that meet the needs of local communities would attract local consumers, particularly in the production of the customized products. Democratic cooperatives are more responsive to dealing with environmental and land use issues that are ecologically friendly as their responsibility to society. The democratic principles of cooperatives facilitate exchange of knowledge related to agricultural production and environmental sustainability. Development of local knowledge related to agricultural production gives cooperatives with its local knowledge a competitive edge over investor oriented firms.

Women's Cooperatives

Gender imbalances that exist in the wider society are also reflected in cooperatives. Women are generally regarded as 'other' in relation to the dominant position held by rural men (Vakoufaris, Kizos, Spilanis, Koulouri, & Zacharaki, 2007). Men own the resources and make most decisions on behalf of the family in the majority of households in developing countries. However, cooperatives can address gender issues because of the principles embedded in the cooperative movement. The economic power gives women confidence for they do not need to rely on men for their financial needs. In addition to economic benefits that women can gain from membership in a cooperative, empowerment of women ensures that women gain skills and experience as they participate in cooperatives. Despite the opportunities cooperatives offer to improve the lives of women, several factors hinder women from achieving full benefits of cooperative membership. Women are underrepresented in cooperatives and have minimal participation in shaping policy in support of cooperatives. Limited social, economic and legal rights contribute to low participation among women in cooperatives. Other factors that limit women's participation result from various tensions brought about by the democratic principle of the cooperative structure. Socioeconomic differences, age, class, race and personality issues create conflict and tensions that impede cooperation as a result of the different groups having varying interests. Additionally, women often lack adequate knowledge, access to information, and business experience necessary to operate cooperative enterprises.

Organizations are a source of strength for women to demand their rights (Agarwal, 1997). The cooperative can be effective in forming gender-progressive coalitions through which to demand gender friendly policies. The principles and values of cooperatives render the cooperative approach to business enterprises appropriate to empower women and contribute to reducing gender imbalances. Cooperative principles include: voluntary and open membership; democratic

member control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for community (Birchall, 2003; ICA, 2009). Cooperative values of self-help, self-responsibility, equality, equity, openness, and caring for others are important to cooperative members as well (Cohn, Carroll & Force, 2003; Nippierd, 2002). The democratic principle of cooperatives is particularly valuable because women learn that their ideas are valuable as they contribute to decision-making through their cooperative. Conventional cooperatives operate on the principle of one-member-one vote. Participation by women in their own cooperatives gives them the opportunity to discover pathways to empowerment (Papert, Conelly & Barriteau, 2000). The exchange of ideas among women and the discussions they hold during cooperative meetings lead them to develop behaviors that enhance their relationships at home and in society. Therefore, every member feels equally important as most decisions are made through voting on various issues.

The International Co-operative Alliance passed a resolution on "gender equality on cooperatives" in 1995 (Nippierd, 2003). Women's cooperatives are particularly important in empowering women. The ICA has developed various strategies to promote the participation of women in cooperatives. Cooperatives are also in a position to influence policies that reduce gender disparities in society. Women can use the collective action to lobby governments for equal rights, especially land rights and other property rights. Perspectives that combine participatory democracy and critical self-reflection describe empowerment as "a process in which the individual, relatively powerless persons engage in dialogue with each other and thereby come to understand the social sources of their powerlessness and see the possibility of acting collectively to change their social environment" (Young, 1994, p.50). Individuals are transformed in the

reciprocal process of aiding others and collectively they engage in a process of effective collective action.

Women in many developing countries work individually to derive their livelihoods, mostly from low income activities. The opportunity for collective action through cooperatives has the potential to help women achieve goals that are not possible through individual efforts. Cooperatives empower women and provide them with economic, social and political leverage through group action. Women's participation in society increases as they gain confidence through participation in the cooperative's activities. Interaction with fellow women secures empowerment as women recognize that subordination of women and dominance by men is not a natural phenomenon and that a change towards a more egalitarian society is possible (Papert, Conelly & Barriteau, 2000). Factors that affect intra-house bargaining power in relation to subsistence and food security are discussed and ideas exchanged as women carry out the activities of the cooperative. The women become better able to articulate their needs and develop problem-solving capabilities (Nippierd, 2002). Through an increased focus on collective activities, women have the opportunity to fully utilize the cooperative to achieve increased economic and social benefits. Other benefits for women joining cooperatives include education, leadership skills, and social and civic engagement. The collective action enables women to come together, share their experiences and problems, and exchange ideas to help deal with issues they face in their households and society.

In pursuing a common goal, women develop confidence as they connect and nurture others. The specific behavior women develop through the empowerment process enables them to overcome male oppression (Papert, Conelly & Barriteau, 2000). Mohanty (2003) observes that the lives of women are interconnected and interdependent. However, it is also important to note that women are not a homogeneous group (Gurunani, 2002; Papert, Conelly & Barriteau, 2000).

The cooperative principles of working together to address common goals create an environment where women can coordinate their efforts. Additionally cooperatives enable women to develop a sense of togetherness, similar to that observed when women wear the purdah with pride (Mohanty, 1997). Cooperative members take pride in the local product quality of their user-owned and democratically controlled cooperative business (Briscoe & Ward, 2006). The prestige and regard associated with membership in a successful cooperative can add to their confidence. Stofferahn (2002) notes that social benefits in a cooperative include a sense of leadership and confidence that carries over to other community activities. As women acquire more confidence they are likely to bargain their positions as decision makers at the household level and in society. Hafner-Burton and Pollack (2002) observe that greater efforts by women activists and entrepreneurs are needed to increase the visibility of women as well as create an awareness of the critical role of gender in policies, programs, and projects of international development agencies. Women's cooperatives provide an effective means for women to organize and press for policies that favor gender equality.

The economic goal of cooperatives ensures women derive income from the collective enterprise. The income the women earn from cooperatives increase their empowerment as they become less dependent on their husbands. Economic independence has been shown in many feminist and development studies to contribute to increased participation by women in household decision-making and at various levels of community leadership (Molyneux, 1985; Kodoth, 2001; Deere & Leon, 2002).

For empowerment to succeed, women require their own sources of economic survival. Some cooperatives require members to possess certain production resources such as land registered in their names to be members of a cooperative. Cooperatives also require individuals to

pay for membership. Women often require men to grant approval for use of family resources. Women may not be in a position to pay the required membership fee or fulfill other conditions for resources such as land and other production inputs. As a result, women are left out of opportunities that cooperatives provide to their members including credit access, education and training, production inputs, technology and marketing (Nippierd, 2002). The decision on whether to join a cooperative or undertake other economic activities is usually made by the men in households in most developing countries including Kenya. For example studies conducted in Latin America and Kerala, India show that land reforms did not necessarily benefit women. While land rights were given to women, some women would turn over their land to their husbands or sons (Kodoth, 2001; Deere & Leon, 2002). The rationale for giving up the land was mainly inability to acquire production inputs such as labor or technology. Other reasons women gave were to be assured that they were taken care of by their sons in old age. Economic and social benefit that cooperative offer can help to empower women.

Women have not benefitted fully from the cooperative approach due to several limiting factors. Despite the cooperative principles that claim equality and equity, cooperatives have not been very gender sensitive. Women are underrepresented in decision-making and the leadership levels of cooperatives. The traditional roles of a woman as mainly reproductive and carrying out domestic responsibilities hinder their active participation in cooperatives. Women have a heavy work burden which limits their participation in activities outside the home. Women often do not have time to attend meetings or to undertake cooperative activities.

Women's limited social, economic and legal rights contribute to low participation in cooperatives. While cooperative laws are gender neutral, cooperative by-laws formulated by individual cooperatives are often discriminatory. For example, by-laws that state only one member of a household may become a cooperative member, the man is more likely to represent

the household (Birchall, 2003). Other laws that may contribute to poor participation by women in cooperatives are land ownership and inheritance laws that give property rights to males. In some countries, wives are prohibited from making transactions without the husband's consent (Cohn, Carroll & Force, 2003; Nippierd, 2002).

Women's' cooperatives face particular challenges in marketing and management. Literacy of rural women is often low. A study of women's cooperative in Greece observes that women have low managerial and marketing skills (Vakoufaris et al., 2007). Women recognize this lack of skill but are unable to find a proper solution. The lack of skills to solve their problems was attributed to low levels of education and entrepreneurial culture that saw them rely on specific organizations for funding. The study further investigated the relationship between the cooperative's trade and retail prices. The retail stores that bought products from women cooperatives for resale obtained the greatest part of the value-added commodity profit. The results indicate that consumers are willing to pay for the value-added products. The cooperative's representatives are satisfied with the retail and trade prices and do not acknowledge the loss of economic value. Raw materials from outside the region are used as members claim they are not available, are of low quality, or too expensive. The major reason behind sourcing from external markets was the high prices farmers demanded for their products. Another important observation is the loss of character of the product described as local. Production techniques and "know-how" are deemed necessary for a product to be called local. A recent study found that as business becomes more complex, members can lose their power to guide and control management, resulting in a powerful management (Nilsson & Ohlsson, 2007). Capacity strengthening in women's cooperatives is critical for their success and sustainability.

Emerging New Cooperative Structures

The environment in which the cooperative operates is important to its success. As cooperatives struggle to fit in to the current global economic and social environment, they are undertaking major structural changes to become more entrepreneurial. One such example is the New Generation Cooperatives (NGCs). NGC is a relatively new term often used to describe these emerging cooperative structures (Merrett & Walzer, 2004; Royer, 1999; Barton, 1989). Some argue that NGCs are just one type of structure to which cooperatives might convert to achieve their objectives (Chaddad & Cook, 2004). Chaddad and Cook (2004) categorize alternative forms of cooperative structures as open membership and closed membership. The key concepts associated with cooperatives are the following: 1) primary purpose is economic benefits for members; 2) members are usually patrons; 3) members own and control the cooperative; 4) qualifying patrons receive distribution of benefits; 5) cooperatives are private organizations; 6) public policy establishes the institutional framework (Barton, 1989). Emerging cooperatives focus on the economic concept of the cooperative. While the main focus of Traditional Cooperatives (TC) is raw materials, the NGCs aim to maximize profits through value-added products (Merrett & Walzer, 2004; Harris, Stefanson & Fulton, 1996).

Through NGCs, farmers add value to their farm commodities to enhance their incomes. The members get economic benefits from the sale of produce from their farms products to the cooperative and also from the profit the cooperative makes on the sale of the processed product. The value added to the products could be the result of technology or skills and knowledge. The organization of TCs and NGCs differ in fundamental ways. The distinguishing factor between TCs and NGCs is their property rights structures (Chaddad & Cook, 2004; Coltrain, Barton &

Boland, 1999; Zeuli, 2004). NGCs have well defined property rights while TCs have vaguely defined property rights (Table 2.1).

Table 2.1. Situation Structure Performance (SSP) Comparison between Traditional Cooperative and New Generation Cooperative

Situation	Traditional Cooperative Structure	New Generation Cooperative Structure	Performance
Membership Low Exclusion Costs (LEC) good in New Generation Cooperatives High Exclusion Costs (HEC)good in Traditional Cooperatives	*Ownership rights* a. Vaguely defined property rights b. Open membership c. Exit right- difficult, shares not tradable/ undiluted assets	*Ownership rights* a. Secure property rights b. Closed membership c. Exit right-easy, shares tradable	*Traditional Cooperative* Members less committed remain in cooperative Free rider, horizon, portfolio, influence problems Higher transaction costs *New Generation cooperatives* Greater member commitment to cooperative success Low transaction costs Members exit if not satisfied
Owner investment Investment requires secure expectation LEC in New Generation Cooperatives HEC in Traditional Cooperatives	*Investment rights-restrictions and obligations* a. Low initial investment b. Low proportionality to use c. Low liquidity of exchangeability/transfer of ownership d. Ability to pay equity redemption obligation e. No business expansion investment	*Investment rights-restrictions and obligations* a. High initial investment b. High proportionality to use c. High liquidity of exchangeability/transfer of ownership d. No equity redemption obligation e. High business expansion investment	*Traditional Cooperative* Lower commitment to cooperative investment Higher transaction costs Opportunistic behavior *New Generation cooperatives* Higher commitment to investment options Lower transaction costs

Situation	Traditional Cooperative Structure	New Generation Cooperative Structure	Performance
Member business volume New Generation Cooperatives- high contract negotiation cost to obtain commodity, prices known Traditional Cooperatives- member supply unknown, prevailing market prices for commodity	*Delivery or purchase rights- restrictions and obligations* a. Contracts/marketing agreements rare b. Cooperative purchases all delivered commodity *c.* marketing agreement and set price d. Business mostly with member-patrons	*Delivery or purchase rights- restrictions and obligations* a. Contracts/ marketing agreements b. Delivery rights limited to purchased c. Identity preserved d. Common pooling distribution marketing agreement and set price e. Differentiated/service policies among members is an option	*Traditional Cooperative* Member income cannot be predicted Hard for cooperative to plan for processing capacity *New Generation cooperatives* Plan for processing capacity Member income predictable- unique value rather than market price
Decision-making *Member voting and control* LEC for New Generation Cooperative members HEC for Traditional Cooperative members	*Decision-making rights: Formal and informal* a. Democratic control through one-member-one-vote b. Low eligibility restrictions c. Usually member one vote	*Decision-making rights: Formal and informal* a. Democratic or proportional control b. High eligibility restrictions c. Can be one member one vote or one share one vote	*Traditional Cooperative* Less commitment to decision-making process Low commitment to meet quality and quantity demands of cooperative *New Generation cooperatives* More commitment to conditions contracts Greater power for members with higher shares to influence decisions Members attend meetings and hold elections

The property rights of NGCs include closed membership; marketing contracts; transferable equity shares; appreciable equity shares; and minimum up-front high equity investment (Merett & Walzer, 2004; Zeuli, 2004; Illiopoulos & Cook, 1999; Coltrain, Barton & Boland, 1999). Zeuli (2004) observes that property rights dictate the business and financial arrangements of cooperatives. According to Coltrain, Barton and Boland (1999), these differences arise from marketing and financial operations and fall into four categories (Table 2.1): customer marketing, patron profit distribution, owner investment obligations, and member voting control. Coltrain, Barton and Boland (1999) observe that all types of businesses engage in these four functions and that each business has unique stakeholder roles or relationships. They identify the four roles as customer, patron, owners, and members. They observe that traditional cooperatives have various combinations of these roles, e.g. many users may be customers, but not patrons, members or owners, while others may be customers, patrons and owners, but not members. Coltrain, Barton & Boland (1999) contend that NGCs must fulfill the four roles of customer, patron, owners, and members.

Among the well defined property rights of NGCs are legally binding delivery rights. Equity shares are linked to delivery rights. Contractual agreements guarantee cooperatives secure steady access to commodities (Harris, Stefanson & Fulton, 1996; Coltrain, Barton & Boland, 1999). The delivery rights in NGCs are limited to the amount of shares purchased upfront. And determine the quantity and quality of commodity members deliver. Marketing contracts and a defined membership is necessary for NGCs and constitute a legal relationship between a member and the cooperative. Ownership rights are restricted to current member-patrons. Member-patrons are required to acquire delivery rights based on expected patronage so that usage and investment are aligned (Chaddad & Cook, 2004). While members in TCs can join and exit as they please, NGC members have to supply commodities to fulfill contract obligations. Members sign contracts with the cooperative stating the amount, quality and quantity they will supply to the

cooperative at a specified time. The producer's rights and obligations are defined in the contract. The cooperative sets prices for purchase of the commodity from producers and determines the number of producers they want to involve. Because marketing contracts are tied to membership, the NGC members are concerned with individual and cooperative success.

Unlike TCs, NGCs have transferable and appreciable delivery rights. The delivery rights in NGC may gain or lose value depending on the profitability of the cooperative. If the cooperative is successful the delivery rights may appreciate or if unsuccessful, depreciate. However, the delivery rights have a limited resale market. The board of directors has to approve the transfer. The delivery rights in a TC are not linked to membership equity contributions and only a few TCs have marketing agreements, mainly based on a member's delivery history (Harris, Stefanson & Fulton, 2007). Members in a TC may sell their produce to the cooperative when there is a glut in the market and sell elsewhere to obtain better prices during a shortage of the commodity. The TC is obliged to take all the produce a member supplies. Consequently, the cooperative is unable to strategically plan its operation, making production decisions difficult in a Traditional Cooperative.

Cooperative Principles

Cooperative principles distinguish cooperatives from other business organizations. It is not possible to adequately discuss cooperative structures without referring to cooperative principles. In 1995, ICA identified seven principles that have become widely accepted worldwide: 1) voluntary and open membership; 2) democratic member control; 3) member economic participation; 4) autonomy and independence; 5) education, training and independence; 6) cooperation among cooperatives; 7) concern for community (ICA, 2009).

Although practices and policies vary among cooperatives, the cooperative principles are commonly used in all cooperatives (Barton, 1989). However, scholars and cooperative leaders continue to deliberate on the application of the cooperative principles to present day cooperatives and some argue that cooperative principles are not relevant to current cooperative practices (Zeuli, 2004; Barton, 1989). These scholars and cooperative leaders observe that the existing conditions when the principles were defined are different from today's prevailing conditions and cooperatives. The restated and revised cooperative principles enable application of property rights to individual incentives for organizing and operating cooperatives (Reynolds, 2000). The cooperative's need to revisit the principles is well recognized (ICA, 2009: Novkovic & Power, 2005). The principles guide cooperatives to fulfill their economic and social functions.

The cooperative principles structure the relationship between a member and the cooperative. Reynolds (2000) observes that principles are central in efficient decision-making and focus on them is increasing in analysis of cooperatives. Cooperative principles are classified along property rights into ownership, control, and the distribution and derivation of benefits (Chaddad & Cook, 2004; Zeuli, 2004). The organizational structure, including decision making and the principles, constitute formal legal arrangements between members and the cooperative (Chaddad & Cook, 2004; Szabó, 2007). The issue of what structure is optimal for member benefit is becoming increasingly pertinent as cooperatives globally change or modify their structures in response to current changes in the food and fiber sector. In the prevailing environment of global expansion of agricultural markets and stiff competition, a cooperative structure that can successfully manage the internal and external relationships will be vital for success of cooperatives.

Purpose of the study

The purpose of this study was to examine the influence of cooperative structure on member commitment, satisfaction, and success of the Murang'a Nutribusiness Cooperative. In 2007, a pilot study funded by Penn State's Africana Research Center, Institute of Social Studies and College of Agricultural Sciences was conducted to establish the current status of the Murang'a Nutribusiness Cooperative. This study revealed that member commitment was a major problem facing the cooperative. Members did not hold meetings and had limited information about the cooperative. Although the cooperative continued to process and sell its products through a marketing agent, business with cooperative members was minimal. The study revealed that cooperative members had not received patronage refunds since the cooperative's inception. This research documents the current Murang'a Nutribusiness Cooperative structure and identifies an optimum cooperative structure that can increase member commitment. Research objectives and questions guided the study to determine how the cooperative structure influences member commitment in Murang'a Nutribusiness Cooperative. Based on the literature review on member commitment hypotheses were generated and tested. The influence of the commitment, satisfaction and success in Murang'a Nutribusiness Cooperative on member commitment is discussed in comparison with Traditional Cooperative and the New Generation Cooperative structures. Suggestions of a structure likely to enhance member commitment in Murang'a Nutribusiness Cooperative are given in the recommendations section.

This study establishes member commitment and the key variables that influence commitment: leader/member interaction, governance/leadership and relationships with external organizations/individuals. Member perceived success and satisfaction are assessed.

Finally, a comparison of the Murang'a Nutribusiness Cooperative with Traditional Cooperative and New Generation Cooperative is be made. An optimal cooperative structure was subsequently suggested. Further, policy issues that are necessary for support of nutribusiness cooperatives and their emergence are discussed.

Research Objectives

1. Assess the current cooperative structure for leader/member interaction and governance/leadership.

   RQ: What is the current structure of the Nutribusiness Cooperative?

   Sub-questions:

   a) How is the Nutribusiness Cooperative managed?

   b) How does the cooperative's board and management share information with cooperative members?

2. Assess member satisfaction with the cooperative.

   RQ: Are the Nutribusiness Cooperative members satisfied with the cooperative?

3. Assess success of the cooperative.

   RQ: Do the Nutribusiness Cooperative members perceive the cooperative as successful?

4. Assess member commitment to the cooperative.

   RQ: How committed are the Nutribusiness Cooperative members to their cooperative?

Hypothesis

Hypothesis 1: There is a higher overall level of affective commitment than continuance commitment in Murang'a Nutribusiness Cooperative.

Hypothesis 2: There is a positive relationship between satisfaction and commitment in Murang'a Nutribusiness Cooperative

Hypothesis 3: There is a positive relationship between success and commitment in Murang'a Nutribusiness Cooperative.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Case Study Research Design

The case study research method is an intensive, holistic description and analysis of a single unit or bounded system (Dooley, 2007: Yin, 2003). Case studies may be used in both qualitative and quantitative research. Dooley (2007) observes that in a case study, the researcher comes to know some of the things told, as if she or he has experienced them. Consequently, the case study helps to understand the phenomenon under study. A high quality case study includes examining the setting, characters, events, problems, and conflicts (Patton, 2002; Dooley, 2007).

External validity (generalizability) is judged on whether findings may be applied to other settings or with other subjects (Dooley, 2007). Dooley (2007) posits that transferability of the findings of a case study may occur when there are shared characteristics. Literature on case studies also indicates that results generalized back to theory can be used to theorize about similar cases (Yin, 2003; Patton, 2002).

This case study is grounded in theoretical propositions. An earlier pilot study conducted by the researcher, on the Murang'a Nutribusiness cooperative also provided insights into the theoretical propositions. The aim of this research was not statistical generalization but to generalize results back to theory. The main unit of analysis was the Murang'a Nutribusiness Cooperative. This case study involved multiple perspectives from 1) general cooperative members and 2) cooperative board members (Figure 3.1). In addition to interviewing individuals in each group, the researcher examined existing documents which included minutes of meetings, agendas, constitution, by-laws, and archival records of the cooperative. Document analysis provided information about individuals not involved in the study and also provided information

on events that took place prior to data collection (Harper & Museus, 2007; Patton, 2002). In addition, the researcher and the interviewers recorded their observations as they conducted the interviews. Observations capture the real life context in which participants interact and also enable the researcher to grasp information that participants may overlook (Harper & Museus, 2007; Dooley, 2007). The observations became part of the data used to answer the research questions.

The research instrument was translated into the local Language, Kiswahili, and confirmation of its translation accuracy was completed by an individual fluent in both English and Kiswahili. The Penn State Office of Research Protections approved the research (IRB#32124). The Kenya National Council of Science and Technology also approved the research.

Research Design

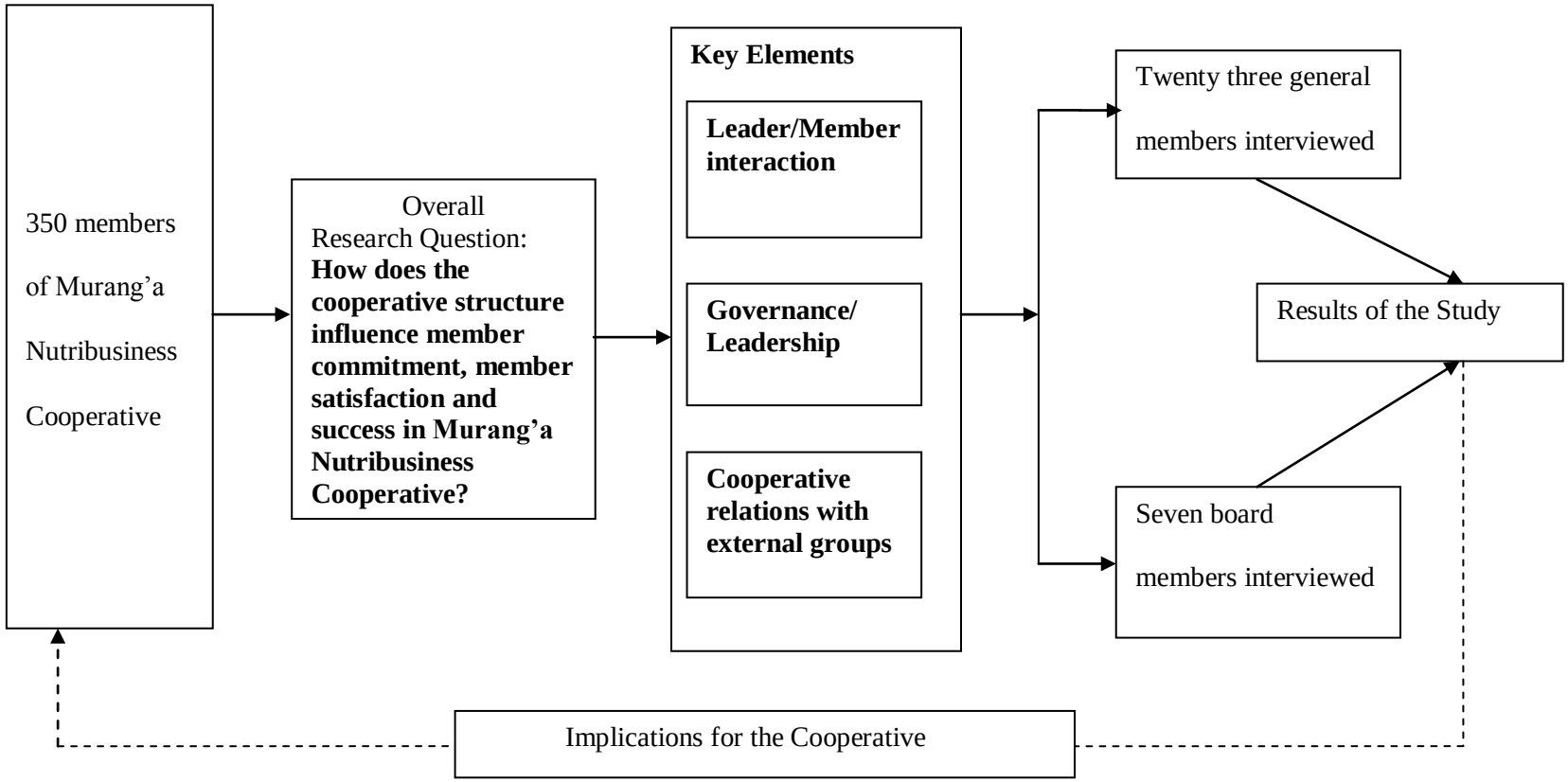


Figure 3.1. Research Design

Study Population

The target population for the study was the 350 registered cooperative members of the Murang'a Nutribusiness Cooperative. The sampling frame was obtained from records held by the management board of the cooperative. Although selection of study participants was originally intended to be through random selection, doing so was not possible as many members in the study population could not be located. Since joining the cooperative, many members had moved to other areas.

A register of cooperative members was used to identify respondents. The researcher used snowball sampling (Black, 1999) or the identification method (also called referral sampling or chain sampling, Welch, 1975). Through this process data were collected from 23 general members and 7 board members. The total number of board members of the cooperative is nine. During the interview it was apparent that saturation (Dooley, 2007) had occurred and further expansion of the sample was not necessary. The board members live in three different districts from which the cooperative draws its membership. The chairperson is from the Gatanga District, the vice chairperson from Kandara District, and the treasurer from Maragwa District (Figure 3.2).

Face-to-face interview strategy was preferred for this study because literacy levels of the study population are relatively low. All members of the cooperative are female ages 30 and above. The majority were over age 55.



☆ Murang'a region

Figure 3.2. Map of Kenya.

The Instrument

The instrument for cooperative members was a face-to-face interview schedule of 19 items (Appendix A). The interview schedule was the same for board members and the general cooperative members. Structured and unstructured questions were included. The structured part of the interview ensured that necessary information was captured (Harper & Museus, 2007).

Unstructured questions were used to gather data that required probing for in-depth information (Harper & Museus, 2007; Yin, 2003).

To answer the first research question, information on the governance structure, cooperative management, and information flow was also gathered from printed documents in addition to the interview schedule. To assess the current cooperative structure for member commitment, success and satisfaction, information regarding leader/member interaction, governance/leadership, and cooperative relations with external groups were analyzed. Questions two and three sought cooperative members' responses to the level of success and satisfaction with the cooperative. All items were measured on a 5-point Likert scale. The scale for success was 1= successful, 2= somewhat successful, 3= neither successful nor unsuccessful, 4= unsuccessful, and 5= I am unable to determine. The scale for satisfaction was 1= satisfied, 2= somewhat satisfied, 3= neither satisfied nor dissatisfied, 4= somewhat dissatisfied, 5= dissatisfied. The fourth research question sought to establish how committed cooperative members are to their cooperative. The commitment construct was measured using Allen and Meyer's (1990) organizational commitment scale.

Allen & Meyer Organizational commitment scale

The Allen and Meyer (1990) organizational commitment scale was adapted to measure affective and continuance commitment of the cooperative members (Appendix A, Item 16). The organizational commitment scale distinguishes three forms of commitment; affective commitment, normative commitment and continuance commitment. Affective commitment is associated with emotional attachment, identification with, and involvement in the organization while continuance commitment is associated with the perceived cost of leaving the organization (Allen & Meyer, 1990). Members with normative commitment remain in the organization

because they view commitment as one's obligation (Allen & Meyer, 1990). Normative commitment has been found to correlate strongly with affective commitment with some antecedents correlating similarly with affective commitment (Allen & Meyer, 1990; Powell & Meyer, 2004; Solinger, van Olffen & Roe, 2008). Powell & Meyer (2004) acknowledge that further attention should be given to the development of the normative component. In this study normative commitment was treated as redundant and only affective commitment and continuance commitment was taken into consideration.

In a recent meta-analysis, the Allen and Meyer (1990) scale of organizational commitment is found to be applicable for cross-cultural settings (Powell & Meyer, 2004). However, difficulties that occurred in translation were acknowledged and dealt with through research team discussion and interpretation (Powell & Meyer, 2004). Some changes were made to the commitment scale items to be able to apply it to the member-owned cooperative organization. The Allen and Meyer (1990) scale item 8 was split into two separate items. Item 10 on the continuance commitment scale was added because it was found necessary for a cooperative. All items were measured on a 5-point Likert scale (1= Strongly Disagree to 5=Strongly Agree). A total of 17 commitment items were included in this study. Examples of items included are "I am happy to be a member of this cooperative" and "One of the major reasons I continue membership in this cooperative is that leaving would involve considerable personal sacrifice" (Appendix A, Item 16).

Survey items related to the third and fourth research questions on success of cooperatives and on external linkages were based on literature identifying factors contributing to the success of cooperatives. Some items were also drawn and modified from a questionnaire used in a previous study on characteristics of successful cooperatives (Bhuyan & Leistriz, 2001). Table 3.1 shows the variables for each research question and type of data used in the analysis of the research items.

Table 3.1. Survey Research Questions, Key Variables and Type of Data

Research Question	Key Variable	Items from Survey/ Interview	Type of Data
What is the current structure of the NutriBusiness Cooperative	Membership	Items 1, 2, 17	Nominal
	Decision-making	Items 5, 6, 7, 10	Nominal
a) How is the NutriBusiness Cooperative managed?	Business operations	Items 3, 4, 8	Interval/ Ratio
			Interval/ Ratio
	Strengths and weaknesses	Item 8	Interval/ Ratio
b) How does cooperative board and management share information with cooperative members?	Information sharing	Item 10	Interval/Ratio
	Member/Board training and education	Item 8,10	Interval/Ratio
How committed are the Nutribusiness members to their cooperative?	Member commitment	Item 16	Interval/ Ratio
	Member perceived success	Item 18	Interval/ Ratio
	Member satisfaction	Item 19	Interval/ Ratio
What is the relationship of the cooperative with external organizations/individuals?	Business Development Services/External groups	Items 9, 12, 13,	Interval/Ratio
		Items 11, 14, 15	Nominal

Data Collection and Analyses

Data Collection

Three fundamental principles of data collection were followed: multiple sources of evidence, case study database, and chain of evidence (Yin, 2003; Dooley, 2007). The methods used in the study were interviews, direct observations and unobtrusive measures (documents other archival records). The multiple sets of data from various sources were useful for triangulation (Harper & Museus, 2007; Yin, 2003; Patton, 2002).

Formal training and orientation of a team of four Kenyan interviewers was conducted by the researcher. The goal of the training was to enable interviewers to understand issues related to the study, including basic concepts and terminologies (Yin, 2003; Patton, 2002) and case study protocol. The case study protocol included the instrument (interview schedule) as well as the rules and procedures to be followed during data collection. The researcher and the four interviewers used the interview schedule to collect data through the face-to-face interviews. Additionally, observations by the researcher and interviewers augmented the interview data. Observations enhanced the researcher's ability to grasp motives, beliefs, concerns, and interests (Dooley, 2007). Observations also helped to triangulate what was observed with other data sources to better understand and capture the context (Patton, 2002; Dooley, 2007). Unobtrusive measures; documents, letters, memos, agendas, meeting minutes and pictures were used as part of data collection methods. At the beginning of the research the researcher requested and was given the Cooperative's constitution, list of registered members, letters, memos, agendas, and meeting minutes. The various data sources provided multiple perspectives that made triangulation possible.

Data Analyses

Content and face validity were established through a panel of experts from the Penn State College of Agricultural Sciences. For this study, a pilot with five subjects not included in the study was completed. Instrument feedback was obtained on the pilot test and responses made were used to refine the questions. The Allen and Meyer (1990) measure of organizational commitment reliability coefficient (alpha) of 0.9 was obtained for affective commitment and 0.8 for continuance commitment for the study.

Participants responses to each of the items on the subscale were recorded using a 5-point Likert response scale (1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree). Thus the higher mean summated value represents greater commitment.

Management, organizational and financial factors variables were tested for reliability: reliability for management items was 0. 74, reliability for capitalization was 0.37, questions regarding members 0.84, questions regarding board members 0.75, contribution to members/society 0.91, decision-making 0.91, quality of information 0.97, cooperative values 0.84, contribution of support organization 0.70, current difficulties 0.80, important services 0.86. Construct validity was established through sets of multiple data sources and articulation of a chain of evidence.

The results of this study are intended to make analytical generalizations. According to Yin (2003) and Silverman and Marvasti (2008), a case study based on theoretical propositions can be generalized to theory. This case study was grounded in the theory of cooperatives (Chaddad & Cook, 2004; Schmid, 2004; Bhuyan & Leistriz, 2001; Merrett & Walzer, 2004; Royer, 1999; Zeuli, 2004). To establish external validity, the research findings were generalized to theory. Case study protocol and database were used to establish reliability of the study (Yin, 2003).

CHAPTER 4

RESULTS

This chapter summarizes the data analysis for two primary commitment variables and a third variable that assessed overall satisfaction with the cooperative. A final variable was the perceived success of the Murang'a Nutribusiness Cooperative. Affective commitment represents a summated Likert scale score created by the researcher via summing the responses to eight individual items. The summated scale score for affective commitment contained three recoded items (Item 5, 6, and 8). The summated continuance commitment score was created by summing responses for ten individual continuance commitment items. The summated scale score for continuance commitment contained two recoded items (Item 1 and 4). Success and Satisfaction with the cooperative were each assessed by examining responses to a one-item statement on success and satisfaction with the cooperative statements respectively (Item 18 and 19). The data for these four variables were examined comparing responses of cooperative members at large (general members) with Board members of the Murang'a Nutribusiness Cooperative. This chapter will first present the results by hypothesis. A summary of the results will then be given.

Comparison of Affective and Continuance Commitment

Hypothesis 1: There is a higher overall level of affective commitment than continuance commitment in Murang'a Nutribusiness Cooperative.

Findings indicate a higher overall average level of affective commitment (M = 3.5, SD = 1.0) than continuance commitment (M = 3.0, SD = 0.8) in the Murang'a Nutribusiness Cooperative. The findings are based on the summated Likert scale mean scores for affective commitment (Figure 4.1 and Table 4.1) and for continuance commitment (Figure 4.1 and Table

4.2). Qualitatively these combined means for both board members and general members would be interpreted that on average the mean for affective commitment "falls" between undecided and agree and for continuance commitment the overall mean is described as undecided on the Likert response scale.

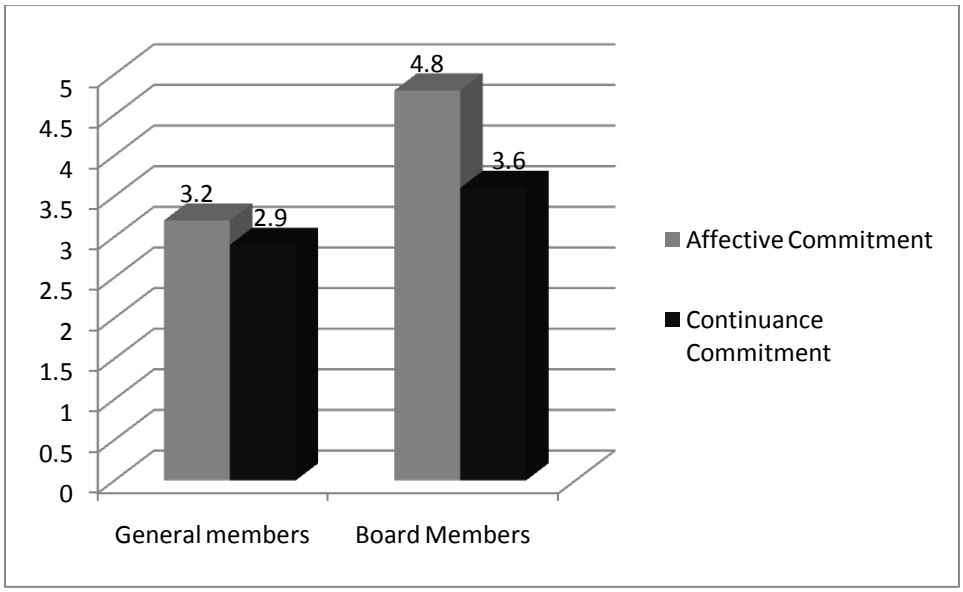


Figure 4.1. Affective commitment and continuance commitment.

Scale 1(strongly disagree)-5(strongly agree): Commitment r=.48, p<.05

Table 4.1. Distribution of Responses for Affective Commitment Items by Position.

Affective Commitment Item	**Strongly Disagree % (N)**	**Disagree % (N)**	**Undecided % (N)**	**Agree % (N)**	**Strongly Agree % (N)**	**Item Mean/ SD**
1.I am happy to be a member of this cooperative						
Member	13% (3)	9% (2)	13% (3)	44% (10)	22% (5)	3.5 / 1.3
Leader	0% (0)	0% (0)	0% (0)	0% (0)	100% (6)	5.0 / 0.0
2. I enjoy discussing my cooperative with people outside it						
Member						
Leader	26% (6)	4% (1)	9% (2)	52% (12)	9% (2)	3.1 / 1.4
	0% (0)	0% (0)	0% (0)	0% (0)	100% (6)	5.0 / 0.0
3.I really feel as if this cooperative' problems are my own						
Member	0% (0)	0% (0)	4% (1)	65%(15)	30% (7)	4.3 / 0.5
	0% (0)	0% (0)	0% (0)	0% (0)	100% (6)	5.0 / 0.0
Leader						
4.I think I could easily become attached to another cooperative as I am to this one						
Member	17% (4)	13% (3)	9% (2)	48% (11)	13% (3)	3.3 / 1.4
Leader	0% (0)	17% (1)	0% (0)	17% (1)	67% (4)	4.3 / 1.2
5.I <u>do not</u> feel like a "member of the family" at this cooperative						
Member						
Leader	17% (4)	26% (6)	13% (3)	35% (8)	9% (2)	2.9 / 1.3
	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	4.8 / 0.4
6.I <u>do not</u> feel emotionally attached to this cooperative						
Member	13% (3)	30% (7)	26% (6)	22% (5)	9% (2)	2.8 /1.9
Leader	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	4.8 / 0.4
7.This cooperative has a great deal of personal meaning for me						
Member						
Leader	18% (4)	22% (5)	27% (6)	27% (6)	5% (1)	2.8 / 1.2
	0% (0)	0% (0)	0% (0)	0% (0)	100% (6)	5.0 / 0.0
8.I <u>do not</u> feel a great sense of belonging to this cooperative						
Member	17% (4)	22% (5)	22% (5)	17% (4)	22% (5)	3.0 / 1.4
Leader	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	4.8 /0 .4

Summated affective commitment score had a mean of 3.5 with a standard deviation of 1.0 for general members and leaders combined. *Items 5, 6 and 8 are reverse coded*

Table 4.2. Distribution of Responses for Continuance Commitment Items by Position.

Continuance Commitment Item	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)	Item Mean/ SD
1.I am not afraid of what might happen if I quit my membership in this cooperative without the possibility of joining another						
Member	17% (4)	17% (4)	0% (0)	57% (13)	9% (2)	3.2/1.3
Leader	0% (0)	0% (0)	0% (0)	23% (2)	77% (7)	4.6/0.5
2.It would be hard for me to stop my membership in this cooperative now even if I wanted to						
Member	17% (4)	26% (6)	0% (0)	43% (10)	13% (3)	3.0/1.4
Leader	16% (1)	0% (0)	0% (0)	34% (2)	50% (3)	4.0/1.5
3.Too much of my life would be disrupted if I decided to stop my membership in this cooperative right now						
Member	35% (8)	43%(10)	4% (1)	17% (4)	0% (0)	2.0/1.0
Leader	16% (1)	0% (0)	16% (1)	16% (1)	50% (3)	3.8/1.6
4.It would not be too costly for me to leave this cooperative in the near future						
Member	9% (2)	26% (6)	0% (0)	52% (12)	13% (3)	3.3/1.2
Leader	16% (1)	0% (0)	16% (1)	16% (1)	50% (3)	3.8/1.6
5.Right now, staying on as a member of this cooperative is a matter of necessity as much as desire						
Member	22% 5)	17% (4)	17% (4)	34% (8)	8% (2)	2.9/1.3
Leader	0% (0)	0% (0)	0% (0)	0% (0)	100%(6)	5.0/.00
6.I believe I have too few options to consider should I withdraw from membership in this cooperative						
Member	17% (4)	34% (8)	13%(3)	26%(6)	8% (2)	2.7/1.2
Leader	33% (2)	16% (1)	0% (0)	0% (0)	50% (3)	3.1/2.0
7.One of the few negative consequences of withdrawing membership from this cooperative would be scarcity of opportunities available elsewhere						
Member	17% (4)	43%(10)	13% (3) 0% (0)	13% (3) 0%	13% (3)	2.6/1.3
Leader	83% (5)	0% (0)		0)	16% (1)	1.6/1.6

Item 1 and 4 are reverse coded

Table 4.2. Cont. Distribution of Responses for Continuance Commitment Items by Position

Continuance Commitment Item	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)	Item Mean/ SD
8.One of the major reasons I continue membership in this cooperative is that leaving would involve considerable personal sacrifice						
Member	13% (4)	18% (4)	0% (0)	40% (9)	27% (6)	3.5/1.4
Leader	40% (2)	0% (0)	0% (0)	20% (1)	40% (2)	3.2/2.0
9.Another place may not match the overall personal benefits I have in this cooperative						
Member	22% (5)	36% (8)	31% (7)	4% (1)	4% (1)	2.3/1.0
Leader	33% (2)	0% (0)	0% (0)	50% (3)	16% (1)	3.1/1.7
10.If I had not already put so much of myself in this cooperative, I would consider membership in another						
Member	4% (1)	27% (6)	9% (2)	50% (11)	9% (2)	3.3/1.1
Leader	16% (1)	33% (2)	0% (0)	16% (1)	33% (2)	3.1/1.7

Summated continuance commitment score had a mean of 3.0 and a standard deviation of 0.8 for general members and leaders combined

The relationship between overall affective commitment and overall continuance commitment was moderate (PPMr=.488). Results also indicated that overall affective commitment and overall continuance commitment varies by position. General member affective (M=3.2, SD =0.8) and continuance (M=2.9, SD =0.6) commitment are relatively equal, whereas leaders had much higher overall affective (M=4.8, SD=0.1) than continuance (M=3.6, SD= 1.2) commitment (Figure 4.1). The results also indicate that there was a positive, moderately high relationship between affective commitment and position of members (Table 4.3, $r_{pt\ bis}$ = .669).

Table 4.3. Bivariate Correlations between Selected Variables.

Variables Correlated	Mean and (SD)	Correlation Value (p)
Affective Commitment and Continuance Commitment	3.5 (1.0) 3.0 (.8)	PPMr = .488 (.05)
Affective Commitment and Position (0 = member & 1 = leader)	3.5 (1.0)	$r_{pt\ bis}$ = .669 (.01)
Continuance Commitment and Position (0 = member & 1 = leader)	3.0 (.8)	no correlation
Success and Position (0 = member & 1 = leader)	2.7(2.4)	$r_{pt\ bis}$ = .394 (.05)
Affective Commitment and Satisfaction	3.5 (1.0) 2.4 (1.3)	PPMr = .463 (.05)
Continuance Commitment and Satisfaction	3.0 (.8) 2.4 (1.3)	PPMr = .468 (.05)

Affective Commitment Contrasts and Similarities

The researcher decided it may be more informative to examine responses to individual commitment items with special attention to examining contrasts and similarities in response patterns by general members as compared to board members of the Murang'a Nutribusiness Cooperative. Some caution needs to be used because of the large differences in the number of cases for the general members (N= 23) and for the leaders (N=7).

Affective Commitment Contrasts by Position

The greatest similarity in the response pattern for board members and general members appears for item three *I really feel as if this cooperative' problems are my own* (Table 4.1). There appear to be similar levels of personally being concerned regarding the problems of the Murang'a Nutribusiness Cooperative by both board members (100% strongly agree) and general members (95% agree or strongly agree).

This result is perplexing when examining the responses of board members and general members to item five I *do not feel like a "member of the family" at this cooperative* (Table 4.1). All seven board members (100%) strongly agreed or agreed with that statement. For general members, 44% either agreed or strongly agreed with that statement; however, 43% of the general members disagreed or strongly disagreed with that statement. The main issue with the results for this item is that 100% of the board members agreed with this item yet the reason(s) they responded in this manner is not known. This response becomes a more intriguing issue when one then examines responses to item six.

For item six *I do not feel emotionally attached to this cooperative* (Table 4.1), 100% of the board members either agreed or strongly agreed with that statement. Among general members, 31% agreed or strongly agreed with the statement; however, 43% disagreed or strongly disagreed with the statement and 26% indicated they were undecided.

The following three items (Table 4.1) relate to an underlying construct of a sense of belonging and personal attachment to the cooperative.

Item 4 -- *I think I could easily become attached to another cooperative as I am to this one.*

Item 7 -- *This cooperative has a great deal of personal meaning for me.*

Item 8 -- *I <u>do not</u> feel a great sense of belonging to this cooperative.*

In examining the individual responses by general members and board members, there are several interesting disparities for these items. For item four I *think I could easily become attached to another cooperative as I am to this one,* 30% of the general members expressed some level of disagreement with this statement with an additional 9% undecided. One (17%) of the six board members expressed some level of disagreement with this statement. For item seven *This cooperative has a great deal of personal meaning for me*, the disparity in responses was substantive. For general members, 40% expressed some level of disagreement with an additional 27% indicating they were undecided. None of the board members expressed disagreement or were undecided regarding this statement. For item eight *I <u>do not</u> feel a great sense of belonging to this cooperative*, nine (39%) general members expressed some level of disagreement, whereas, none of the board members expressed disagreement with this statement. In essence all the board members agreed that they do not feel a great sense of belonging to the Murang'a Nutribusiness Cooperative, and 39% of the general members agreed (with an additional 22% undecided) they do not feel a great sense of belonging to the Murang'a Nutribusiness Cooperative.

Items one and two assess the cooperative member's general happiness and interest in discussing the cooperative with nonmembers of the cooperative. All the board members strongly agreed they were happy to be members of the cooperative and to discuss the cooperative with nonmembers of the Murang'a Nutribusiness Cooperative. Among general members, 66% agreed or strongly agreed they were happy to be a part of the cooperative. All the board members (100%)

agreed strongly and 61% of the general members agreed or strongly agreed they enjoy discussing the cooperative with nonmembers.

Continuance Commitment Contrasts by Position

For purposes of this analysis, the ten items within continuance commitment (Table 4.2) were grouped into three domains:

1. Alternatives to continuing membership in Murang'a Nutribusiness Cooperative.

    a. Item 6. *I believe I have too few options to consider should I withdraw from membership in this cooperative.*

    b. Item 7. *One of the few negative consequences of withdrawing membership from this cooperative would be scarcity of opportunities available elsewhere.*

    c. Item 9. *Another place may not match the overall personal benefits I have in this cooperative.*

2. Consequences of leaving Murang'a Nutribusiness Cooperative.

    a. Item 1. *I <u>am not</u> afraid of what might happen if I quit my membership in this cooperative without the possibility of joining another*.

    b. Item 3. *Too much of my life would be disrupted if I decided to stop my membership in this cooperative right now.*

    c. Item 4. *It would <u>not be</u> too costly for me to leave this cooperative in the near future.*

    d. Item 8. *One of the major reasons I continue membership in this cooperative is that leaving would involve considerable personal sacrifice.*

3. Reasons for membership or reasons for continuing membership in Murang'a Nutribusiness Cooperative.

    a. Item 2. *It would be hard for me to stop my membership in this cooperative now even if I wanted to*

    b. .Item 5. *Right now, staying on as a member of this cooperative is a matter of necessity as much as a desire.*

    c. Item 10. *If I had not already put so much of myself in this cooperative, I would consider membership in another.*

Alternatives—Responses to item six *I believe I have too few options to consider should I withdraw from membership in this cooperative*, general members indicated that 34% agreed or strongly agreed they had too few options to consider withdrawing their membership in the cooperative. For board members, 50% expressed some level of positive agreement that too few options existed to consider withdrawing their membership. Item seven *One of the few negative consequences of withdrawing membership from this cooperative would be scarcity of opportunities available elsewhere* specifically required respondents to indicate their level of agreement regarding withdrawing membership and the consequence of having few alternative opportunities elsewhere. Only 26% of the members and 16% of the leaders indicated lack of opportunities would represent a negative consequence of withdrawing membership from the Murang'a Nutribusiness Cooperative. Item nine *Another place may not match the overall personal benefits I have in this cooperative* specifically asked respondents to reflect on the personal benefits available through alternative opportunities. Importantly, 31% of the general members indicated they were undecided. Just eight percent of the general members agreed or strongly agreed alternative options would not offer the same level of personal benefits yet among the board members, 66% agreed or strongly agreed alternatives would not match the current level of personal benefits available through the Murang'a Nutribusiness Cooperative.

Consequences of leaving—Item one *I <u>am not</u> afraid of what might happen if I quit my membership in this cooperative without the possibility of joining another* specifically requested respondents to reflect on whether they were afraid of what might happen if they dropped membership in this cooperative without the possibility of joining another. Among the general members, 66% agreed or strongly agreed that they were not afraid to drop membership in the cooperative without the possibility of joining another. For the board members, 100% agreed or strongly agreed that they were not afraid of leaving the cooperative without the possibility of joining another. It is important to consider that 34% of the members were afraid to quit the cooperative without having the possibility of joining another. Responses to item three *Too much*

of my life would be disrupted if I decided to stop my membership in this cooperative right now by general members indicated that 78 % of the general members disagreed or strongly disagreed that their lives would be disrupted if they left the cooperative. Only 16% of the board members disagreed or strongly disagreed that their lives would be disrupted if they left the cooperative. Therefore, a majority of board members would have their lives disrupted if they dropped membership in the cooperative. Item four *It would not be too costly for me to leave this cooperative in the near future* specifically required members to reflect on the cost of leaving the cooperative in the near future. Both members (65%) and board members (66%) relatively equally agreed or strongly agreed that leaving the cooperative in the near future would be costly to them. Responses to item eight *One of the major reasons I continue membership in this cooperative is that leaving would involve considerable personal sacrifice* by the general members indicated that 67% of the general members and 60% of the board members agreed or strongly agreed that one of the major reasons they continue membership in this cooperative is that leaving would involve considerable high personal sacrifice.

Reasons for leaving or not leaving— Responses to item two *It would be hard for me to stop my membership in this cooperative now even if I wanted to* indicated that 56% of the general members agreed or strongly agreed that it would be hard for them to stop their membership in this cooperative even if they wanted. For the board members, 84% agreed or strongly agreed it is hard for them to stop membership in the cooperative. Item five *Right now, staying on as a member of this cooperative is a matter of necessity as much as a desire* required respondents to reflect on their reasons for staying on as a member of the cooperative. Among the general members, 42% agreed or strongly agreed staying on as a member of the cooperative is a matter of necessity as much as a desire. For the board members, 100% indicated that staying on as a member of the cooperative is a matter of necessity as much as a desire. Item 10 *If I had not already put so much of myself in this cooperative, I would consider membership in another,* specifically required respondents to reflect if they had personally invested too much in this cooperative to consider

membership in another. Among general members, 59% indicated that had they not invested so much in this cooperative themselves, they would consider membership in another. Relatively fewer board members, 49%, agreed or strongly agreed that they had put too much of themselves in this cooperative to consider membership in another. Also worth noting is only 9% of the general members and no board members were undecided.

Relationship between Satisfaction and Commitment

Hypothesis 2: There is a positive relationship between satisfaction and commitment in Murang'a NutribusinessCooperative

The findings of this study supported the hypothesis that there is a positive relationship between satisfaction and commitment in Murang'a NutribusinessCooperative. The relationship between affective commitment and satisfaction (Table 4.3) was positive with a moderate correlation ($r=.463$, $p\leq.05$). Satisfaction varied by position with board members having a much higher satisfaction than members (Figure 4.2 & 4.3, general members $M=2.1$, $SD=1.3$; board $M=3.6$, $SD=1.0$). Continuance commitment and satisfaction had a moderate relationship ($r=468$, $p\leq.05$). The relationship between continuance commitment and position ($r=.0362$, $p=.064$) though not statistically significant at $p\leq.05$, according to Huck it would be appropriate to call it "marginally significant" (Huck, 2008 p.169 - 172).

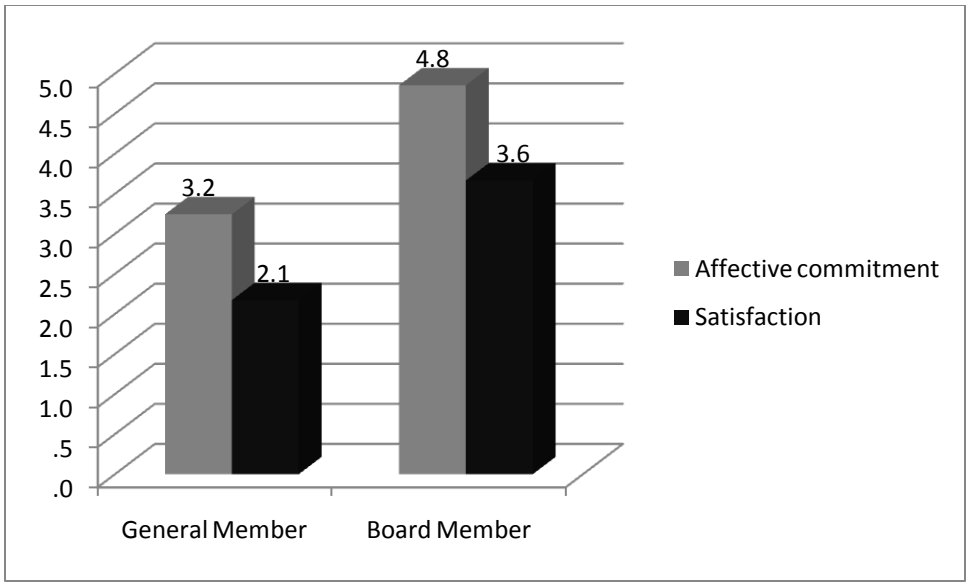


Figure 4.2. Affective commitment and satisfaction

Scale 1(strongly disagree)-5(strongly agree), r=.46, p<.05

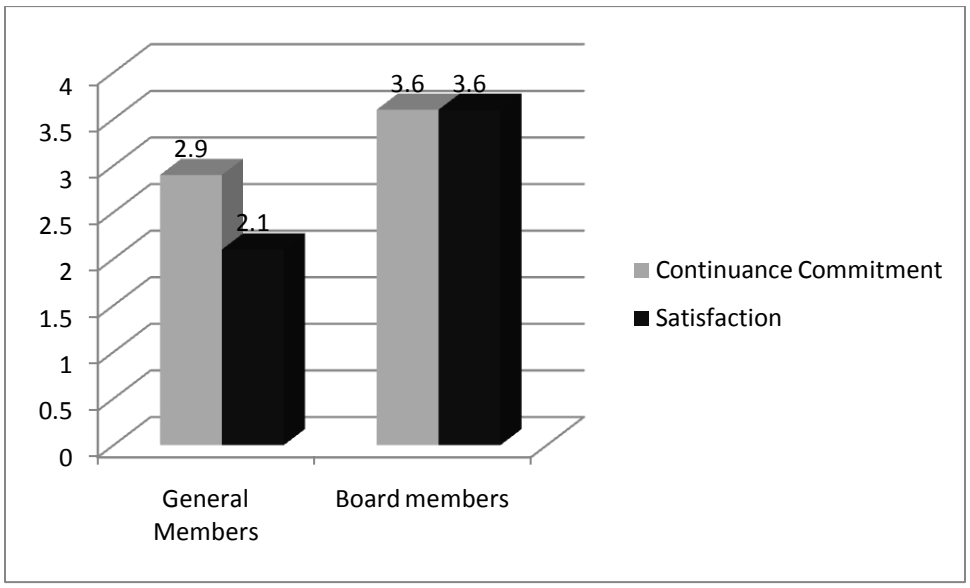


Figure 4.3. Continuance commitment and satisfaction

Scale 1(strongly disagree)-5(strongly agree), r=.46, p<.05

Relationship between Success and Cooperative Commitment

Hypothesis 3: There is a positive relationship between success and commitment in Murang'a Nutribusiness Cooperative.

Contrary to the hypothesis that there is a positive relationship between success and commitment in Murang'a Nutribusiness Cooperative, this study found no such relationship with affective or continuance commitment. The means for general members and board members on perceived success averaged 2.5 and 3.8 respectively (Figure 4.4 & 4.5). However, a moderately significant and positive relationship (Table 4.3) was observed between success and position ($r=.394$, $p\leq.05$). The study also found out that there was no correlation between success and satisfaction.

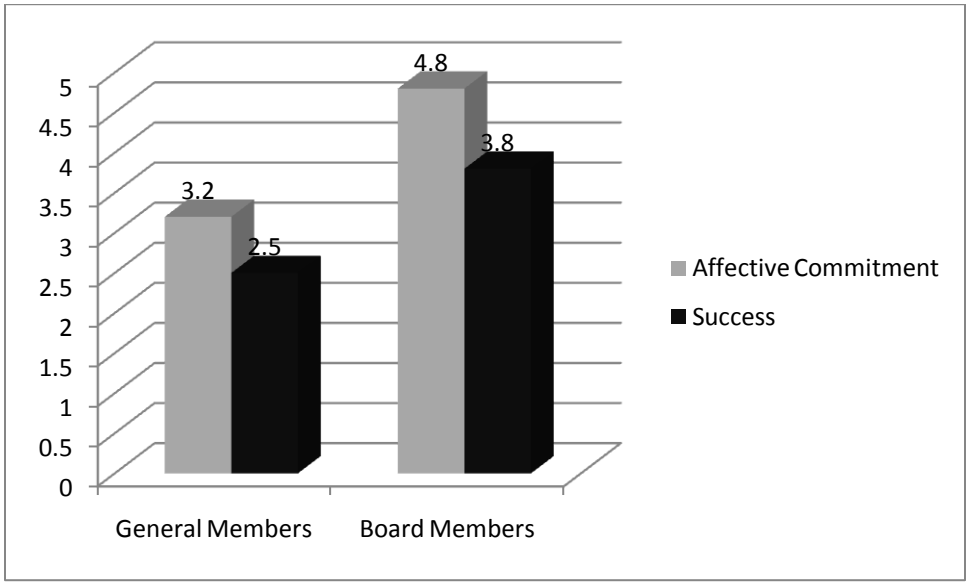


Figure 4.4. Affective commitment and success:

Scale 1(strongly disagree)-5(strongly agree)

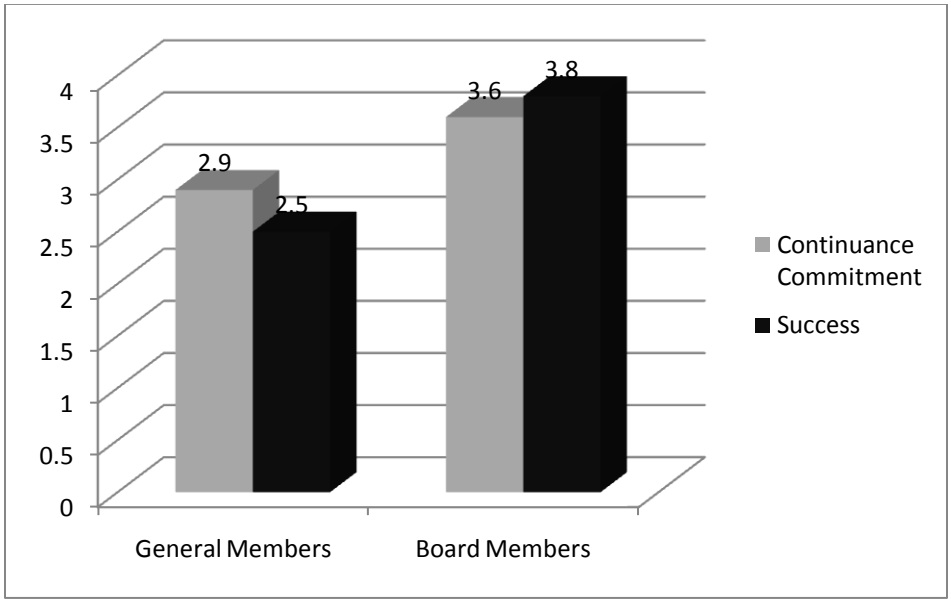


Figure 4.5. Continuance commitment and success

Scale 1(strongly disagree)-5(strongly agree)

Summary of Results

Results indicate that overall, Murang'a Nutribusiness Cooperative members have higher overall affective than continuance commitment. The study found that affective commitment to the cooperative was influenced by whether one held the position of board member or general member. Continuance (General members M=2.9, Board members M=3.6) commitment had no relationship with the position held (Table 4.3). The study revealed that while both affective and continuance commitments were significantly related to member satisfaction, perceived cooperative success had no such relationship with commitment. Success was, however, significantly related to position.

Sense of belonging

The cooperative board members are happy to be part of the cooperative and enjoy discussing the cooperative with non-members. In contrast, although the general members are happy to be part of the cooperative, fewer of them enjoy discussing the cooperative with outsiders. The general members also have a stronger sense of belonging and feel more attached to the cooperative than the board members.

Alternatives

Relatively few members and about half of the board members identify scarcity of alternatives as a reason for continued membership to the cooperative. A majority of the board members indicated that they derive benefits from this cooperative that they are not likely to get elsewhere. Only a small number of the general cooperative members shared the same sentiments. The board members were not afraid of what might happen if they dropped membership in this cooperative without the possibility of joining another. Some of the members were, however, afraid of what might happen if they dropped membership in this cooperative.

Leaving

The reasons for continued membership appeared to be different for board members and general members. None of the leaders was afraid to leave the cooperative without having the possibility of joining another. All the board members indicated that staying on as members of the cooperative was as much a desire as it was a necessity. The board members also indicated that leaving the cooperative in the near future would disrupt their lives; they would find it hard to leave the cooperative. Fewer members expressed the same sentiments. Regarding the cost of leaving the cooperative, both members and board members equally felt that leaving the cooperative in the near future would involve a great deal of personal sacrifice. Although the personal cost of leaving was a concern for both board members and general members, many general members stayed in the cooperative mainly because their investments were locked in, and they had not yet received any anticipated benefits of membership. Relatively fewer l board

members felt they had invested too much to consider membership in another cooperative. Both board members and general members felt strongly that the problems of the cooperative were like their own individual problems.

Member satisfaction with the cooperative is related to one's position in the cooperative. The cooperative board members indicated higher satisfaction with the cooperative than general members. The higher affective commitment of the board members was related to higher satisfaction with the cooperative. Board member satisfaction with the cooperative may be a result of the perceived benefits they receive from the cooperative.

Current Murang'a Nutribusiness Cooperative Structure

Results of the study revealed that the Situation, Structure and Performance (SSP) factors of Murang'a Nutribusiness Cooperative are as described below (Table 4.4).

Table 4.4. Murang'a Nutribusiness Cooperative Structure

Murang'a Nutribusiness Cooperative-Situation	Murang'a Nutribusiness Cooperative-Structure	Murang'a Nutribusiness Cooperative-Performance
Membership Low exclusion cost High transaction cost	Vaguely defined property rights Closed membership Difficult to exit	Lower general member affective commitment
Owner investment No investment after initial membership share contributions	High initial investment, Low liquidity of exchangeability/ transfer of ownership No equity redemption or business expansion	Low commitment to operations/activities of the cooperative Less successful
Patron profit distribution No profits distributed to members	High retained profit	Low general member satisfaction Lower general member commitment
Member business volume Business done primarily with non-members Prevailing market prices lacks member incentives to supply	No contracts/agreements	Difficult to plan commodity supply or for processing activities Less efficiency for members and cooperative Low satisfaction
Decision-making Low exclusion cost Business controlled by board members and marketing agent Asymmetric information about cooperative	Rare member meetings Rare voting	Low general member participation in decision-making Low general member commitment
Duty to educate Little member education or training Little knowledge about cooperative principles	No duty to educate Training only at inception	Limited knowledge of rights, responsibilities or obligations cooperative or its activities Members fail to follow cooperative principles
Networking Few relationships in community/society Limited support from development practitioners Cooperative product not well known, use marketing agent	Cooperative not federated Limited linkages with government agencies, non-governmental and business developments services Marketing agent without contract	Unexploited social networks for potential support Limited market in community Dependent on marketing agent Cooperative faces threat of collapse in absence of marketing agent

CHAPTER 5

GENERAL DISCUSSION

Member commitment (performance goal), the organizational structure and situation, as described by Schmid (2004), are intricately linked together. Situation, structure and performance variables influence each other reciprocally and influence commitment in the cooperative. Although this study is centered on member commitment, additional information on the situation and structure collected from cooperative members also helped inform the researcher regarding the factors that may contribute to member commitment in the nutribusiness cooperative and to derive the current Murang'a Nutribusiness Cooperative structure (Table 4.4). Member commitment is the performance goal that this study addresses. In this chapter, affective commitment and continuance commitment in the cooperative are discussed. Then the relationship of commitment with satisfaction and success, key variables in cooperatives success, are discussed. A comparison of the Murang'a Nutribusiness Cooperative structure and the Traditional as well as New Generation Cooperatives follows. Finally a structure likely to increase member commitment in the cooperative is suggested.

In this study, member commitment was found to be related to the position of members: whether one is a general member or a board member. The cooperative's general members and the board of management reported substantive differences in affective and continuance commitment. The relationship between affective commitment and position of members was moderately strong. The results of this study documented that board members had higher affective commitment to the cooperative while that of the general members was much lower. However, the results indicated that the cooperative's general members have a relatively stronger sense of belonging than the board members. These findings imply that the general members believe more strongly in the cooperative's goals and values (Mowday, Steers & Porter, 1979; Meyer & Allen, 1990; Powell &

Meyer, 2004). Unlike the board members, the general members are more emotionally attached to their cooperative and wish to remain in it. The results revealed that the board members have a lower sense of belonging to the cooperative, and yet, they are happy to be part of the cooperative and enjoy discussing the cooperative with non-members. For the board members to act in the best interest of the cooperative and share in common goals and values with the rest of the members, having a sense of belonging to the cooperative and feeling like a member of the family in the cooperative is vital. Shared interests, goals and values enhance the collective action of members. Although they have a greater sense of belonging to the cooperative, the general members are more inclined to remain in the cooperative mainly because their investment is locked in through membership dues. A relatively high investment in shares, associated with closed membership cooperatives, is one of the key features of Murang'a Nutribusiness Cooperative structure.

Although the general members are happy to be part of the cooperative, they are less likely than board members to discuss it with members outside of it and are not as satisfied with its performance as the board members. They, therefore, have less pride in being associated with the cooperative and have not developed a sense of togetherness with the board members, necessary for shared interests, goals and values (Briscoe & Ward, 2006; Mohanty, 1997). However, the women members identify with the cooperative's product and believe it is of high quality and in demand in the community. Therefore, the observation was that the general members have a strong sense of belonging to the cooperative although they are not proud of their cooperative. The cooperative has so far not issued patronage refunds or distributed profits to members. Members of the cooperative are less willing to talk with others about their cooperative because they have received limited benefits from the cooperative and also because they lack information about the cooperative. The observation was that a majority of the general members still expect to get rewards for their investment.

According to the results of this study, a majority of the women remain in the cooperative for fear that they would lose their investment without having experienced any benefits. The

observation was that the majority of the general members still expect to get rewards from their investment. Previous studies identify distribution of member benefits as essential to enable cooperatives to develop affective commitment (Fullerton, 2005; Dawson, Kapila & Mead, 2002; Mowday, Steers & Porter, 1979). The cooperative members identified the cooperative as successful. However, the success of the Murang'a Nutribusiness Cooperative has little correlation with member satisfaction as is generally expected of cooperatives (Bruynis et al., 2001). The business volume of the cooperative with its members is also low. Lower affective commitment of general members in the Murang'a Nutribusiness Cooperative thus may rightly be associated with perceived lack of incentives and an inadequate reward system for general members. Cooperative benefits appeared not to be distributed evenly among members (the board members observed that another place would not match the benefits they received in the cooperative while a majority of the members disagreed). The general members implied that the main reason for their continued membership was the high personal sacrifice. The responses of general members are in conformity with the observation that the board members affective commitment was much higher than that of general members.

For success, and therefore commitment in a cooperative, cooperative members must also be producers (Royer, 2004). In a processing cooperative, members derive benefits from the delivery of raw materials to the cooperative and also from the profits accruing from the sale of the processed product. Member benefits, termination costs and shared values influence commitment in a cooperative (Goo & Huang, 2008; Morgan & Hunt, 1994). The success of a cooperative is often a reflection of member satisfaction and vice versa (Bruynis et al., 2001). Member satisfaction is primarily a result of expected and realized benefits of membership. The satisfaction of members creates positive attitudes towards the cooperative. Organizational rewards, procedural justice and management support contribute to member satisfaction and thus increase affective commitment (Schmid, 2004; Rhoades, Eisenberger & Armeli, 2001; Mowday, Steers & Porter, 1979). Organizational rewards in a cooperative can be in the form of patronage refunds or

favorable delivery contracts. Regard for members in the allocation of opportunities helps assure members that their interests are taken care of, and therefore, potentially enhances use of the cooperative by members. Poor relationships between management and general members often result in high transaction costs (Schmid, 2004; Goo & Huang, 2008). Members may actually distance themselves from a cooperative when they feel that the cooperative alienates them (Hafer & Martin, 2006). Procedural justice involving perceived fairness of means used to determine the distribution of resources is likely to enhance commitment (Rhoades, Eisenberger & Armeli, 2001). The relationship between members and the cooperative's management personnel is important (Bhuyan & Leistriz, 2001**).** Member satisfaction in cooperatives is enhanced when cooperatives regard member welfare as more important than the cooperative's profit maximization. Member satisfaction in Murang'a Nutribusiness Cooperative was low. The low member satisfaction level could be linked to the general member perception that cooperative was not successful and did not regard member welfare.

Shared vision, goals and values reduce transaction costs and enhance commitment. Schmid (2004) contends that when people are committed, they do not make undivided calculations to their best interest. Transaction costs of the cooperative are low when members have affective commitment (Schmid, 2004; Royer, 1999). Low affective and low continuance commitment increase the likelihood of members leaving the cooperative if better opportunities are available or if the cost of leaving is not high (Allen & Meyer, 1990; Powell & Meyer, 2004; Solinger, Olffen & Roe, 2008; Goo & Huang, 2008; Fullerton, 2005; Karim & Noor, 2006; Morgan & Hunt, 1994) . The cooperative management board would benefit from employing strategies to enhance member affective commitment in order to potentially increase cooperative success. Studies document that member commitment is necessary for the success of cooperatives (Schmid, 2004; Ortmann & King, 2007a: Novkovic & Power, 2005; Fulton & Gibbins, 2000). Since cooperatives cannot afford to alienate members and still remain successful, the cooperative

could benefit if it aligns member interests to those of the Murang'a Nutribusiness Cooperative and therefore reduces transaction costs (Royer, 2004; Schmid, 2004).

The small group of cohesive board members and a large and heterogeneous membership may have emerged as a result of inadequate leadership. Studies have shown that when a group is too large, small groups of powerful individuals may emerge (Ostrom, 2000). The cooperative has 350 members of whom only about 8 are actually active. Seven of the active members belong to the board of management which has a total of nine members. Since the cooperative has a large membership, it is possibly difficult to manage, particularly for women with low managerial skills and cooperative experience (Vakoufaris et al., 2007). Although the women may realize they have a leadership problem, they may not be able to identify solutions to address the problem. Developing good relationships among members and the board of management is necessary to help balance members' interests and reduce transaction costs (Bhuyan & Lestriz, 2001).

Member heterogeneity increases transaction costs as different interests try to influence management decisions (Schmid, 2004). Management of the large cooperative might have been quite difficult for the women. The time and resources that might have been required to manage such a large and heterogeneous membership must have been rather high. Sources of member heterogeneity in this cooperative could have been the result of different regions from which members came and also the type of crops members grew for delivery to the cooperative. Additionally, women are not a homogeneous group and thus member heterogeneity is inevitable (Gurunani, 2002; Papert, Conelly & Barriteau, 2000). As a consequence, decision making is, therefore, mainly carried out by the board members with limited general member participation. The observation was that general members had very little information about the cooperative. However, heterogeneity can add fresh perspectives when addressing various challenges. Members reciprocate cooperative interest in their welfare with increased affective commitment. When members have commitment, they share common interests and act in the best interest of the

collective action (Schmid, 2004). They advocate on behalf of the cooperative and believe in and accept its goals and values.

Differences in Structure between the Murang'a Nutribusiness Cooperative Structure and the Traditional Cooperative to Enhance Member Commitment

Heterogeneous membership, membership policy, and following a democratic voting structure are key characteristics of cooperatives. The Murang'a Nutribusiness Cooperative has a closed membership policy and a relatively heterogeneous membership (Table 4.4). The cooperative does not have delivery contracts and has no special consideration for members as suppliers of raw material. The benefits of membership are, therefore, minimal.

The closed membership policy of the cooperative implies that the cooperative has low exclusion costs and is, therefore, appropriate for value-addition. Low exclusion costs refer to the cost of keeping non members from enjoying the benefits of the cooperative at the expense of the members. Fewer free riders are likely to be experienced with low exclusion cost cooperatives. Although Murang'a Nutribusiness Cooperative has a closed membership policy, it operates like an open membership cooperative. The cooperative has no contracts with members, and therefore, members can exit if they wish. Ownership of the cooperative alone provides no benefit to members (Royer, 2004). Few members, however, wish to leave the cooperative. Continuance commitment at Murang'a Nutribusiness Cooperative was low, indicating members may not want to leave the cooperative. The cooperative members possibly hope that one day their investment will pay-off. However, some members indicated that leaving the cooperative was difficult because they would have to forfeit their investment and any benefits that accrued. This observation is in accordance with that of traditional cooperatives with undiluted assets (Royer, 2004).

Member heterogeneity in the cooperative results from a variety of factors. Members are geographically dispersed with members from each region feeling that the processing facility should be located in their region. The income level of 90 per cent of the members is similar, with most members involved in subsistence farming or small scale trade businesses. Member heterogeneity is also a result of different crops members cultivate, and therefore, likely to deliver to the cooperative. The educational level of members is below elementary school level and only about 10% of the members have a high school diploma. When membership is heterogeneous, diverse interests may arise and create various tensions in the cooperative. For example, members producing different products for sale may not easily agree on pricing. Although member heterogeneity can be a source of conflict, it can also generate broader perspectives useful for decision making and problem solving. Many inherent problems of the Traditional Cooperative resulting from member heterogeneity may be addressed when members have affective commitment to the cooperative.

Members made initial contributions of Ksh. 3000 ($70) for membership to the cooperative but have not contributed anything further. The cooperative has low liquidity of exchangeability/transfer of ownership. There is no equity redemption. The cooperative shares are not tradable, a characteristic of Traditional Cooperatives. However, members do very little business with the cooperative, a reason for low commitment to the cooperative (Royer, 2004; Bhuyan & Leistriz, 1999; Bruynis et al., 2001). The cooperative has no property rights regarding delivery of commodities. Both members and non-members have equal opportunity to sell to the cooperative, creating internal and external free-riders. Member business volume was low in comparison to much higher non-member business volume. Member business volume contributes to member satisfaction, and therefore, member commitment. The majority of members identified member business volume as important to the cooperative. The cooperative pays cash for the raw materials it buys from wherever it can get the best prices, mostly from non-members outside the community. The cooperative does not reduce the cost of doing business or provide members with

goods and services, the key reasons cooperatives form. Members of the cooperative, therefore, do not benefit from markets created by the presence of the cooperative in their communities. In essence, the cooperative does not offer any special benefits to members. Efficiency in the value addition cooperative, therefore, benefits the cooperative but not the members.

In successful cooperatives, members must be producers and patrons of the cooperative (Royer, 2004). Majority of the Murang'a Nutribusiness Cooperative members and few deliver produce to the cooperative and are also not patrons of the cooperative. Members hardly get any benefit from the sale of their products or the value added commodity, thus contributing to the lower member commitment observed. Non-member business volume further creates challenges to addressing member interest (Zeuli, 2004). Contracts, a characteristic of New Generation Cooperatives, offer secure property rights to members, and therefore, increase member commitment (Schmid, 2004; Royer, 2004). The knowledge by members that they have a unique product gives them bargaining power (Bhuyan & Leistriz, 2001). Special attention must also be given to the relationship the cooperative has with consumers since many consumers believe that the processed product is made from locally grown commodities. Purchases from outside the community might bring into question the quality of the product, whether it is local as is purported. Cooperative members need to supply the cooperative with raw materials to maintain their market niche. Market niche is an essential marketing strategy that gives value-addition cooperatives a competitive edge.

Democratic decision making is fundamental in a cooperative. The Murang'a Nutribusiness Cooperative rarely communicates with members or holds meetings. The cooperative board makes almost all the decisions, rarely voting or consulting members. The general members are really not aware of what is happening in the cooperative. Usually, the one-member-one-vote policy of cooperatives allows accurate representation of members and enables cooperatives to align member interest to those of the cooperative (Zeuli, 2004). Cooperative members become more committed to their organization when their interests are addressed. The

International Cooperative Alliance cooperative's principle of democratic decision making ensures that cooperatives address member interests and thereby potentially enhance member commitment. However, time and resources are also required to increase involvement of members with the organization. The government, NGOs and business partners as well as national and international cooperative organization movements have a role in helping the cooperative build its organizational capacity and maintain democratic ideals (Dawson, Kapila & Mead, 2002; Somerville, 2007; ILO & ICA, 2003; Birchall, 2003; Wanyama, Develtere, & Pollet, 2009).

Effective communication between management and members contributes to member satisfaction and commitment (Bruynis et al., 2004). Information flow between members and management is critical to commitment and success of cooperatives (Goldsmith, 2004). Diverging member and management interest creates agency problems. Constant communications is, therefore, necessary to keep members informed and secure their support for various decisions and activities. Similar to many cooperatives, the Murang'a Nutribusiness Cooperative members appear to lack motivation to monitor or provide incentives to management to ensure member interests are addressed. Lack of communication is probably one of the main reasons that led to the creation of a powerful management and a largely heterogeneous membership with few shared objectives. Power became concentrated at the top of the hierarchy in the hands of a small homogeneous group that communicated very little information to the rest of the members. Currently about 63% of households in Kenya have at least one mobile cell phone (GOK, 2010). Cell phones potentially improve operations of the cooperative. Communication among cooperative members and with customers is, therefore, much easier now than at the inception of the cooperative.

Cooperatives require technical and non-technical solutions to their most important problems: technical assistance e.g. developing business plans, contracts, and market study; open discussions with members concerning the cooperative; and educating respondents on cooperative principles. One of the principles of cooperatives is the duty to educate its members. Although

initial training of members on cooperatives was done at the inception of the cooperative, the Murang'a Nutribusiness Cooperative does not currently train or educate its members. The cooperative members felt that they needed education on cooperatives and their responsibilities as members. This need for training and education is connected to the observation that women are usually unfamiliar with the cooperative approach and may not know their rights, responsibilities or obligations (Ikäheimo & Makinen, 1999; Vakoufaris et al., 2007). The women also often lack skills in entrepreneurship and in management. Training members and the board on management and on the day-to-day running of the cooperative was also found to be necessary (Bacon, Mendez & Brown, 2008). Training on a regular basis will empower the cooperative members and enable them to be effective in operating the cooperative (Yu, 2002).

The Murang'a Nutribusiness Cooperative has limited linkages with external organizations or individuals. The members, therefore, did not have support from organizations to help them address problems in their cooperative. The main external linkage was with the marketing agent. The marketing agent makes most of the managerial decisions and is involved in purchases of raw material, sale of the processed product BASCOT, and in maintenance of the processing facility. The marketing agent ensures the cooperative product is certified by the Kenya Bureau of Standards in addition to paying the workers. Networks of the cooperative with other organizations in the community are limited despite the several government agencies, non-governmental organizations and business development services that exist in the local community. The cooperative, therefore, does not benefit from the support of development organizations and agencies or business development services in the community.

Differences in Structure between the Murang'a Nutribusiness Cooperative and the New Generation Cooperative to Enhance Member Commitment

The Murang'a Nutribusiness Cooperative has a closed membership policy similar to that of New Generation Cooperatives. The cooperative structure, therefore, is suitable for value added processing that focuses on member profits (Merret & Walzer, 2004). However, members can exit at will since their shares are not linked to delivery contracts. Studies have shown, however, that open membership cooperatives have a higher success rate (Bhuyan & Leistriz, 2001). New Generation Cooperatives seek to address many of the structural inefficiencies of traditional cooperatives.

Similar to New Generation Cooperatives, the Murang'a Nutribusiness Cooperative had a relatively high initial investment, and therefore, members investments tied to the cooperative are relatively significant. The cooperative does not offer equity redemption. Additionally, there is no security of expectations since the property rights are not well defined. Members and non-members have relatively equal rights to deliver commodities and to purchase the processed product. Investments of members in the cooperative are limited to the membership shares they contributed at inception. There is a low level of satisfaction and commitment.

The factors that contribute to success and member satisfaction to influence member commitment are member/leader interaction, governance/leadership, and linkages with external organizations. According to the findings, Murang'a Nutribusiness Cooperative has characteristics of both Traditional and New Generation Cooperatives. The cooperative structure was different from the Traditional Cooperative in a number of ways: membership policy, democratic principle, duty to educate, patronage refund, and cash exchange policy.

The current Murang'a Nutribusiness Cooperative structure offers few incentives to members, and therefore, member commitment is low. The cooperative shares some key characteristics with New Generation Cooperatives: closed membership, and high cash exchange. However, the cooperative also differs from New Generation Cooperatives in fundamental ways, including lack of contracts, perceived difficulty in exiting, and low member investment.

CHAPTER 6

SUMMARY AND RECOMMENDATIONS

Summary

Commitment

The study revealed that member commitment to this cooperative varies by position. The general members have lower commitment than do board members. While commitment is desirable, it is necessary to distinguish the type of commitment present in a cooperative. This study focused on two types of commitment, affective and continuance commitment. Affective commitment is a strong psychological attachment to the cooperative and members remain in the cooperative because they want to. Cooperative members with continuance commitment remain in the organization because they have to.

The overall affective commitment in Murang'a Nutribusiness Cooperative is higher than continuance commitment. The board members have stronger affective commitment than general members. Surprisingly, however, board members also have higher continuance commitment (p.67). Results by position for continuance commitment are not expected. Specifically, board members are expected to have a higher sense of belonging, feel emotionally attached, and part of the family in the cooperative since they like to discuss the cooperative with others outside of it but did not (p.68, Items 2, 5, 6,and 8). A sense of belonging would imply advocacy: that one is proud to be associated with the cooperative and would like to talk about it to others. Therefore, one would also expect more general members to discuss their cooperative with non-members and to advocate for it since they are happy to be part of the cooperative and have strong sense of belonging (p.68, Item2).

For the leaders to act in the best interest of the cooperative, advocate for it, and provide strong leadership, the board members need to have a sense of belonging to the cooperative and feel like a member of the family (p.68, Item 8). The cooperative also needs members to advocate for it to market its product widely within and outside the local community.

Member satisfaction and success of the cooperative

Cooperative board members regard the cooperative as successful and general members less so. The board members are also more satisfied with the cooperative than the general members. Member business with the cooperative is low. It is important to note that there is a positive, although moderate, relationship, between satisfaction and commitment. Members so far have not received any patronage refunds or profits. The cooperative members are emotionally attached to the cooperative and may wish to continue as members. However, because of the perceived little or no benefits of membership, general members would be more inclined to leave the cooperative, if only their investment was not locked in financially. None of the board members wishes to leave membership and feel that no other place would match the benefits they receive from this cooperative. This implies that the cooperative may have benefits that could be enhanced and distributed among members as is often the case with value addition cooperatives.

Factors that influence member commitment

This study has both structural and managerial implications that could help to enhance member commitment. Member commitment in a cooperative is inherently linked with the organizational structure. Therefore, the type of structure a cooperative adopts is essential to secure member incentive and consequent member commitment. The management of a

cooperative is central to enhancing member commitment. The characteristics that define a cooperative as user-owned and user-controlled businesses that distribute benefits to members on the basis of use are virtually absent in the Murang'a Nutribusiness Cooperative. The cooperative has some characteristics of Traditional and also New Generation Cooperatives but differs from cooperatives in some key characteristics (Table 4.4). The cooperative has limited networks with other organizations. While support may be available from Governments agencies, nongovernmental organizations and other development practitioners, the Cooperative does not receive any support. The Cooperative could benefit from technical or non-technical support development practitioners provide to local organizations.

Based on the findings of this study, the Murang'a Nutribusiness Cooperative could benefit from adopting a structure that has more features of a New Generation Cooperative. This structure is likely to have low transaction costs, defined property rights, and facilitates information sharing and adhering to cooperative principles and values. Such a structure would create member incentives and increase member commitment. Increasing member business volume, providing patronage refunds, and encouraging participation in the cooperative's decision-making is likely to create incentives and increase member satisfaction with the cooperative. The cooperative members may benefit from increased member commitment if members are producers and patrons of the cooperative. Patronage refunds to cooperative members are likely to contribute to satisfaction with the cooperative. The management board may increase member affective commitment if they integrate members into the cooperative's activities. The management board may encourage all members to participate in democratic decision-making processes as well as enhance member business volume. Higher member participation in the cooperative's activities and in decision-making as well as enhanced member benefits is likely to increase commitment to the cooperative.

External linkages of the cooperative with support organizations may enhance commitment to the cooperative. The study revealed that the Murang'a Nutribusiness Cooperative

had limited linkages with support organizations or business development services with the exception of the marketing agent. The marketing agent was crucial in securing markets for the cooperative's product. Clearly, marketing skills were beyond the capacity of the women. The cooperative could also benefit from improved relations between management and general members, better governance, and linkages with external organizations. Studies have demonstrated that community-based enterprises need initial support, particularly in organizational capacity strengthening. Support is also necessary to enable organizations to achieve early profits to help secure member commitment.

Since choice of structure determines to some extent the performance outcomes and efficiency of the organization to address identified interests, the choice of structure the cooperative adopts will help determine whether member interest and commitment will be achieved. The attachment of cooperative members to the cooperative could be leveraged if the suggested structure is adopted to enhance affective member commitment. Results of this study call for renewed commitment of members to the cooperative. The cooperative needs to increase member participation in the cooperative's activities and in decision-making. The cooperative need not be a closed cooperative as is often the case with New Generation Cooperatives. The cooperative is likely to achieve higher affective commitment if it adheres to cooperative principles.

Implications for the cooperative

Based on the research findings on the Murang'a Nutribusiness Cooperative issue of commitment and also based on cooperatives and organizational structure literature, five recommendations for the nutribusiness cooperative are hereby suggested. The recommendations cover five distinct themes, each impacting a pertinent issue in the Nutribusiness Cooperative.

First, the cooperative structure would have secure property rights in order to ensure that member interests are addressed. The cooperative may increase its business volume with members through delivery contracts. These delivery contracts will ensure members have a secure market for their produce. The contracts will also ensure the processing operations of the cooperative proceed as planned, without a shortage of raw materials. Opportunities to invest more in the cooperative may be given to members to increase their investment and expand the cooperative's business. Net income if based on patronage would encourage members to increase their investment in the cooperative. To increase purchase and use of the processed product by members and also in the local community, a retail shop may be opened at the factory or close by to sell the cooperative's product. Opportunities could also be created whereby cooperative members are given priority for employment at the processing facility. As their interests are addressed, such opportunities will make members feel cared for and consequently translate into increased member affective commitment.

Second, the democratic principle of cooperatives needs to be followed if the Murang'a Nutribusiness Cooperative is to run as a cooperative. The cooperative may benefit from increased sharing of information with members, regular meetings and annual general meetings. The members need to be knowledgeable about cooperative principles and ensure that they are followed by the cooperative. Election of cooperative officials may be done every few years as required by the rules and regulations governing cooperatives in Kenya. Voting on major decisions would enhance democracy and ensure member representation. A smaller membership is likely to develop homogeneity and decrease organizing costs. The Murang'a Nutribusiness Cooperative may also expand the processing facility and build others in the other two regions.

Third, the cooperative may benefit from training and educating its members on various technical and non-technical issues. The training may be carried out by organizations such as relevant government agencies, non-governmental organization or business development services. Training members on non-technical issues such as the principles of cooperatives, cooperative

management, group dynamics and leadership is essential. Technical skills including building business plans and marketing strategies are necessary. However, marketing may be beyond the present skills of the women. The cooperative may still utilize the services of a marketing agent (s). The services of a manager or a marketing agent, however, create the widely acknowledged agency problems. The cooperative would benefit from contracts with the marketing agent(s) or a manager to help address agency problems.

Fourth, external linkages with organization are crucial for a cooperative. Technical, organizational and management support to the cooperative is important. The need for organizational capacity strengthening is particularly urgent. Existing relationships within the organization and with external support groups may be strengthened and new ones formed. The cooperative may also share experiences with other cooperatives and producer organizations during training and through exchange visits. Currently the cooperative has no links to other cooperatives or organizations. The cooperative may benefit from membership in the government, national and international cooperative alliances or apex bodies and gain from the support provided through training and sharing of experiences. By joining other cooperatives, the cooperative becomes federated cooperative and may share information and experiences with other cooperatives on a regular basis, and therefore, build solidarity with similar cooperatives. Support may also be provided by the government's Ministry of Co-operative Development or the cooperating out of poverty program and similar programs that the International Cooperative Alliance (ICA) carries out. The development practitioners may form a network of stakeholders from different relevant technical fields to ensure that the nutribusiness cooperatives get the required support to become successful.

Fifth, policy support is also essential to enhance sustainability of the existing nutribusiness cooperatives and to help in organizing new ones. The fact that the general members have low continuance commitment and do not wish to leave the cooperative should create an impetus to help members achieve the benefits of their cooperative. The government must provide

support in terms of training and ensuring cooperative rules and regulations such as regular elections and annual general meetings and keeping financial records are followed. The cooperative may enhance its relationships with the general members and increase its transparency and accountability.

Future Directions for the Murang'a Nutribusiness Cooperative

While government agencies and other support organizations potentially have a role in helping a cooperative remain viable, the members and board are responsible for making the final decision on the structure that will be appropriate for their cooperative. The goal should be to adopt a governance structure that enhances member affective commitment to the cooperative. For the Murang'a Nutribusiness cooperative to be successful and achieve higher member satisfaction and commitment, a wide range of actors including relevant Kenya Government Ministries and agencies and relevant nongovernmental organizations will be important. A networking group with representatives from government agencies such as the Ministry of Co-operative Development, Ministry of Agriculture, Ministry of Gender and Children Affairs, and Kenya Agricultural Research Institute along with some identified relevant NGOs and private practitioners may be formed to provide advice and counsel for the Murang'a Nutribusiness Cooperative. These key support organizations may assist in mobilizing members to hold meetings where they can discuss their problems and identify solutions. The network may also provide technical support, training and marketing advice to the Murang'a Nutribusiness Cooperative management and other existing nutribusinesses as well as be involved in establishing new cooperatives. The potential impact that strengthening the Cooperative will have on the women members' enhanced incomes, availability the nutritious Nutribusiness Cooperative's product in the community, and overall contribution to improved livelihoods provides the impetus for the local development practitioners to act in support of the Cooperative.

Implications for future research

1. Future research might examine reasons for the different board member and general member affective and continuance commitment. Perhaps a qualitative survey would be able to determine why the cooperative board members do not view themselves as part of the family in this cooperative.

2. Research to establish what roles external organizations might contribute to higher member affective commitment is necessary. Interviews with representatives of key development practitioners including government agencies, non-governmental organizations and business development services may be essential to reveal the type and accessibility of support available to the nutribusiness cooperative.

3. Research on what factors contribute to sustainability of cooperatives such as Murang'a Nutribusiness and their implications for policy. Interviews with various stakeholders will give insight into the existing and required policy support to nutribusiness cooperatives.

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Appendix A

Questionnaire for Murang'a Nutribusiness Cooperative Survey

This survey is to establish the performance of the Murang'a Nutribusiness Cooperative. The survey will help reveal the challenges of the current cooperative and help identify an optimal cooperative structure to address problems experienced. Your responses are very important and will be handled in strict confidence.

The cooperative

1. How long have you been a member of the cooperative? ___ Years/months
2. Is the cooperative currently accepting new members?
Yes ___ No___

3.In the last three years, has the revenue for your cooperative
a) Increased
b) Decreased
c)I don't know

4a. In your opinion, how much of the raw material for processing the flour comes from cooperative members? ___ %
i) Quarter
ii) Half
iii) Three quarters
iv) All
v) I don't know

4b)In your opinion, how much of flour is bought by cooperative members? ___ %
i) Quarter
ii) Half
iii) Three quarters
iv) All
v) I don't know

5. How is the cooperative managed? **(Please check one)**
a. Member managed
b. Hired manager (full-time)
c. Hired manager (part-time)
d. Other **(Please specify)**

6. If hired manager, is there a contract specifying payment, roles and responsibilities, etc?
Yes ___ No___ I don't know ___

7. What changes, if any, in the cooperative product line do your foresee in the near future?
_____
_____

8. What are your perceptions regarding your cooperative**?(Please circle the appropriate value)**

Factors	**Very Weak**	**Weak**	**Undecided**	**Strong**	**Very Strong**
Management of the cooperative					
Producer of unique product	1	2	3	4	5
Provider of an essential product	1	2	3	4	5
Managing or controlling operating costs	1	2	3	4	5
Managing quality	1	2	3	4	5
Location	1	2	3	4	5
Marketing	1	2	3	4	5
Planning for future	1	2	3	4	5
Customer relations	1	2	3	4	5
Managing cash flows	1	2	3	4	5
Competition from other companies	1	2	3	4	5
Regarding Capitalization					
Availability of long-term credit	1	2	3	4	5
Maintaining equity	1	2	3	4	5
Equity redemption	1	2	3	4	5
Regarding members					
Member education/training	1	2	3	4	5
Board or management education/training	1	2	3	4	5
Member business volume					
Non-member business	1	2	3	4	5
Communication between the cooperative and its members	1	2	3	4	5
Trust among members	1	2	3	4	5
Member retention	1	2	3	4	5
Regarding the Co-op Board					
Recruiting Board members	1	2	3	4	5
Business experience of the board members	1	2	3	4	5
Tenure of the board	1	2	3	4	5
Compensation of the board	1	2	3	4	5

9. Please rate the following contribution of your cooperative. **(Please circle the appropriate value)**

This cooperative has contributed in the following ways	**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
Reduce member's cost of goods and services	1	2	3	4	5
Provide market for farm produce	1	2	3	4	5
Provide employment	1	2	3	4	5
Enhance image of the community	1	2	3	4	5
Help members remain independent	1	2	3	4	5
Promote democracy	1	2	3	4	5
Agents of economic development	1	2	3	4	5

10. How are decisions made in the cooperative?

Factors	**not at all**	**rarely**	**sometimes**	**often**	**always**
Regular member meetings	1	2	3	4	5
Regular board meetings	1	2	3	4	5
Use voting structure (e.g. g. one-member-one-vote)	1	2	3	4	5
Voting is by					
Show of hand/open count	1	2	3	4	5
Secret ballot	1	2	3	4	5
Other method (Please specify)					
Members participate when cooperative makes major decisions	1	2	3	4	5
Members share vision, interest, expectation	1	2	3	4	5
Board fosters effective communication between members and cooperative	1	2	3	4	5
Board shares relevant Information on					
Board agendas	1	2	3	4	5
Board decisions	1	2	3	4	5
By-Laws	1	2	3	4	5
Financial information	1	2	3	4	5
Reflects cooperative values (self-help, self-responsibility, democracy, honesty, equality, equity, openness, social responsibility and caring?	1	2	3	4	5
Decide on how to share benefits	1	2	3	4	5
Board open and transparent	1	2	3	4	5

11. For each of the following, indicate by placing a check on the appropriate box the major contribution to your cooperative

Organization/Individual	**Information/ training**	**Financial**	**Marketing**	**none**	**I don't know**
Government agencies					
Universities					
NGOs					
Business development services					
Private agencies					
Individuals					
Others **(please specify)**_____					

12. Currently how difficult are the following in maintaining your cooperative**(please circle the appropriate value)**

Factors	**Very difficult**	**Moderately difficult**	**Not difficult**
Consistent customer base	1	2	3
Marketing plan	1	2	3
Equity	1	2	3
Reliable sources of supplies and services	1	2	3
Member loyalty	1	2	3
Member knowledge about coops	1	2	3
Attracting and keeping managers	1	2	3
Identifying/selecting board members	1	2	3
Support from government agencies NGO's BDS	1	2	3
Competition in the major market/trade area	1	2	3
Balancing the interest of members	1	2	3
Other (Please specify) _____	1	2	3

13. How important are the following services for continued success of cooperative. **(Please specify)**

Services	**Very important**	**Somewhat important**	**Not important**
Technical assistance, such as developing business plans, market study, contracts, etc	1	2	3
Financial support or grants to conduct business plans, market study, member recruitment drive, etc	1	2	3
Marketing services	1	2	3
Discussion with members regarding problems and prospects	1	2	3
Training of board management on running coops	1	2	3
Educate members on cooperative principles	1	2	3
Training on day-day operations of the coop	1	2	3
Volume of business members do with cooperative	1	2	3
Other **(Please specify)**_____	1	2	3

14. Is your business a member of any local or national cooperative organization?
Yes ___ No___ I don't know ___
15. If yes, list three such principal organizations

1. _____
2. _____
3. _____

16. **Commitment of members to their cooperative**

Factors	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Affective Commitment					
1. I am happy to be a member of this cooperative	1	2	3	4	5
2. I enjoy discussing my cooperative with people outside it	1	2	3	4	5
3. I really feel as if this cooperative's problems are my own	1	2	3	4	5
4. I think I could easily become attached to another cooperative as I am to this one	1	2	3	4	5
5. I do not feel like "a member of the family" at this cooperative	1	2	3	4	5
6. I do not feel emotionally attached to this cooperative	1	2	3	4	5
7. This cooperative has a great deal of personal meaning for me	1	2	3	4	5
8. I do not feel a great sense of belonging to this cooperative	1	2	3	4	5
Continuance Commitment					
1. I am not afraid of what might happen if I quit my membership in this cooperative without the possibility of joining another	1	2	3	4	5
2. It would be hard for me to stop my membership in this cooperative now even if I wanted to	1	2	3	4	5
3. Too much of my life would be disrupted if I decided to stop my membership in this cooperative right now	1	2	3	4	5
4. It would not be too costly for me to leave this cooperative in the near future	1	2	3	4	5
5. Right now, staying on as a member of this cooperative is a matter of necessity as much as desire	1	2	3	4	5
6. I believe I have too few options to consider should I withdraw from membership in this cooperative	1	2	3	4	5
7. One of the few serious consequences of withdrawing membership from this cooperative would be scarcity of opportunities available elsewhere	1	2	3	4	5
8. One of the major reasons I continue membership in this cooperative is that leaving would involve considerable personal sacrifice	1	2	3	4	5
9. Another place may not match the overall personal benefits I have in this cooperative	1	2	3	4	5
10. If I had not already put so much of myself in this cooperative, I would consider membership in another	1	2	3	4	5

17. What makes Murang'a Cooperative valuable to you?_____
No Suggestions

18. To what extent do you consider your cooperative venture a success? **(Please tick one)**
___ successful
___ somewhat successful
___ neither successful nor unsuccessful
___ unsuccessful
___ I am unable to determine

19. Overall, how are you satisfied with your cooperative?(**Please check one**)
___ satisfied
___ somewhat satisfied
___ neither satisfied nor dissatisfied
___ somewhat dissatisfied
___ dissatisfied
Please explain your answer

Thank you for your participation in this survey. A summary report will be provided to your cooperative should you want to see it.

Appendix B

English Kiswahili Translation of Survey Instrument

Questionnaire for Murang'a NutriBusiness Cooperative Survey
Maswali haya yanalenga kugundua jinsi hii cooperative ya Murang'a Nutribusiness inaendelesha shughuli zake. Maswali haya yatasaidia kigundua zile shida zinakumba cooperative hii kwa sasa na kuelekeza jinsi shida hizi zingeweza kutatuliwa na pia vile hii cooperative ingeundwa ili iweze kufaulu zaidi na kutatua shida zilimo sasa. Majibu yako binafsi ni ya muhimu sana na yatawekwa katika hali ya siri.
Cooperative (Shirika)
1. Je, umekuwa mwanachama wa hii cooperative kwa muda gani? ___ Miaka/Miezi
2. Cooperative hii inakubali wanachama wapya?
Ndio ___ Hapana___
3. Kwa jumla miaka mitatu iliyopita, kiasi cha fedha cha cooperative hi
a) kimeongezeka ama
b) Kimepungua
c)Sijui
4. a. Kwa maoni yako, kiasi cha bidhaa zinatotengeneza huu unga hutoka kwa wanachama
i) robo
ii) nusu
iii)kasorobo
iv) yote
v) sijui
b. Kwa maoni yako, wanachama hununua kiazi gani ya bidhaa zinazotengenezwa na hii coopera
i) robo
ii) nusu
iii)kasorobo
v) yote
v) sijui
5. Uongozi wa cooperative hii unatekelezwaje? **(weka alama kwa jibu moja)**
a. Na wanachama
b. Meneja aliyeajiliwa
c. Meneja aliyeajiliwa kwa masaa
d. Jibu tofauti **(Fafanua)**
6. Ikiwa meneja ameajiliwa, kuna contract ama makubaliano ambayo inaonyesha malipo na maj
Ndio ___ Hapana___ Sijui ___

7. Kama yangekuwekwo, ni mabadiliko gani ungetarajia hivi karibuni kihuzu zile bithaa ambazo cooperative hii

inatengeneza?_____

8. kwa maoni yako, uwezo wa hii cooperative unatokana na nini? (Weka alama kwa jibu lililo sawa)

Factors	Sikubali Kabisa	Siku kubali	siku bali wala sikat ai	nina kubali	ninakub ali kabisa
Ukurugenzi wa cooperative					
Bidhaa ya kipekee	1	2	3	4	5
Bidhaa inayohitajika sana	1	2	3	4	5
Meneja wa hali ya juu	1	2	3	4	5
Mahali factory imejengwa	1	2	3	4	5
Uuzaji	1	2	3	4	5
Mipango ya badaye	1	2	3	4	5
Uhuziano mwema na wateja	1	2	3	4	5
Kutumia fedha sawasawa na mipango iliyowekwa	1	2	3	4	5
Mashindano na makampuni mengine	1	2	3	4	5
Regarding Capitalization					
Kuweko kwa mikopo	1	2	3	4	5
Wanachama kutoa matoleo yao	1	2	3	4	5
Kugawia wanachama fedha kutokana na mapato	1	2	3	4	5
Regarding members					
Kuelimisha wanachama	1	2	3	4	5
Kuelimisha bodi na meneja kuhusu majukumu yao	1	2	3	4	5
Biashara wanachama wanafanya na cooperative					
Biashara kutokana na wasiowanachama	1	2	3	4	5
Mawasiliano baina ya bodi na wanachama	1	2	3	4	5
Imani baina ya wanachama	1	2	3	4	5
Kuwa na wanackama wasiowacha uanachama	1	2	3	4	5
Regarding the Co-op Board					
Vile bodi inavyachaguliwa	1	2	3	4	5
Ujizi wa bodi kuhusu biashara	1	2	3	4	5
Muda wa board kabla ya kubadiliswa	1	2	3	4	5
Marururupu kwa bodi	1	2	3	4	5

9. cooperative yako inachangia yafuatayo. **(Weka lama kwa jibu lililo sawa)**					
Mchango wa cooperative	**strongly agree**	**moderately agree**	**Neutral**	**Moderately disagree**	**strongly disagree**
Kupunguza gharam ya bidhaa za ukulima	1	2	3	4	5
Soko ya kuuza bithaa za ukulima	1	2	3	4	5
kuajili	1	2	3	4	5
Ninzuri ikiwa hapa kijijini	1	2	3	4	5
Inasaidia wanachama kujitegemea	1	2	3	4	5
inaendeleza demokrasia ama haki ya kuchagua vior	1	2	3	4	5
kuleta maendeleo katika kijijini	1	2	3	4	5

10. Je, mopango inatekelezwaje na hii cooperative?					
Factors	**not at all**	**rarely**	**sometimes**	**often**	**always**
Mikutano ya mara kwa mara ya wanachama	1	2	3	4	5
Mikutano ya kila wakato ya bodi	1	2	3	4	5
Upigaji wa kura Kura (Kila mmoja kura moja)	1	2	3	4	5
Upigaji wa kura kupitia:					
Kuhesabiwa ama kuinua mikono	1	2	3	4	5
kura ya siri	1	2	3	4	5
Njia zingine (Fafanua)_____					
Wanachama kutoa maoni yao wakati cooperative inatoa uamuzi muhimu	1	2	3	4	5
Wanachaama kuwa na maono na matarajio yalio sa	1	2	3	4	5
Bodi kuwa na uhusiano mwema na wanachama	1	2	3	4	5
Bodi inapatia wanachama habari kuhusu					
Makadirio (agenda)	1	2	3	4	5
Uamuzi wa bodi	1	2	3	4	5
kuweka sheria	1	2	3	4	5
fedha	1	2	3	4	5
Kwa kawaida,kujisaidia, kutekeleza majukumu, demokrasia, uaminifu, usawa, na kuangalia maslahi ya wengine? Je cooperative hii	1	2	3	4	5
Uamuzi wa jinsi ya kugawa mapato	1	2	3	4	5
Uaminifu wa bodi	1	2	3	4	5

11. Kwa kila moja lifuatalo, weka alama kwa jibu sawa pale wafuatao wanachangia sana cooperative yako.					
	habari/mafunzo	**fedha**	**soko**	**hakuna**	**sijui**
mashirika ya serikali					
Vyuo vikuu					
NGOs					
mashirika ya kuendeleza biashara					
makampuni					
Biashara za kibinafsi					
Zinzine**(Fafanua)**_____					

12. Kwa wakati huu, ni lipi lilo ngumu zaidi kwa kuendeleza cooperative hii					
Jibu	**ngumu saidi**	**ngumu**	**sio ngumu**		
Wateja wa kila wakati	1	2	3		
Mpango wa kutekeleza biashara	1	2	3		
Pesa ya chama	1	2	3		
Mahali pa kununua bidhaa	1	2	3		
Uaminifu wa wanachama	1	2	3		
Ujuzi wa wanachama kuyhusu cooperative	1	2	3		
Kuvitia na kudumisha mameneja walio na ujuzi	1	2	3		
kuchagua wanachama wa bodi	1	2	3		
Isaidizi kutoka popote, hata mashirika ya serikali an	1	2	3		
Cmashindano na makampuni	1	2	3		
Kuangalia maslahi ya wanachama	1	2	3		
Jibu tofauti (Fafanua) _____	1	2	3		

13. Je huduma zifuatazo zinaumuhimu gani kwa kufaulu kwa cooperative hii?

Huduma	**muhimu sana**	**ni muhimu**	**sio muhimu**		
Ujuzi kama kutengeneza mpango wa biashara, kutafuta wateje, kuandika makubaliano, etc	1	2	3		
Fedha ama mikopo ya kujiendeleza	1	2	3		
Uuzaji	1	2	3		
Majadiliano baina ya wanachama kuhusu mipango y	1	2	3		
Kuelimisha board kuhusu jinsi ya kutekeleza majuk	1	2	3		
Kuelimisha wanachama kuhusu majukumu yao na y	1	2	3		
Kuelimisha wanachama kuhusu jinsi coop inafanya	1	2	3		
Kiasi ya biashara wanachama wanatekeleza na coop	1	2	3		
jibu lingine **(Fafanua)**_____	1	2	3		

14. Cooperative yako ni mwanachama ya shirika lingine hapa kijijini ama inchini?

Ndio ___ Hapana___ Sijui ___

15. Kama jibu ni ndio, orodhesha

1. _____

2. _____

3. _____

16. Commitment of members to their cooperative

Factors	sikubali kabisa	sikubali	sikubali wala sikatai	ninakubali	ninakubali kabisa
Ninafurahia kuwa mwanachama wa hii cooperative	1	2	3	4	5
Ninafurahia kuongea juu ya hii cooperative na wasiowan	1	2	3	4	5
Ninahisi ya kwanba shida za hii cooperative ni kama zan	1	2	3	4	5
Ninafikiria ninaweza kuwa na uhusiano wa karibu na cooperative nyingine kama vile nilivyo na hii cooperative	1	2	3	4	5
Sijihisi kama "mmojawapo wa familia moja" katika hii co	1	2	3	4	5
Sijisikii kama moyo wangu uko kwa hii cooperative	1	2	3	4	5
Cooperative hii ni ya maana sana kwangu kibinafsi	1	2	3	4	5
Jijisikii kama niko mmojawapo kwa hii cooperative	1	2	3	4	5
Sijali kinachoweza kutokea nikiachana na uanachama wa hii cooperativebila matarajio ya kujiunga na nyingine	1	2	3	4	5
Ingekuwa jambo ngumu sana mimi kuacha uanachama katika hii cooperative	1	2	3	4	5
Maisha yangu yangesumbuliwa sana ningeamua kuacha uanachama katika hii cooperative wakati huu	1	2	3	4	5
Ingekuwa gharama kuu kwangu kuachana na cooperative hii hivi karibuni	1	2	3	4	5
Kwa wakati huu, kuwa mwanachama wa hii cooperative ni jambo la muhimu na sawasawa na la kufurahia	1	2	3	4	5
Sina mahali pengine pa kwenda ningeachana na uanachama kwa hii cooperative	1	2	3	4	5
Jambo lisiloridhisha la kujiondoa kwa uanachama wa hii cooperative ni ukosefu wa nafasi zingine kwingine	1	2	3	4	5
Sababu moja yangu kuu ya kuendelea na uanachama katika hii cooperative ni ya kwamb kujiondoa katika uanachama ingekuwa na gharama kuu kibinafsi	1	2	3	4	5
Mahali kwingine hakungekuwa na faida kibinafsi kama ile niko nayo kwa hii cooperative	1	2	3	4	5
Kama singekuwa nimejitolea sana katika hii cooperative ningefikiria kujiunga na nyingine	1	2	3	4	5

18. Hii cooperative inafaulu kibiashara? **(Chagua jibu moja)**					
___ imefaulu sana					
___ kufaulu kwake kuko katikati, sio sana na sio kidogo					
___ Imefaulu kidogo					
___ haijafaulu					
___ Siwezi nikajua					
19. Kwa jumla, umeridhika na kufaulu kwa hii cooperative **(Chagua jibu moja)**					
___ nimeridhika sana					
___ nimeridhika kiasi					
___ sijaridhika wala silalamiki					
___ sijaridhika kiasi					
___ sijaridhika kabisa					
20. Elezea jibu lako					
Asante sana kwa kujihusisha na kujibu maswali haya. Repoti kamili kutokana na mawsali haya itapeanwa kwa cooperative yako kama ungetaka kuiangalia.					

Appendix C

Implied Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: **Evaluation of the Current Structure of Muranga Nutri-Business Cooperative in Kenya**

Principal Investigator: Mary Marete, Graduate Student

114 Ferguson Building

University Park, PA 16802

(814) 863-7877; email@psu.edu

Advisor: Dr. Joan Thomson

209B Ferguson Building

University Park, PA 16802

(814) 863-3825; email2@psu.edu

1. **Purpose of the Study:** The purpose of the study is to evaluate the current structure of the Muranga Nutri-business Cooperative and its influence on performance.

2. **Procedures to be followed:** You will be asked to answer 20 questions on a survey. The questions will focus on how your cooperative relates with its members and about your personal benefits of being a member. Audio recording of the interviews will be done for research accuracy only.

3. **Duration:** It will take about 45 minutes to complete the survey.

4. **Statement of Confidentiality:** Your participation in this research is confidential. The data and recordings will be locked in a file cabinet in 012 Ferguson Building, Penn State. The recordings will be accessible to only myself as the principal investigator and to my faculty advisor. The recordings will be destroyed three years past the end of the study, in December 2012. In the event of publication or presentation resulting from this research, no personally identifiable information will be shared because your name is in no way linked to your responses.

5. **Right to Ask Questions:** Please contact Mary Marete at cell phone number (254)-0721-491338 or at Penn State Agricultural Extension and Education department telephone number (814) 863-7877 with questions, complaints or concerns about this research.

6. **Voluntary Participation:** Your decision to participate in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. You must be 18 years of age or older to take part in this research study.

7. From the information on this consent form I have read to you, do you agree to participate in this research?

VITA
Mary-Alice Mukiri Marete

EDUCATION

2010	Ph.D., Department of Agricultural and Extension Education
2004	Masters Degree, Training, Rural Extension and Teaching, Larenstein University, The Netherlands
Dissertation Title	The Influence of Cooperative Structure on Member Commitment, Satisfaction and Success: The Murang'a Nutribusiness Cooperative in Kenya

PROFESSIONAL EXPERIENCE

1989 to present	Served as an assistant Director of Agriculture, a lecturer, a head of department. Kenya Ministry of Agriculture and agricultural training institute.

2010: November 10-13 American Evaluation Association Conference
Abstract: *The influence of cooperative structure on commitment and member satisfaction: a case of the Murang'a Nutribusiness Cooperative in Kenya*

2010: October 28 Penn State Interinstitutional Consortium for Indigenous Knowledge and Ag2Africa Seminar: *The influence of structure on member commitment: A case of Murang'a Nutribusiness cooperative***.**

2010: Penn State Research Exhibitions. Poster: *The influence of structure on member commitment: A case of Murang'a Nutribusiness cooperative.* March 27-28, The Graduate School Exhibition
Gamma Sigma Delta/College of Agricultural Sciences Research Expo. March 17-18

2009: Penn State Gamma Sigma Delta/College of Agricultural Sciences Research Expo
Poster: 1st place Social Science Division *Evaluation of Murang'a Nutribusiness Co-operatives in Kenya***,** March 18-19

AWARDS

2009-2010: The Borlaug Leadership Enhancement in Agriculture Program (LEAP) Fellowship
2007: Penn State. Institute of Social Sciences: $1000
2007: Penn State Africana Research Center (ARC) research grant: $1000
2005: Larenstein and Wageningen, The Netherlands. Professional Network for AIDS and Rural Development (LAPNARD) research grant: 750 euro
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