INSTITUTIONAL AND GOVERNANCE FACTORS INFLUENCING THE PERFORMANCE OF SELECTED SMALLHOLDER AGRICULTURAL COOPERATIVES IN KWAZULU-NATAL, SOUTH AFRICA

By

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ABSTRACT

This dissertation investigates the impact of institutional and governance factors on the performance of 10 selected smallholder agricultural cooperatives (case studies) in KwaZulu-Natal (KZN). All the selected cooperatives were traditionally structured (e.g., one-member, one-vote system). Due to logistical and administrative constraints, the selected smallholder cooperatives were drawn from the EThekwini and UMgungundlovu Districts (the latter comprising of two sub-districts, namely Camperdown and Msunduzi), which incorporate the major cities of Durban and Pietermaritzburg. Five of the cooperatives grow and market vegetables, three produce and market poultry, one is a beef production cooperative and another operates a bakery.

Information from the interviews suggests that members of the selected smallholder cooperatives do not fully understand cooperative principles and have high expectations of potential benefits of being members. Descriptive analysis of the case studies describes total membership of each selected cooperative; average number of management meetings per month; gender and age composition of cooperative members; the characteristics of chairpersons of these cooperatives (e.g., gender, age and education); the initial capital structure of these cooperatives; annual turnover; growth opportunities; and institutional and governance factors influencing the performance of these cooperatives.

The results of a cluster analysis suggest that the performance of the selected smallholder cooperatives is influenced by institutional and governance problems. Institutional problems give rise to low levels of equity and debt capital, reliance on government funding, low levels of investment, and subsequent loss of members. Governance problems are strongly linked to the absence of secret ballot, low levels of education, lack of production and management skills training, weak marketing arrangements and consequent low returns to members as patrons or investors. The conclusion is that appropriate institutional arrangements and good governance are important to the performance of enterprises initiated by groups of smallholders. South Africa’s new Cooperatives Act prevents smallholder cooperatives from adopting good institutional arrangements. Alternative ownership structures such as close corporations and

private companies offer better institutional arrangements and opportunities for equity-sharing partnerships.

DECLARATION

I, Mutsa Chibanda, declare that:

(i) The research in this dissertation, except where otherwise indicated, is my original research.
(ii) This dissertation has not been submitted for any degree or examination at any other university.
(iii) This dissertation does not contain other person's data, pictures, graphs or other information, unless specifically acknowledged as being sourced from those persons.
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Signed ……………………………… …………………………….
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Professor GF Ortmann Date
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INTRODUCTION

Smallholders are the potential drivers of agricultural development in less-developed regions (Machethe, 1990). Delgado (1999:165) argues that "Smallholder agriculture is simply too important to employment, human welfare, and political stability in sub-Saharan Africa to be either ignored or treated as just another small adjusting sector of a market economy …." Governments in less-developed countries have often promoted the use of cooperatives as organisations that could enhance the development of their small-scale farmers. Since 1994, the new democratic government in South Africa has been supporting the growth of cooperatives, especially among historically disadvantaged South Africans, as a strategy to alleviate poverty and create jobs. This government did not consider the Cooperatives Act of 1981 as a suitable vehicle for the development of cooperatives in the new economic and political era, and initiated a process of developing a new Act based on international cooperative principles. The new Cooperatives Act (No. 14 of 2005), under which a variety of cooperatives can register, was signed into law in August 2005. This Act recognizes the cooperative values (such as self-help, self-reliance, self-responsibility and democracy) and argues that a viable, autonomous, self-reliant and self-sustaining cooperative movement can play a major role in the economic and social development of the country, particularly among the previously disadvantaged people (Government Gazette, 2005). However, the new legislation perpetuates the notion of traditional cooperatives (TCs), ignoring trends in developed countries where cooperative legislation has been amended to encourage investment by patron and non-patron members (Lyne and Collins, 2008).

A traditional cooperative (TC) is an organisation formed by a group of people who meet voluntarily to fulfil mutual economic and social needs through running a democratically controlled enterprise such that the benefits achieved through cooperation are greater than the benefits achieved individually (ICA, 2005). Some analysts argue that cooperatives have significant potential to contribute towards reducing poverty, enhancing empowerment and creating employment (Barton, 1989; Philip, 2003; Van Niekerk, 1988). However, several factors have hindered the performance of smallholder cooperatives in developing countries. Research by Machethe (1990) on poor-performing and failed cooperatives in the former homelands of South Africa suggests that members did not clearly understand the purpose of a cooperative, their obligations and rights, or how to manage their business. Cooperatives' failure to provide transport for delivery of members' purchases, lack of membership identity with their cooperatives, and lack of understanding of members' roles were contributory factors. This could have resulted from members' ignorance, a lack of education and skills training and/or poor extension advice (Machethe, 1990).

Van der Walt's (2005) study on cooperative failures in Limpopo province indicated that poor management, lack of training, conflict among members (due mainly to poor service delivery), and lack of funds were important contributory factors. Other authors (Van Niekerk, 1988; Barratt, 1989:2; Kherallah and Kirsten, 2002; Anderson and Henehan, 2003) highlighted access to start-up capital; experience and training in business management, marketing and accounting; levels of literacy; attitudes towards work; and the degree of cooperative community ethos as factors contributing to cooperative performance. Weak institutions (e.g., ill-defined property rights), inadequate capital, deficient support systems such as external monitoring and evaluation, and lack of a supportive policy environment have also contributed to cooperative failures (Lyne and Collins, 2008; Zulu, 2007). Ill-defined property rights, according to agency theory, give rise to a set of problems that undermine the efficiency of traditional cooperatives (TCs) in risky and differentiated markets (Kyriakopoulos, 2000). This study focuses on the effects of institutional and governance factors on the performance of selected smallholder agricultural cooperatives in KwaZulu-Natal (KZN). The study is important because it builds on previous work that highlights the importance of resolving institutional and governance problems in TCs (Cook, 1995:1159; Cook and Iliopoulos, 2000) and ways in which South Africa's cooperative legislation could be amended to mitigate these problems (Lyne and Collins, 2008).

According to the 2005/6 report of the South African (SA) Registrar of Cooperatives, 511 new cooperatives were registered during the financial year 2004/5. In the 2005/6 financial year 2829 cooperatives were registered in South Africa – an increase of 454%. The number of registered *agricultural* cooperatives increased by 79% from 256 in 2001 to 459 in 2004 (CIPRO, 2006). KwaZulu-Natal (KZN) recorded 57 new agricultural cooperatives in the year 2005 (Mthembu, 2005; cited by Ortmann and King, 2007b). Van der Walt (2005) reports that it is difficult to establish how many of the registered cooperatives are actually active and thriving. Some of the smallholder cooperatives have registered but are not operating at all. According to the KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZNDAEA), some of the associated factors that have contributed to this include: lack of proper co-ordination between cooperative members; poor financial support such as provision of equity and debt capital; lack of markets; no mentorship, monitoring and evaluation programmes; and lack of entrepreneurial skills (Zulu, 2007). Therefore, there is a need to better understand the factors that have inhibited the growth and performance of smallholder agricultural cooperatives in KZN.

The cooperative as a business form exists to provide a service to its members, who retain influence over cooperative functions and activities. They can reduce costs, enhance incomes, and improve the viability of business activities, and thus have potential to contribute towards reducing poverty, enhancing empowerment and creating employment (Philip, 2003). The International Cooperative Alliance (ICA) is an independent, non-governmental organization (NGO) which unites, represents and serves cooperatives worldwide. According to the ICA (2005), cooperatives are significant economic and social actors. Barton (1989) agrees that agricultural cooperatives provide significant economic incentives which include achieving more favourable prices, patronage refunds, providing services which would not be available otherwise, or to secure sources of inputs and access to certain markets.

The aim of this study is to gain a better understanding of the characteristics of smallholder agricultural cooperatives in KZN and to identify institutional and governance constraints affecting their performance through in-depth analysis of 10 case studies. Identifying performance constraints is important if cooperative development is to be achieved in the future.

This dissertation is structured as follows: Chapter 1 reviews the relevant literature on the concept of agricultural cooperatives, the principles they are guided by, and their history. It then focuses on the classification and rationale for the cooperative business as identified by the literature. Chapter 2 addresses the factors influencing the performance of cooperatives. Chapter 3 presents the research methodology that will be used to assess the factors influencing the performance of selected smallholder cooperatives in KwaZulu-Natal. Chapter 4 describes the case studies and their characteristics. Qualitative and quantitative results of the study are presented in chapter 5, followed by conclusions and policy recommendations.

CHAPTER 1

REVIEW OF THE LITERATURE ON DEVELOPMENT OF COOPERATIVES

1.1 Introduction

In order to understand the concept of performance of smallholder cooperatives, it is imperative to first understand how cooperatives developed. Hence, this chapter focuses on a review of the literature on the development of cooperatives. This chapter is presented in four sections: the first section gives an overview of cooperative definitions and principles, and the second section provides an overview of the origin of agricultural cooperatives. The role of agricultural cooperatives and a comparison of cooperatives with other forms of businesses are presented in the third and fourth sections respectively.

1.2 Definitions and principles of a cooperative

Review of the literature on agricultural cooperatives yields numerous definitions of cooperatives (McBride, 1986; Porter and Scully, 1987; Nilsson, 1997). The legal definitions of a cooperative vary depending upon the source, but most agree that a traditional cooperative is one that: (1) provides service at cost; (2) is democratically controlled by its member-patrons; and (3) limits returns on equity capital (McBride, 1986:93). The owners of a cooperative are the same people who have access to the services it offers. Knapp (1962:476) defines a cooperative as “a special type of business corporation serving those who are at the same time both owners and users of its services”. Porter and Scully (1987:494) define cooperatives as “voluntary closed organizations in which the decision-control and risk-bearing functions repose in the membership, and decision management reposes in the agent (manager), who represents the principal’s interests”. Le Vay (1983) states that the basic blocks in defining a cooperative are that it is an association of persons (either individually or institutions) who work together to achieve certain commercial objectives. According to Rhodes (1983), a cooperative is a special type of business firm owned and operated for mutual benefit by the users (member-patrons). Nilsson (1997) listed the three most common characteristics found in most cooperative definitions, namely: (1) cooperation is an economic activity; (2) it is conducted for the need of its members; and (3) it is owned and controlled by these members.

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, 2005). According to the National Cooperative Business Association (NCBA, 2007), people form cooperatives to exploit new market and economic opportunities through self-help; provide themselves with services that would not have otherwise been available if provided individually; to strengthen bargaining power; maintain access to competitive markets; acquire needed products and services on a competitive basis; reduce costs; and manage risk. Hence, cooperatives exist to serve the interests of their members. Essentially, then, a cooperative is an organisation formed by a group of people who meet voluntarily to fulfil mutual economic and social needs through running a democratically controlled enterprise such that the benefits achieved through cooperation are greater than the benefits achieved individually (McBride, 1986; Nilsson, 1997; Krivokapic-Skoko, 2002; ICA, 2005; NCBA, 2007).

The social, moral and economic considerations which motivated the first Cooperative Societies of Europe in 1844 are still relevant to most cooperatives today (Zeuli and Cropp, 1980). The Rochdale Society of Equitable Pioneers first set out the Cooperative principles in 1844. They began by opening a cooperative store that sold items such as flour and sugar to members, and the society quickly expanded into other enterprises (Zeuli and Cropp, 1980; Ortmann and King, 2007a). Presently, cooperative businesses are owned by the members they serve; hence, like all forms of business undertakings, they are guided by a set of principles (see Appendix 1). The adoption of these principles ensures that the organisation’s primary objectives is one of member service, rather than one of long term profit maximization as in a non-cooperative business. The United States Department of Agriculture (USDA) incorporated three basic cooperative principles in their government regulations. These are: (1) the user-owner principle: persons who own and finance the cooperative are those who use it; (2) the user-control principle: control of the cooperatives is by those who use the cooperatives; and (3) the user-benefit principle: benefits of the cooperative are distributed to its users on the basis of their patronage (Birchall, 2004).

The first three principles specifying openness, democratic control and the source and management of capital, are fundamental ones and have remained constant with the ICA principles. Modern cooperatives reward investors – including external investors in some cases – with dividends, capital gains and even voting rights. These company-like institutional arrangements are not consistent with the principles underpinning traditional cooperatives. Agricultural cooperatives are pursuing new generation cooperatives because investment constraints arise as a result of free rider, horizon and portfolio problems (Chaddad and Cook, 2004).

1.2.1 Cooperative typology

In addition to traditional cooperatives, Chaddad and Cook (2004) introduced an ownership rights typology of five non-traditional forms of cooperative. These include proportional investment cooperatives, member-investor cooperatives, new generation cooperatives (NGCs), cooperatives with capital seeking components, and investor share cooperatives. The five non-traditional cooperative types can be characterised as follows:

1. *Proportional investment cooperatives* – differ from traditional cooperatives in that owner-patrons are required to invest in proportion to their patronage;
2. *Member-investor cooperatives* – owner-patrons receive returns in proportion to both patronage and investment, with their dividend payments in proportion to shareholding, or by allowing appreciable share values;
3. *New-generation cooperatives* – ownership rights remain restricted to owner patrons, and in fact to specific owner-patrons, but are both appreciable and transferable. In addition, owner-patrons are required to patronise the cooperative in proportion to their investment;
4. *Cooperatives with capital seeking components* – allow non-patron equity participation, enabling access to outside capital, but restrict this participation to be via subsidiary companies, strategic alliances, etc., rather than investing directly in a cooperative; and;
5. *Investor-share cooperatives* – allow direct non-patron equity participation in the cooperative itself, usually involving the issuance of multiple classes of financial instruments (such as non-voting or investor shares).

1.3 Origin of agricultural cooperatives

The history of agricultural cooperatives dates back more than 150 years. Cooperative businesses are now found in almost all continents of the world, from the developing nations of Africa, Asia, and South America to the industrial countries of Europe and North America. Northern Europe (where the cooperative movement originated) has a strong cooperative presence in agriculture (Zeuli and Cropp, 1980). Traditionally, many cooperatives focused on three main areas of business: (1) the purchase and sale of agricultural inputs and equipment; (2) the purchase, storage and subsequent sale of agricultural commodities; and (3) transport services (Piesse *et al*., 2003; cited by Ortmann and King, 2007a). The primary objective of the first cooperative systems was aimed at assisting the participants to overcome their greatest obstacle to economic self-sufficiency; namely, their effective isolation from their routine of wage labour through the development of economic activity (Barratt, 1989). The evolution of cooperatives in developed and developing countries will be discussed next, with a focus around Europe, the United States and South Africa.

1.3.1 Cooperatives in developed countries

Modern cooperatives originated in Europe in the late 19th century, during the Industrial Revolution (Hoyt, 1989; cited by Ortmann and King, 2007a). These cooperatives were seen as social and economic alternatives to the impacts of emergent industrial capitalism (Philip, 2003). While some cooperatives have failed, others have survived for many years and are successful. According to Philip (2003), cooperatives grew within five distinct traditions: the consumer cooperatives, established in England by a group of workers popularly known as the Rochdale Pioneers; the worker cooperatives, whose early establishment was in France; the credit cooperatives, which largely began in Germany; the agricultural cooperatives, which were first established in Denmark, Spain, Poland and Germany; and, finally, service cooperatives, such as housing and health cooperatives, which emerged in many parts of industrial Europe by the end of the 19th century. Table 1.1 shows some of the earliest recorded cooperatives in selected countries.

Table 1.1: Earliest recorded cooperatives in selected developed countries

Year	Country	Cooperative type
1696	Great Britain	Fire Insurance
1752	United States	Fire Insurance
1816	Poland	Agriculture
1842	Spain	Agriculture
1848	Belgium	Bakery
1849	Germany	Credit
1850	Sweden	Consumer
1851	Norway	Consumer
1853	Italy	Cattle insurance
1863	Bulgaria	Credit
1866	Denmark	Consumer
1876	Netherlands	Consumer

Source: (Ingalsbe and Groves, 1989; cited by Ortmann and King, 2006)

The Industrial Revolution in the late 18^{th} and early 19^{th} centuries brought about profound effects on the way business was organized. The working conditions and economic situations of many people led to the formation of the Rochdale Society of Equitable Pioneers in England in 1844 (ARDI, 2003). The Rochdale Pioneers was a group of workers representing various trades who formulated a set of basic operating rules based on a two-year study of cooperatives, including some that were not successful (Ortmann and King, 2007a). Among these rules were: democratic control of members; payment of limited interest on capital; and net margins distributed to members according to level of patronage. The Rochdale set of policies soon became a model for other cooperatives and have become to be known as the general principles that differentiates cooperatives from other business structures. The Rochdale cooperative objectives were to address their members' needs, such as better housing, employment, food, education and other social needs.

The history of cooperatives in China dates back to the beginning of the twentieth century when cooperatives emerged in some parts of China in the 1920s (Hu *et al.*, 2006). During the

1920s and early 1930s the Chinese nationalist government began to promote many rural credit cooperatives. However, the development of farmer cooperatives in China is still at an early stage. Hu *et al. (*2006) state that the organization and strategy of farmer specialized cooperatives in China are deeply influenced by the institutional environment. In the United States (U.S.), one of the earliest cooperatives was established in 1752 by Benjamin Franklin and is still in operation today, namely the Philadelphia Contributorship for the Insurance of Houses from Losses by Fire (Van Niekerk, 1988:6). Most agricultural cooperatives in the U.S. originated in the early 1900's due to economic, farm organisation, and public policy factors (Cook, 1995). Cooperatives were formed mainly for two reasons, namely: a) individual producers needed institutional mechanisms to bring economic balance under their control, usually because of excess supply-induced prices; this was particularly the case immediately following World War I, when an agricultural depression was severe; and b) individual producers needed institutional mechanisms to countervail opportunism and hold-up situations which were common in the late 1800's and early 1900's in the U.S. (Cook, 1995). Most U.S. agricultural producers worked collectively for defensive purposes – to depressed prices and/or market failure. About 12 000 agricultural cooperatives were formed in the subsequent ten years. History shows that successful cooperatives often evolve in institutional structure to become more similar to investor-owned firms over time (Cook, 1995). Restrictive legislation or tax benefits afforded to cooperatives can restrain this natural evolution.

1.3.2 Cooperatives in developing countries

Cooperative movements have endured and thrived in many African countries that are still developing. Most agricultural cooperatives in the developing countries focus more on product marketing and input supply as opposed to production (Ortmann and King, 2006). The introduction of cooperatives to English speaking African countries was based on the experience gained by the British colonial administration in Asia. African farmers grew crops such as coffee, cocoa, cotton, peanuts and rice. The British colonial system marked the enactment of cooperative legislation, which also provided for the establishment of a cooperative union and the appointment of a Registrar of Cooperative Societies. According to Machethe (1990), the majority of people in less-developed countries (LDCs) live in the rural areas and survive on a low income earned through subsistence agriculture. In the case of South Africa, agricultural cooperatives in the former homelands were generally not successful in promoting agricultural development. Machethe (1990) mentions some of the reasons as lack of membership identity with their cooperatives, lack of understanding cooperative principles, and the inability of members to dismiss inefficient management.

The history of cooperatives in South Africa dates back to late 19^{th} century, when Natal was the first province to establish commercial farm cooperatives in 1892. These were the Pietermaritzburg Cooperative Society and the Natal Creamery Limited. In 1908, the South African Cooperatives Act was formulated (Barratt, 1989:8). The first cooperative in the Orange Free State was only established in 1911. The development of agricultural cooperatives in South Africa was characterised by periods of distress with the accompanying government support (Smith, 1979). These periods included the Anglo-Boer War and the Great Depression. Many cooperatives in South Africa were only established after the end of the Anglo-Boer war when commercial farmers, whose livelihoods had been displaced by their long absences from the land, lacked start-up capital. The government established the Land and Agricultural Bank of South Africa in 1912 to provide loans to farmers. This led to agricultural cooperatives reaching a high turnover of R549 million in 1958 (Barratt, 1989:8).

The Land and Agricultural Bank, formed in 1912, absorbed the provincial banks of the Transvaal and the Orange Free State Societies with unlimited liability and cooperative “companies” with limited liability increased (Strickland, 1937). This increase only became rapid after 1922 when the Cooperative Societies Act for the entire Union was implemented. The history of black people’s cooperative enterprise in South Africa has until recently been very limited, and is largely restricted to credit unions - the first formal example of which was registered in 1928.

SA farmers are faced with a dynamic global economic and trade environment caused by the liberalisation of international markets. In addition, there has been a rapid advance in information and communication technologies (Ortmann, 2005). The agri-food industry has been rapidly changing and globalising and, hence, some agricultural cooperatives have responded by forming subsidiaries co-owned by external investors or opening up their own societies to investment by non-farmer interests, while other agricultural cooperatives have demutualised and are investor owned (Birchall, 2004). Global experiences show that in most cases farmers are determined to keep control of their core business**.** A typical example is Clover Industries Limited (CIL) that has grown from a Creamery in Natal to a large SA organization (Clover S.A., 2007)**.** The Natal Creamery Ltd was changed to National Co-operative Dairies Limited (NCD) in 1943 when its members approved the cooperative-style system. In 1994 Clover S.A. (Pty) Ltd was established as an operational company by NCD and during 1997 Clover Holdings Limited was formed to act as a holding company for Clover. In 2003 NCD was converted from a cooperative to a public company to raise capital and to access the value of the business as a going concern. Clover Holdings Limited was unbundled in 2004 and at present CIL is the holding company of Clover S.A., South Africa's largest dairy company and one of the leading manufacturers and marketers of food products in southern Africa (Clover S.A., 2007).

1.4 The role of agricultural cooperatives

Agricultural cooperatives have been promoted in many less-developed countries (LDCs) as instruments of nurturing agricultural development. In the SADC region, agricultural cooperatives are considered important for providing services (e.g., market access, extension) to small-scale farmers and agribusinesses that contribute to poverty reduction and economic development. For example, in South Africa, cooperatives in the past dominated the distribution of agricultural inputs and intermediates such as seed, fertilizer, fuel and repair services. The establishment of cooperatives can result in various advantages for their members. Cooperatives can supply services to their members which other suppliers are unwilling to do. They can increase the bargaining power of individuals enabling them to obtain services and products at more favourable prices. Von Ravensburg (1999:6), as cited by Van der Walt (2005), adds that bargaining power obtained not only contributed to the goals of individuals, but that the forming of cooperatives can also contribute to the alleviation of poverty, especially amongst the less privileged communities. Bhuyan and Olson (1998:7) consider the cooperative an ideal type of business to concentrate on as it contributes to the socio-economic needs of its members. In rural communities, the cooperative can play an important role as the economic engine for creating jobs and increasing rural income (Van, der Walt, 2005).

Whilst some authors such as Nilsson (2001) and Hakelius (1996) underline the economic role of cooperatives (e.g., establishing new markets, vertical integration) and their competitive advantage, others stress their role as part of the social economy (such as influencing governmental policy and production cooperatives as a stabilizing factor in the labour market) (Bouckova, 2002). According to Lyne and Collins (2008:180), “agricultural cooperatives are often viewed as appropriate vehicles to facilitate vertical coordination with, or horizontal integration between, small farmers who would have been excluded from value-adding opportunities and discerning markets”. Agricultural cooperatives have allowed people to achieve objectives such as provision of credit, management techniques and supply of production inputs relatively cheaply and on time which was not feasible if they had acted individually (Machethe and Van Rooyen, 1983). According to Gertler (2001:8), "Cooperatives and collective ownership schemes are important vehicles to meet the economic goals of development, broad individual empowerment, and sustainable livelihoods for communities".

Koller (1947) argues that the primary role of cooperatives is to overcome some of the defects and limitations of the capitalistic economy. These include imperfections in the competitive process, which interfere with the free allocation of resources in accordance with consumer preferences. Cooperatives improve competitiveness of a group and enlarge the area in which the competitive pricing mechanism is effective. Barton (1989) agrees that agricultural producers have significant economic incentives to form cooperatives to generate benefits for members. These include negotiating patronage refunds, or to secure sources of supply and access to certain markets or to vertically integrate into processing plants (specific assets) that are too big for individual farmers to finance and supply.

Cooperatives schemes are one means for working towards a sustainable social, environmental and economic expansion (Gertler, 2001). In the U.S., Western Europe and other advanced agricultural countries, agricultural cooperatives have been well known for providing market access and competitive returns to independent producers (Chaddad *et al*., 2005). The following are some of the economic benefits provided by cooperatives: access to and secure markets for the long term; build up countervailing power; increase technological and market efficiency; decrease and internalize transaction (information) costs, with a better flow of information on consumer demand; lower both economic and technological uncertainties and increase the income of members (Szabo, 2006). In 1994, the United Nations estimated that the livelihood of 3 billion people (almost half the world's population) was secured through cooperative enterprises. ICA (2005) estimated that more than 725 million people were members of cooperatives which created around 100 million jobs.

Currently, commercial agricultural cooperatives have played a major role in the global market by forming joint ventures in order to jointly export their products, and continue to serve their members by looking for growth opportunities and use advanced technology (USDA, 2002). In the 20th century, agricultural cooperatives in South Africa played a major role in the development of commercial agriculture, albeit with government's assistance through subsidized interest rates, tax concessions and price supports (Ortmann and King, 2007a). Agricultural cooperatives are typically classified according to three major functions they perform, namely: marketing, supply and service. Marketing cooperatives help cooperative members to market and sell their farm produce and maximize the return that they receive for these goods. Supply cooperatives sell farm supplies (such as seed, fertilizer, petroleum, chemicals and farm equipment) to their members. Service cooperatives provide various services (such as pesticide application, seed cleaning and artificial insemination) to their members (Ortmann and King, 2006).

1.5 A comparison of traditional cooperatives, new generation cooperatives and companies

Basic differences exist between the cooperative and other forms of businesses such as proprietorship, partnership and the corporation. A major difference lies in how profits are shared. Cooperatives return profits to their investors based on investor patronage (usage of cooperative services) and other businesses distribute profits based on investment in the business. Whilst a cooperative distributes net returns or losses primarily to users of its services, an investor-owned firm (IOF) distributes returns to shareholders, who are the owners of the firm's capital. Buccola (1994:431) defines an IOF as a "firm in which ownership and control are proportionate to equity capital invested rather than in proportion to use of the firm's services". The main characteristic difference between cooperatives and IOFs is contracting and ownership. IOF's targets are based on wealth - the richer the investor is, the more shares in the company he/she can buy, and the more control that individual has over the company. In a cooperative each member always has one vote irrespective of individual market share. Hence, no one is better off than the other in a cooperative. Table 1.2 compares the business structure of traditional cooperatives (TCs), new generation cooperatives (NGCs) and companies. The major difference is in ownership structure.

Table 1.2: A comparison of traditional cooperatives, new generation cooperatives and companies

Attribute	**Traditional cooperative**	**New generation cooperative**	**Company**
Voting power	One member, one vote or voting based on patronage proportion.	One member, one vote based on patronage proportion.	Voting based on shareholding.
Membership	Open membership.	Closed membership.	Open membership.
Distribution of profits	Based on patronage of cooperative.	Based on patronage of cooperative.	Based on share capital.
Ownership rights	Restricted to farmer patrons.	Restricted to farmer patrons.	Open to community.
Membership restrictions	Restricted to material participants.	Restricted to material participants.	None.
Value of shares	Delivery rights are non-transferable, non-appreciable and redeemable.	Equity shares and delivery rights are tradable and share prices are appreciable.	Shares can appreciate in value. Companies may not buy back their own shares.

Source: UWCC (1998), Brown and Merrett (2000), Competition Commission (2004)

Membership in TCs is open, hence, any producer can join simply by bringing their product to be processed, marketed, or handled by the cooperative. There is generally no up-front investment other than a nominal membership fee and there is also typically no further commitment to further patronize the cooperative. NGCs are closed agricultural cooperatives that engage in value-added activities and issue equity shares that obligate each shareholder to deliver a commodity for processing (Umarov, 2002).

NGCs have particular characteristics that differentiate them from traditional agricultural cooperatives. These characteristics include: value-added processing of members' commodities, a significant equity contribution by farmer members, obligation of product delivery based on equity contribution, equity shares and delivery rights are tradable and share prices can appreciate, reflecting members expected returns over time (Ortmann and King, 2007a). The two similar characteristics between NGCs and TCs are: earnings are based on member patronage and most TCs and NGCs follow a one member, one vote rule. NGCs emerged as a result of structural changes in agriculture and were designed to address problems of TCs such as ownership rights.

In contrast, company investors are owners and have the right to vote based on members' shareholding in the company. It is also important to note that patronage drives TCs since profits and liquidation proceeds are distributed based on patronage (Hanson, 2000). Companies have a great advantage over TCs and NGCs since they have a diversity of membership, a wider exposure to capital, a greater potential in achieving threshold membership, a greater community commitment, and flexibility in options to grow differ greatly from cooperatives. The inherent problems of TCs include free rider, horizon, portfolio, control, and influence cost problems caused by vaguely-defined property rights (see section 1.5.1). NGCs essentially add a new set of well-defined property rights to the ill-defined property rights of TCs (Lyne and Collins, 2008). Problems associated with NGCs are that they have limited entry of new members and maintain an effective governance structure (for example, undue pressure exerted by members on management to link voting rights to delivery rights due to their high financial stake in the business) (Harris *et al*., 1996; Royer, 1999).

1.6 Institutional flaws of traditional cooperatives

Economists have applied property rights theory (PRT) and agency theory (AT) as theoretical frameworks for identifying incentive problems within the cooperative form (Vitaliano, 1983; Porter and Scully, 1987; Nilsson, 2001; Ortmann and King, 2007a). These theories converge on a set of interrelated incentive problems that are creating disadvantages for cooperative members in traditional cooperatives. Some incentive problems are investment-related (common property/free rider, horizon, portfolio problems) whereas other incentive problems are decision-related (control, follow-up, influence-cost problems) (Nilsson, 2001).

1.6.1 Free-rider problem (or problem with common ownership)

Since ownership of the cooperative's assets is collective, there is a high probability of free-rider problems since property rights are not tradable, are insecure or unassigned. Royer (1999) identified this as the "common property problem" of restricted residual claims in the context of labour managed organizations. Royer (1999) argues that this problem emerges when property rights are not tradable or not sufficiently well-defined or enforced to ensure that individuals bear the full cost of their actions or receive the full benefits they create. The free-rider problem can either be internal or external. Regarding internal free-rider problems the rights of residual claims in a traditional cooperative are linked to patronage instead of investment, and external free-rider problems occur "whenever a cooperative provides its members with collective goods characterised by *de facto* unfeasibility of exclusion…" (lliopoulos and Cook, 1999:80, as cited by Ortmann and King, 2007a).

1.6.2 Horizon problem

This problem occurs as a result of the limited planning horizons of the members in a cooperative, and residual rights cannot be transferred when members withdraw. The different planning horizons between members, management and elected representatives make it difficult to make optimal investment decisions, and this inhibits the overall development of the organisation (Nilsson, 2001). The implication of horizon problems for the performance of a cooperative organization is that residual claimants can capture the benefits of investment decisions only over the time horizons of their expected membership in the organization (Vitaliano, 1983).

1.6.3 Portfolio problem

Cook (1995) views this problem from a cooperative's perspective as "another equity acquisition problem". The portfolio problem restricts residual claims to the patron group in cooperatives, which deprives members of the opportunity to diversify their investment portfolios to minimize risk (Vitaliano, 1983). Such portfolio problems usually give rise to further differences in preferences among subgroups of cooperative members. The result is economic inefficiency since lower risk decisions are favoured.

1.6.4 Control problem

Organisations bear control costs as the interests of management (agent) and their representative board of directors (principal) diverge. For example, if new members are allowed to join without paying any membership fees may result in market distortion. Members become reluctant to get involved or invest. “This is an indication of market forces in the relationship between the members and the organization - members receive insufficient compensation for their involvement, thus, the owner-control does not work” (Nilsson, 2001:330). Control over the firm is thus weakened, since attempts by members to affect change cannot achieve the intended objectives. The principal-agent problems are reduced by the fact that the board is specifically responsible for controlling and directing the management. Severe control problems in a traditional cooperative arise because shares are not transacted at market value, so members do not get a clear signal of management performance (Royer, 1999).

1.6.5 Influence cost problem

The influence cost problem arises because members have diverging interests which are linked to individual farm production activities. Members differ according to size of their farms and the location of their farms relative to collection / processing sites (Royer, 1999; Trewin, 2004). Influence costs are “associated with activities in which members or groups within an organization engage in an attempt to influence the decisions that affect the distribution of wealth or other benefits within an organization” (Royer, 1999:56). The extent of influence costs depends on factors such as the existence of a central authority, procedures that govern decision making, and the degree of homogeneity or conflict of interests amongst cooperative members (Cook, 1995). Traditional cooperatives suffer an influence problem because voting power is not proportional to investment. Potential investors are faced with the prospect that their money will be invested in enterprises preferred by members who have a voting majority (e.g., risk averse members) (Cook, 1995; Royer, 1999; Lyne and Collins, 2008). The inability of investors to influence investment decisions also discourages lenders from financing cooperatives. Whilst the free-rider, horizon, portfolio and control problems can all be resolved by trading shares at their market value, the influence problem can only be resolved by abandoning the traditional cooperative principle of one-member, one-vote (Cook, 1995; Cook and IIiopoulos, 2000; Chaddad and Cook, 2004).

The next chapter will address the factors influencing the performance of smallholder agricultural cooperatives.

CHAPTER 2

FACTORS INFLUENCING THE PERFORMANCE OF SMALLHOLDER AGRICULTURAL COOPERATIVES

2.1 Introduction

Cooperatives which are viable are likely to ride on their success and remain functional - even grow (Gertler, 2001). Lyne (2007) argues that cooperative performance is damaged by weak institutional arrangements that constrain capital and which lead to strategic choices that depend largely on group dynamics. Different firms within an industry are heterogeneous in terms of the resources they possess and strategies they pursue and those differences create different performance outcomes. This chapter focuses on the factors that affect performance of smallholder cooperatives in developing regions. The first section presents the definition of performance, followed by the characteristics of smallholder cooperatives in South Africa in the second section. The third section presents the factors influencing the performance of smallholder agricultural cooperatives. The fourth section gives an overview of the main school of thought adopted in this study (New Institutional Economics), and its application to cooperatives is presented in the fifth section. The last section presents the inter-relationships between performance, institutional arrangements and governance.

2.2 Definitions of performance, institutions and governance

Performance is difficult to measure and interpret in the case of cooperatives, which generally aim to pay their members the best price for the products received, or to charge the lowest possible price for the inputs and services supplied (Dess and Robinson, 1984; Kyriakopoulos *et al*., 2004). Several authors (e.g., Gassenheimer *et al*., 1989; Yavas *et al.*, 1989; Yavas *et al.*, 1989; Read and Miller, 1990; Harrington *et al.*, 1991; Clarke, 1991) define performance as improved product quality, productivity, technical efficiency, service capabilities of a firm, and logistical performance (which include an organisation's ability to meet promised delivery dates), leading to sustainable profits. According to Dess and Robinson (1984), two popular measures of economic performance are return on assets and growth in sales. In this study, cooperative performance is defined in terms of key performance indicators (KPIs) such as generating a net surplus; access to equity and debt capital; reduced reliance on government funding; investment in growth assets such as poultry pens and vegetable tunnels; skills training of cooperative members; and good marketing arrangements.

Institutions are the "rules of the game" of a society or, more formally, the humanly-devised constraints that structure human interaction (Klein, 1999; North, 2000; Kherallah and Kirsten, 2002). The most commonly agreed upon definition for institutions is: a set of formal rules (laws, contracts, political systems, organisations and markets) and informal rules of conduct (norms, traditions, customs, value systems, religions and sociological trends) that facilitate coordination or govern relationships between individuals or groups (Kherallah and Kirsten, 2002). This study investigates institutional arrangements and governance factors that characterise smallholder agricultural cooperatives in KZN and which affect their performance. In particular, it examines rules governing membership, voting rights, the distribution of net surpluses, capital gains and the tradability of shares.

King (2002:1) defined corporate governance as "…the building of a balance between economic and social goals and between individuals and communal goals, with the aim being to align as closely as possible the interest of individuals, organisations and society". King (2002) listed seven characteristics of good corporate governance as discipline, transparency, independence, accountability, responsibility, fairness and social responsibility. In this study, governance indicators are defined in terms of electoral procedures, financial audit, training and access to information and meetings.

2.3 Characteristics of smallholder farmers in South Africa

Smallholder cooperatives are often a significant part of the agricultural structure, especially in developing countries. They often serve as the engine of economic growth and livelihood improvement (Machethe and Van Rooyen, 1983). However, funding opportunities for smallholder farmers and cooperatives remain a challenge since funders such as banks require some form of collateral, which smallholders often do not have. Before 1994, most established smallholder cooperatives in South Africa started their businesses from donated funds from the government, non-governmental organizations or other sponsoring companies (DTI, 2004).

Smallholder farmers often face barriers to accessing resources, including credit and information, and their markets are often constrained by inadequate property rights and high transaction costs (Lyne, 1996). Williamson (2000) considers transaction costs as costs of organizing, maintaining and transacting exchanges. These costs include search and information costs, bargaining and decision costs, and policing and enforcement cost. According to Lyne (1996) and Delgado (1999), smallholder farmers in Africa are often faced with high transaction costs in the production and marketing of agricultural outputs due to the nature of their products and the institutional environment in which they operate. Access to markets can be considered according to three dimensions: physical access to markets (markets, costs); structure of the markets (asymmetry of relations between farmers, market intermediaries and consumers); and producers' lack of skills, information and organization (understanding of the market, prices, bargaining) (IFAD, 2003).

Smallholder farmers often have little knowledge or no information on market conditions, and their experience on market negotiation is limited. This is mostly aided by the lack of education. For example, research on two communal areas of KwaZulu-Natal province (Impendle and Swayimana) showed that education levels of the respondents in both study areas are generally low (mean of 5.2 years) and only 36% of all respondents speak English (32.5 speak and write English) (Matungul *et al*., 2001). In addition, Matungul *et al.*, (2001) showed that smallholder farmers in these communal areas normally sell their produce through informal channels, such as neighbours, local shops and monthly pensioners. In South Africa, smallholder farming is generally associated with black agriculture in former homeland areas.

2.4 Some institutional and governance problems influencing the performance of traditional smallholder cooperatives

Smallholders often face a number of barriers, e.g., transport constraints to accessing the market for their produce and, hence, their market is limited to local community members such as neighbours, local shops, schools and pensioners (Matungul *et al*., 2001; Magingxa and Kamara, 2003). According to the IFAD (2003), market access can be defined in three dimensions: physical access to markets (distance, transport costs, etc.); structure of the markets (asymmetry of relations between farmers, market intermediaries and consumers); and producers' lack of skills, information and organisation. Although cooperatives can improve smallholder access to preferred markets by reducing unit marketing and transaction costs, their members often do not understand the market well, lack information on market conditions, and have little experience with market negotiations (Magingxa and Kamara, 2003).

Membership of TCs is open, hence, any producer can join by purchasing shares at their par (rather than their appreciated) price. There is generally no up-front investment other than a nominal membership fee and there is also typically no further commitment to patronise the cooperative. TCs follow a one-member, one-vote rule, regardless of the member’s level of patronage or level of investment. Institutional problems faced by TCs include free rider, horizon, portfolio, control, and influence cost problems caused by vaguely-defined property rights (for a detailed analysis of these, see section 1.6). Free rider, horizon and portfolio problems are investment related whilst control and influence cost problems are decision-related (Nilsson, 2001).

An obstacle often faced by TCs is their difficulty to raise capital necessary to finance long term strategies (Cook and Iliopoulos, 2000). TCs have constrained access to debt and equity capital, being able to raise it only from owner-patrons who have little incentive to invest because capital is not rewarded at market-related rates – investors cannot realise capital gains and dividends are capped (Hendrikse and Veerman, 2001; Chaddad and Cook, 2004). Financial institutions have been hesitant to provide credit to cooperatives due to the high risks associated with lending to them (Ortmann and King, 2007a). High risks are due to insufficient equity capital; the influence problem (caused by egalitarian voting rights), which prevents the majority investors from influencing investment decisions; poor financial record-keeping; and high transaction costs involved in granting small loans (Coetzee and Vink, 1991; as cited by Ortmann and King, 2007a). When equity and debt capital are constrained, the cooperative is unable to finance investments in growth assets such as poultry pens or vegetable tunnels, or in fencing to secure a cooperative’s property from potential losses such as theft. In order to ensure its long-term sustainability, a cooperative needs adequate capital for both its initial development and its ongoing operation (Ling, 2005; Crow, 2006). Difficulty in raising capital implies that smallholder cooperatives in developing regions are usually dependent on government donations and/or soft loans for initial capital (Magingxa and Kamara, 2003).

According to Crawford (1997), an attempt to divert the purpose and resources of cooperatives to the support of particular political objectives adversely affects cooperative development. Ngubane (2008), a KZNDAEA extension officer based in the Msunduzi sub-district, expressed the view that only a minority of smallholder cooperative members had a genuine interest in developing their cooperative. The Deputy Manager of agricultural cooperatives in KZN put it more bluntly, stating that some smallholders established cooperatives to access government grants rather than to develop a business (Zulu, 2007). An 'influence problem' is anticipated when members of a cooperative have divergent interests and equal voting power. Democratic voting rights tend to discourage more entrepreneurial members from investing in a TC because they face the prospect of their capital being used to finance assets preferred by risk averse members who hold majority voting power. This 'influence problem' also discourages lenders from financing TCs and could leave many of KZN's smallholder cooperatives dependent upon external aid for their survival. The divergent interests of members could also manifest in a 'portfolio problem' because members of a TC cannot transact equity shares at their market value. This problem leads to sub-optimal investment by members because they are unable to diversify their own portfolios to reflect personal risk preferences. The performance of cooperatives also depends on educating and training cooperative members, and enhancing their knowledge of cooperative principles and members' rights (Ortmann and King, 2007a). Birchall (2004) argues that cooperatives that lack capital and business management capacity have had a rather disappointing history in developing countries.

Several authors (Barratt, 1989:2; Anderson and Henehan, 2003; Kherallah and Kirsten, 2002) highlighted some of the factors contributing to cooperative performance as access to capital start-up costs; degree and nature of business skills training available to cooperative members; degree of training and experience in marketing and market analysis, costing, bookkeeping, literacy and management skills; attitudes towards work; and degree of cooperative community ethos. The majority of smallholders who engage in cooperative activity do not have access to standard guarantees for loans from financial institutions; they rarely own any property that they could use as collateral. If the cooperative does not have equity or assets financed from equity, borrowing is difficult (Ortmann and King, 2007a). Traditional cooperatives struggle to raise equity capital due to the free-rider, horizon, portfolio and control problems (Lyne and

Collins, 2008). In addition, for any given level of equity, lenders discriminate against traditional cooperatives owing to the influence problem. Financial institutions are profit making organizations that are risk averse and are designed to make as much profit as possible at minimal risk for their shareholders. Hence, the higher the project risk, the less likely the cooperative will get funding without collateral (Barratt, 1989; Ortmann and King, 2007a). According to Gertler (2001), the history, location, and economic condition of the organisation, regulatory context, the experience of key personnel, and links to other organisations are additional factors that affect performance.

Research conducted by Machethe (1990) on six smallholder agricultural cooperatives in the former homelands of South Africa suggested that the following factors were major reasons for the poor performance of these cooperatives: inadequate capital; lack of membership identity with the cooperatives; and cooperatives' failure to provide transport for delivery of members' purchases. In addition, failure of cooperatives to compete with other businesses; inability of cooperatives to keep adequate input stock; and inability of members to dismiss inefficient management were contributory factors.

According to Machethe (1990), many cooperative members of the study cooperatives had the "wrong" reasons for joining a cooperative. For example, the largest percentage (23.75%) stated they joined cooperatives to buy goods on credit, 22.50% said they joined to sell produce through the cooperative, 8.75% for financial benefit, and 8.75% because they thought it is compulsory. Only 41% of the respondents understood that cooperatives were owned by members, 23% did not know who owned the cooperative, and 5% thought cooperatives belonged to whites. With regards to the difference between a company and a cooperative, 26% assumed there was no difference, 19% did not know the difference, while 11% knew the cooperative was owned by its members. Regarding competition with other businesses, many respondents (48%) bought goods from local shops for reasons such as prices of local shops were lower (16.25%), local cooperatives did not carry many items (22.55%) and 6.25% stated that other outlets provided transport, which weakened the cooperative's financial position (Machethe, 1990). Clearly, the statistics show that most cooperative members lacked understanding of cooperative principles, their roles as members and the objectives of these cooperatives. This could have been a result of lack of business skills and education of these members.

Van der Walt (2005) confirmed that 65 per cent of 54 registered cooperatives sampled in the Limpopo province were not functional. The failure of cooperatives in South Africa's communal areas has been largely blamed on poor management (Van Niekerk, 1988; Van der Walt, 2005). Agricultural cooperative performance is usually assessed according to the goals of the cooperative, many of which are established for economic reasons such as promoting the financial sustainability of cooperative members (Machethe, 1990). Performance is also measured according to members' satisfaction since they are the primary drivers of productivity. Machethe (1990) states that the success of cooperatives is brought about if members' interests are served enough to satisfy the majority of members. However, performance of cooperatives in the former homelands was generally unsatisfactory irrespective of the benchmark used (Machethe, 1990).

The factors influencing poor performance reflect the absence of a well functioning market for shares to signal management performance in a traditional cooperative (Machethe, 1990). Perhaps they are a result of the absence of institutional arrangements that promote transparency and accountability like externally audited financial statements, adequate notice of meetings, circulation of minutes and voting by secret ballot. According to Kherrallah and Kirsten (2002), institutions have an influence on human behaviour, and in turn have profound effects on outcomes such as economic performance, efficiency, economic growth and development of an organisation. They can either facilitate or retard the performance of smallholder cooperatives. New Institutional Economics (NIE) considers that the cost of transacting – determined by institutions and institutional arrangements – is the key to economic performance. Ortmann (2005) states that good institutions (i.e., rules, laws and conventions that govern economic behaviour) are essential in promoting exchange and the operation of market forces by securing property rights and enforcing predictable rules of law. A favourable institutional environment and an enabled management and workforce, *ceteris paribus*, improve the operating efficiency of an enterprise (Knight *et al.*, 2003). Production cooperatives face an additional and potentially more damaging institutional problem if members are not rewarded for their own level of labour input.

2.5 Theory of New Institutional Economics (NIE)

The term “New Institutional Economics” was first coined by Williamson (1985) but emerged with Coase’s 1937 article “The Nature of the Firm”. The NIE is a multidisciplinary field which combines economics, law, organizational theory, political science, business organisation and sociology (Kherallah and Kirsten, 2002). NIE is concerned with the social, economic and political institutions that govern everyday life. NIE provides an insight into understanding factors affecting market and non-market participation by smallholder farmers (Dorward *et al.*, 2000).

According to Williamson (2000), there are two levels of NIE, namely the macro (institutional environment) and the micro (institutional arrangements). The institutional environment encompasses the “rules of the game” or background constraints (North, 2000), comprised of both formal legal rules and informal social norms that govern individual behaviour and structure social interactions. By contrast, institutional arrangements are governance structures designed between economic units to mediate particular economic relationships (Klein, 1999). NIE aims to explain what institutions are, how they arise, what purposes they serve, how they change and how they should be reformed (Klein, 1999). Kherallah and Kirsten (2002:1) state that “this new direction of economics considers that the cost of transacting – determined by institutions and institutional arrangements – is the key to economic performance”.

NIE has a dual purpose; it explains the determinants of institutions and their evolution over time, including evaluating their impact on economic performance, efficiency, and distribution (Nabli and Nugent, 1989). In a nutshell, NIE provides a useful framework that could help determine the types of institutions needed (either formal or informal) to improve economic performance in developing countries. It helps to identify a series of obstacles, problems, imperfections, and failures, both in states and in markets that can or should be remedied by various institutional means. NIE has several branches, the most common being the transaction cost, agency, collective action and property rights approaches, which are discussed below (Nabli and Nugent, 1989).

2.5.1 Transaction cost economics

New institutional economists emphasize the potential costliness of transactions. The transaction cost approach was first introduced by Ronald Coase (1937) in his article "The nature of the firm" and formulated by Williamson in 1965. Coase referred to transaction cost as the cost of organising and transacting exchanges. Coase (1937) noted that transaction costs include search and information costs (finding products and appropriate suppliers), bargaining costs (negotiating and establishing the agreement) and policing and enforcement costs (ensuring the other person conforms to agreements) (Coase, 1937; Williamson, 1985). Zaibet and Dunn (1998) indicated that transaction costs include high transport costs due to the distance of the farm from the market, poor or non-existent infrastructure, high marketing margins due to monopoly power, and high costs of searching and monitoring contracts.

A major element of transaction costs relates to market information; these are costs associated with a lack of access to sources of market information. Abdulai and Delgado (1999) maintain that a decline in the cost of information and transport flows as a result of a good infrastructure reduces transaction costs. Makhura *et al*. (2004) defined access to information, amongst others, as having the opportunity of listening to the radio for agricultural information. The study found that access and use of such information differentiated between farmers selling more agricultural produce from those selling less (Makhura *et al*., 2004).

The transaction costs of small-scale farmers emanate from a number of sources. In the first place, smallholder farmers and cooperatives are often located in remote areas far away from service providers and major consumers of farm products (Makhura *et al*., 2004). The distance to the market together with the poor infrastructure, poor access to assets and information is manifested in high exchange costs. In order to participate in the market, it is necessary to discover who the buyers and sellers are, what the terms are, conduct negotiations, draw up a contract (e.g., forward contracting), and undertake the inspection needed to make sure that the terms of the contract are being observed (Coase, 1960).

2.5.2 Agency theory

Agency theory is a second branch of NIE which focuses on information asymmetries, and especially how opportunistic agents can use them to pursue their own interests (Doner and Schneider, 2000). The core of this theory is the relationship between the principal (owner) and the agent (management). Principal-agent problems, according to Doner and Schneider (2000), arise when principals have difficulties in controlling agents, and where managers exploit information asymmetries to further their own interests. This theory explains that by means of a system of rewards the principal can reach a consensus between his own goals and those of the agent, and describes how the principal can direct and control the agent (Nilsson, 2001). Principal-agent problems plague the modern corporation where ownership and management are separated, and where, as a result, shareholders (the principals) have difficulties controlling managers (their agents), and where managers exploit information asymmetries to further their interests in appropriating the firm’s surplus. Thus, agency theory studies the structure of the principal/agency relationships in order to reduce agency costs associated with moral hazard of the agents (Klein, 1999). Ortmann and King (2007a:54) noted that “agency theory is relevant to the institutional structure of cooperatives because employed agents (managers) may not act in the best interest of the cooperative members (principal)”.

2.5.3 Collective action theory

Collective action means group action and, hence, collective action theory refers to activities that require the coordination of efforts by at least two or more individuals to further their interests (Sandler, 1992:1). However, in most group activities where people act collectively, there is an incentive for people to free ride at that expense of others. Olson (1975) states that the free-rider problem usually occurs in cases where the group works towards the provision of a public good. Hence, collective action is associated with actions where members are interdependent so much that one person’s outcome is dependent on the action of others.

NIE provides a framework for identifying problems associated with common property and collective action, and provides solutions with performance linked incentives. Collective action is viewed in a positive light by many institutional economists (Herath, 2005). It is a useful tool to analyse how to overcome the free-rider problem and come up with cooperative solutions for the management of common resources or the provision of public goods. According to Olson

(1975), the success of collective action is related to the homogeneity of the groups. Features such as the size of the group, purpose and the similarity of group characteristics, their goals and incentives may foster cooperative behaviour. Work by Ostrom (1990) and others has shown that local institutional arrangements, including custom and social conventions designed to induce cooperative solutions, can overcome the collective action difficulties and help achieve efficiency in the use of such resources (Nabli and Nugent, 1989).

2.5.4 Property rights theory

Coase (1960) and Demsetz (1967) highlighted the importance of property rights in scarce resources. Their main proposition is that, in the absence of transaction costs, efficient resource allocation will occur with private property rights. This implies that private property is the most efficient system when land resources are scarce. Property rights develop to internalise externalities when the gains from internalisation are larger than the costs of internalisation (Demsetz, 1967). Ownership rights to an asset have an effect on the incentive of the involved parties to invest when property rights are ill-defined (as in a traditional cooperative). Without properly defined and identified ownership structures, there will be under-investment (Kherallah and Kirsten, 2002). Contractual difficulties generally arise from weak property rights, bilateral dependence, measurement difficulties, and weaknesses in the institutional environment (Williamson, 1996).

Demsetz (1967) argues that property rights convey rights to individuals to either harm themselves or others. For example, an industry which causes sea pollution benefits at the expense of society. The Coase theorem (attributed to Ronald Coase) concerns economic efficiency of a government’s allocation of property rights. Coase (1960) theorem says that government involvement is not necessary if property rights are well established. Essentially, the theorem states that regardless of who owns the property rights, if no transaction costs exist, an efficient outcome will occur (individuals will bargain to correct any externality, which is defined as a cost or benefit resulting from an economic transaction that is borne or received by parties indirectly). According to Demsetz (1967), the primary function of property rights is to merely guide incentives to achieve a greater internalization of externalities. Cook (1995) used property rights theory to define five problems associated with traditional cooperatives (see section 1.6). It is also on the basis of property rights that Chaddad and Cook (2004) characterised non-traditional cooperative models (see section 1.2.1).

2.6 Application of the New Institutional Economics framework to cooperatives

NIE can be applied to economic problems faced by agricultural businesses. Given that cooperatives exist to serve the interests of its members, problems such as transaction costs, agency costs, property rights and free-rider problems hinder them from achieving some of their objectives. For example, in the case of collective action, some cooperative members might become free riders (in a case where some members invest and other members do not and still enjoy the benefits of the cooperative). The basic idea of NIE is that the success of a market system depends upon the institutions to facilitate efficient private transactions. North (1990) demonstrates that institutions matter because they provide the rules of the game, constraining human interaction and providing incentives for individuals and cooperatives to engage in productive and/or destructive political, economic, social and other activities. However, NIE has some limitations as transaction costs are difficult to observe and measure (Kherallah and Kirsten, 2002). The institutional environment has considerable influence on cooperatives, in terms of both their internal and external relations. The formal laws of the state, as well as local institutions based on custom and tradition, determine whether the environment for cooperatives development is an enabling or a disabling one (Stockbridge *et al.*, 2003).

In this study, the performance of smallholder agricultural cooperatives will be analysed using NIE theory to show how the problems of ill-defined property rights suppress the growth and competitiveness of traditional cooperatives. Having defined and discussed NIE, the following discussion focuses on cooperatives and the problems associated with the traditional models of cooperatives and how well-defined institutions can help to solve those problems.

2.7 Inter-relationships between performance, institutions and governance

The objective of this study is to test the theoretical proposition that good cooperative performance is dependent upon sound institutions and good governance. The conceptual model in Figure 2.1 argues that sound institutional arrangements and good governance both have a direct impact on good performance. In turn, sound institutional arrangements are influenced by good governance and *vice versa*.

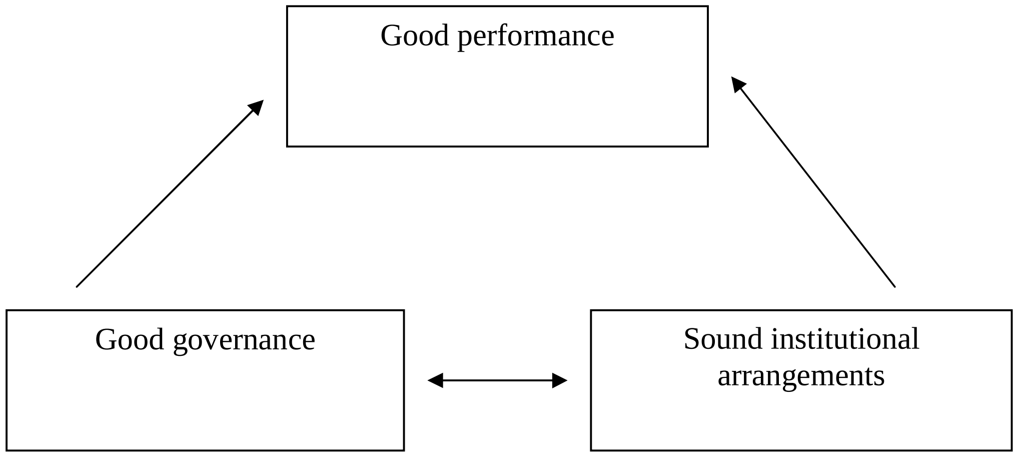

Figure 2.1: Postulated relationships between cooperative performance, institutional arrangements and governance

One route through which institutions ("rules of the game") can influence performance of cooperatives is through their effects on the structure of cooperatives and the efficiency with which they operate. Institutions, such as property rights and contract law, shape the regulatory and economic environment within which cooperatives operate (North, 1990; Williamson, 2000). They also influence the cooperative's internal decisions and its productivity. In order to be successful it is important that a representative institution (e.g., management committee) is established that aspires to good governance and fair representation of its members.

According to North (1990), institutions affect the performance of the economy or firm by their effect on the cost of exchange (transaction costs) and production. By influencing transaction costs and co-ordination possibilities, institutions can have the effect of either facilitating or retarding performance. Specific institutions govern the activities carried out by cooperatives in the course of using resources, producing output and engaging in transactions with others. Such institutions introduce structure into the operation of organisations and markets in order to improve the way in which they function. Institutions at these levels directly affect performance of organisations and therefore economic growth (Frances, 2004).

A growing literature stresses that governance, broadly defined as the process whereby societies or organisations determine how power is exercised, whom they involve and how they render account (Graham *et al*., 2003; Saner and Wilson, 2003), is important for economic growth. In this study, governance includes a cooperative's institutions and structures, decision making processes and its capacity to implement its decisions (Landell-Mills and Serageldin, 1992), and is characterised by transparency (openness), accountability and participation. Together with good institutions, good governance promotes an organisation's performance (North, 1990; Olson, 2003).

The next chapter deals with the research methodology used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the research methodology to be used in this study. Case studies of 10 selected smallholder cooperatives in KwaZulu-Natal (KZN) will be analysed. The chapter is presented in four sections: the next section describes the research objectives and hypotheses of the study, followed by the method used to select the smallholder cooperatives. The last section provides an overview of the analytical tools used in the study.

3.2 Research objectives and hypotheses

The study aims to gain a better understanding of the characteristics of 10 selected (case-study) smallholder agricultural cooperatives in KZN, and to determine some of the performance, institutional and governance constraints that these smallholder cooperative members are facing.

3.2.1 Research objectives

Specific objectives of this research are:

- To characterise and understand the selected smallholder agricultural cooperatives.
- To determine the performance, institutional and governance factors that influence the performance of these smallholder agricultural cooperatives in KZN.
- Provide possible strategies and policies which could be considered to promote the performance of these smallholder cooperatives.

3.2.2 Research hypotheses

The hypotheses of this research are:

- The nature of institutions ("rules of the game") and governance (i.e., rules, norms, and enforcement / penalties, etc.) determine the success or failure of a cooperative.

- Lack of skills training and education on how to manage a cooperative hinder the performance of smallholder cooperatives.
- Improved access to capital is essential in ensuring of overall performance of cooperatives.

3.3 Data collection

3.3.1 Sampling procedure and study areas in KZN

KwaZulu-Natal has a diverse farming sector, ranging from subsistence to large commercial farms, and a wide range of enterprises such as livestock, maize, sugarcane, timber, fruit, cut flowers and herbs are practiced (Wikipedia, 2007). There are 11 municipal districts in KZN (Figure 3.1).

Figure 3.1: Map of municipal districts in KwaZulu-Natal, 2007
Source: Environmental, Planning and Development Consultants (2007).

Ten smallholder agricultural cooperatives in KZN were selected to serve as detailed case studies in this study. An updated list with the names of smallholder cooperatives in KZN was obtained from the KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZNDAEA) who work closely with these cooperatives. Due to funding and logistical constraints, the areas of study were limited to the EThekwini and UMgungundlovu Districts (the latter comprising of two sub-districts, namely Camperdown and Msunduzi), which incorporate the major cities of Durban and Pietermaritzburg in KZN. The case study cooperatives were selected with the help of extension officers from those districts. They were selected because they had been operating for at least two years and were willing to participate in the study. All the selected cooperatives were traditionally structured as defined in Chapter 2. Five of the selected cooperatives were from the EThekwini District, three from the Msunduzi District and two from the Camperdown District.

3.3.2 Study data collection and questionnaire design

Personal interviews were conducted with the chairpersons, management committee and other cooperative members of the selected cooperatives in conjunction with a structured questionnaire in order to obtain qualified answers. The questionnaire provided the respondents with some degree of anonymity so as to obtain as much unbiased information as possible. The first part of the questionnaire (see Appendix 4, Section A) seeks general information about the cooperative: formation, registration and operations of the cooperative. Section B (structure and organization) aims to understand the general structure and how the cooperative is organized in terms of membership, governance and accountability. Section C (financial management) aims to understand the most challenging factors that most smallholder traditional cooperatives face, including equity and debt capital financing, growth prospects, auditing, turnover and government interventions (such as providing cooperative training; monitoring and evaluation of cooperatives).

3.3.3 Pre-testing and implementation

A pilot study on three smallholder agricultural cooperatives in the Msunduzi district (Pietermaritzburg) was conducted in October 2007 to pre-test the questionnaire. The purpose of the pre-test was to assess the relevance, validity and cultural acceptability of the questions.

The pilot study proved useful because some of the questions which seemed ambiguous were then rephrased so that future respondents could better comprehend them. Ten smallholder agricultural cooperatives were then interviewed, including three poultry, five vegetable, one beef and one bakery cooperative.

3.4 Analytical tools

This section presents the analytical framework used in this study to assess the factors which affect the performance of smallholder agricultural cooperatives in KZN. The following analytical tools were used:

3.4.1 Descriptive statistics

Descriptive statistics were used to characterise and understand the structure of the selected smallholder agricultural cooperatives in KZN. These statistics were used to analyse total membership; average number of management meetings per month (a governance factor); gender and age composition of cooperative members; and the characteristics of chairpersons of these cooperatives (e.g., gender, age and education). In addition, the descriptives analysed the initial capital structure of these cooperatives; annual turnover; amount of money kept in the bank; growth opportunities; and institutional and governance factors influencing the performance of these cooperatives. The results of the descriptive statistics are presented in Chapter 4.

3.4.2 Cluster analysis

Cluster analysis of institutional, governance and performance variables has been adopted on the basis of two arguments: firstly, to test for positive relationships hypothesised between cooperative performance, institutional arrangements and governance (Figure 2.1); and, secondly, to identify homogeneous groups or clusters of variables in a multivariate data set.

The term cluster analysis was first used by Tryon in 1939. It encompasses a number of different algorithms and methods for grouping objects of similar kind into respective categories (Aldenderfer and Blashfield, 1984). A general question facing researchers in many areas of inquiry is how to organise observed data into meaningful structures, that is, to develop taxonomies. Essentially, cluster analysis is an exploratory data analysis tool which aims at sorting different objects into groups in a way that the degree of association between two objects is maximal if they belong to the same group and minimal otherwise. It can be used to discover structures in data without explaining why they exist. According to Romesburg (1984), cluster analysis is not as much a typical statistical test as it is a "collection" of different algorithms that put objects into clusters according to well-defined similarity rules.

Cluster analysis can be used for a variety of goals (Aldenderfer and Blashfield, 1984:9); e.g., (1) for developing typologies or classifications, (2) for generating concepts or hypotheses through data exploration, and (3) for testing whether typologies or classifications generated by other procedures, or by using other data, are present in the data set under consideration. Data clustering algorithms can be hierarchical or non-hierarchical. Hierarchical cluster analysis, the method to be employed in this study, involves the construction of a hierarchy of treelike structures. Each observation begins with its own cluster and, at each successive step, observations or clusters of observations are merged into fewer “natural groupings” (Anderberg, 1973:3; Norusis, 1994:100). In the non-hierarchical methods, the number of clusters is predetermined and thereby the observations are allocated among the number of clusters.

Hierarchical cluster analysis algorithms can be classified into divisive ("top-down") or agglomerative ("bottom-up") clusters (Waters and Barr, 1980; Romesburg, 1984). Agglomerative algorithms are computationally faster and, hence, are commonly used. Whilst agglomerative algorithms begin with each element as a separate cluster and merge them into successively larger clusters, divisive methods split a number of individuals into successively smaller clusters. Cluster analysis has been used in the field of medicine, clustering diseases, cures for diseases, or symptoms of diseases (Harrigan, 1985). In the field of life sciences, objects of cluster analysis are life forms such as plants, animals, insects, cells, and micro-organisms. Knight *et al*. (2003) used cluster analysis to identify institutional/organisational practices of successful farmworker equity-share schemes in South Africa, and to discern a set of best institutional practices that will likely promote the success of future equity-share schemes. In this study, a cluster analysis will be performed on variables, obtained from the completed questionnaires to determine the institutional and governance factors influencing the performance of smallholder cooperatives in KZN.

The next chapter presents the characteristics of the 10 selected smallholder agricultural cooperatives in KZN.

CHAPTER 4

CHARACTERISTICS OF SELECTED SMALLHOLDER AGRICULTURAL COOPERATIVES IN KWAZULU-NATAL

4.1 Introduction

The potential of cooperatives and the extent of their development have in many cases fallen short of expectations (Reynolds, 1997). Financial failures, poor management, misuse of funds, use of cooperatives for political ends and low standards of performance have been the common constraints of cooperative development in many less-developed countries (Crawford, 1997). This chapter describes the characteristics of 10 case-study smallholder cooperatives in KwaZulu-Natal (KZN).

4.2 Description of selected cooperatives

With regards to total membership of the case-study cooperatives, the smallest cooperative had five members while the largest had 17 members. Though all the cooperative members for each respective cooperative were present for the interviews, which were held in October and November 2007, the respondents to the questionnaire were the chairpersons or deputy chairpersons of each cooperative. Table 4.1 gives a summary of some basic information on the selected cooperatives.

All the cooperatives were producer cooperatives marketing their own products. Five of the cooperatives focus on producing and marketing vegetables, three produce and market poultry, one is producing beef, and one is a bakery cooperative producing and marketing bread, buns and muffins. Some of the selected cooperatives have more than one line of enterprise. For example, poultry cooperative 2 engaged in post-harvest processing of jam made from guavas, peaches, papaws and melons. Poultry cooperatives 1 and 3 engaged in post-harvest processing of chicken (i.e., cleaning and packaging of chicken). In addition to their respective enterprises, vegetable cooperative 4 and poultry cooperative 2 also produced arts and crafts such as pottery and basket weaving. Five of the selected cooperatives were established in 2005 (Table 4.1), two were established in 2004, two in 2003 and one in 2002. With regards to registration, eight cooperatives registered in 2005 and two registered in 2006.

Table 4.1: Basic information on selected cooperatives, KwaZulu-Natal, 2007.

Cooperative type	Year cooperative established	Year cooperative registered	Respondent/s	Total membership at the time of the study	Location (district)	Average number of meetings per annum
Vegetable cooperative 1	2005	2005	Chairperson	11	Msunduzi	4
Vegetable cooperative 2	2003	2005	Deputy Chairperson	8	EThekwini	12
Vegetable cooperative 3	2003	2005	Chairperson	5	EThekwini	12
Vegetable cooperative 4	2002	2005	Chairperson	17	EThekwini	24
Vegetable cooperative 5	2004	2005	Chairperson	6	EThekwini	12
Beef cooperative	2005	2006	Chairperson	11	Msunduzi	Undefined*
Bakery cooperative	2005	2005	Chairperson	7	Camperdown	12
Poultry cooperative 1	2005	2006	Chairperson	8	Msunduzi	12
Poultry cooperative 2	2005	2005	Chairperson and Treasurer	12	Camperdown	24
Poultry cooperative 3	2004	2005	Chairperson	8	EThekwini	24

**The beef cooperative is currently focusing on breeding cattle and, hence, meetings are held on an ad hoc basis.*

Effective meetings are an important part of the development and ongoing operation of a cooperative business. Effective meetings are those in which goals of the meeting are met and members' participation is high (Harris, 2007). The study indicates that half of the selected cooperatives have, on average, one general meeting per month whilst three cooperatives have two general meetings per month. The beef cooperative's general meetings are only held if there is a need or when a crisis arises because they are currently focusing on breeding cattle. The next section discusses the selected cooperatives' structure and organisation.

4.3 Structure and organisation of selected cooperatives

4.3.1 Vision and objectives

Table 4.2 summarises the reasons that cooperative members provided for joining their cooperative.

Table 4.2: Reasons of members for joining the selected cooperatives, KwaZulu-Natal, 2007.

Cooperative type	Reasons for joining cooperative
Vegetable cooperative 1	- Encouraged by a community member - Affirmative action - Create employment opportunity for members
Vegetable cooperative 2	- Poverty reduction - Create employment opportunity for members - Provide fresh vegetables to orphans in the local community
Vegetable cooperative 3	- Encouraged by a community member - Provide fresh vegetables for the school feeding programme - To get the community involved in social and community development
Vegetable cooperative 4	- To feed the needy - orphans and HIV/AIDS patients - with fresh vegetables - Provide vegetables for the soup kitchen at the local school - Teach the local community to plant organic foods - Create employment opportunities for members
Vegetable cooperative 5	- Create employment opportunities for members - Provide fresh vegetables to the local community
Beef cooperative	- Create employment opportunities for members - Provide milk and beef products to the members and the local community
Bakery cooperative	- Encouraged by a community member - Community development - Poverty reduction - Create employment opportunities for members
Poultry cooperative 1	- Encouraged by a community member
Poultry cooperative 2	- Encouraged by a community member - Poverty reduction - Create employment opportunity for members - Affirmative action
Poultry cooperative 3	- Encouraged by a community member

These reasons included the need for community development, creation of employment, affirmative action (i.e., to provide employment to previously disadvantaged women and orphans), and to provide food security for the members' families. For example, the chairperson of the beef cooperative stated that their members joined for reasons of employment creation and to provide meat and milk products to the members and the local community. Members of six cooperatives also mentioned the encouragement of a community member as a reason for joining their cooperative.

Table 4.3 addresses the vision/objective and strategies of each selected cooperative. Nine of the selected cooperatives had growth of assets as one of their long term goals. Almost all the cooperatives were relying on donations from the government or private organisations for expanding their business. For example, the bakery cooperative negotiated for donations from a larger bakery company to acquire a larger oven for baking more bread loaves per batch. The chairperson of the bakery cooperative had initiated an informal partnership with a bakery company mainly for technical assistance in providing a good service and improving product quality. The large bakery company, according to its mission statement, has a corporate social responsibility to improve the quality of life for employees and their families as well as for the local community and society at large, and to plough back a small percentage of their profits to the communities. It voluntarily sponsors community development projects and, hence, showed willingness to provide technical assistance to the bakery cooperative. Since both organisations are in the same line of business they could relatively easily integrate vertically or horizontally. Apart from providing technical assistance to the bakery cooperative, no memorandum of understanding exists between the bakery cooperative and the bakery company.

The selected cooperatives relied on various markets to sell their products. The target market for 30% of the selected cooperatives was their neighbours (Figure 4.1), who are people living around the cooperative area. These selected cooperatives relied on this market because they did not have access to transport to ship their produce to cities and other markets. Thirty percent of the cooperatives sold their products on all markets, namely neighbours, local shops, monthly pensioners and schools while 20% relied only on local shops and neighbours and

10% relied only on local shops. The beef cooperative did not sell any product since it is currently breeding cattle.

Table 4.3: Vision/objective and strategies of selected smallholder cooperatives, KwaZulu-Natal, 2007.

Cooperative type	Vision/ Objective	Strategy
Vegetable cooperative 1	- To obtain a larger land area from the Municipality since they are currently using school grounds. - Increase number of vegetable tunnels to 12 from the one they currently have. - Diversify their plantings to green pepper, carrots and cucumber and engage in post-harvest processing of tomato sauce and tinned tomatoes.	- To obtain financial assistance from Ithala Bank to erect an additional vegetable tunnel.
Vegetable cooperative 2	- Build a pack house for their vegetables. - Obtain an irrigation system for the vegetables.	- Arranged to obtain a pack house and irrigation system as a donation from the KZNDAEA*.
Vegetable cooperative 3	- Extend their sales to nearby cities and towns. - Plant on all the 0.8ha of land available to them instead of the 0.5ha they are currently using.	- Obtain training on producing high quality vegetables from the KZNDAEA.
Vegetable cooperative 4	- Plant and sell organic vegetables to the community. - Supply organic foods to large chain stores such as Woolworths and Pick ‘n Pay. - Diversify into other enterprises such as Nguni cattle and goats.	- To apply for funds from the Department of Trade and Industry to achieve their vision. - Applied for more land from the KZNDAEA.
Vegetable cooperative 5	- Create employment opportunities, especially for the community youth. - Establish a warehouse that provides fruits and vegetables for the local stalls and shops.	- Applied for a loan for the warehouse from Ithala Bank. The loan is yet to be approved.
Beef cooperative	- Increase the number of Nguni cattle. - Own more farmland for cattle ranching/grazing.	- To apply for more land from the KZNDAEA.
Bakery cooperative	- To expand and grow into a private company. - Increase distribution of products to cities and towns.	- Negotiated with a larger bakery company for assistance in acquiring a larger oven for baking more bread loaves per batch.
Poultry cooperative 1	- Expand their poultry houses to seven from the three they currently have. - Diversify into other enterprises such as cattle breeding and goat production.	- To apply for funding for chicken feed from Ithala Bank.
Poultry cooperative 2	- Provide employment opportunities to community members. - Decrease poverty levels, especially of orphans, by 50% by 2009. - Diversify into mushroom and sugarcane enterprises.	- Build temporary poultry pens until they obtain finance to build proper poultry structures. - Negotiated with the KZNDAEA for assistance with mushroom and sugarcane production advice.
Poultry cooperative 3	- Diversify into a poultry hatchery enterprise. - Provide employment opportunities to community members.	- Applied for a loan which is still to be approved by Ithala Bank to expand their business.

** KZNDAEA = KwaZulu-Natal Department of Agriculture and Environmental Affairs*

4.3.2 Gender and membership composition of selected cooperatives

Table 4.4 shows the gender and age composition of members of the selected cooperatives. Only three cooperatives comprised of members of one gender only. The bakery cooperative and vegetable cooperative 4 comprised of only females, and vegetable cooperative 5 of only males. Table 4.4 shows that females are in the majority in seven of the selected cooperatives. In seven of the case studies, the majority of members were older than 40 years of age. Vegetable cooperatives 2 and 3 and the beef cooperative had no members less than 40 years of age.

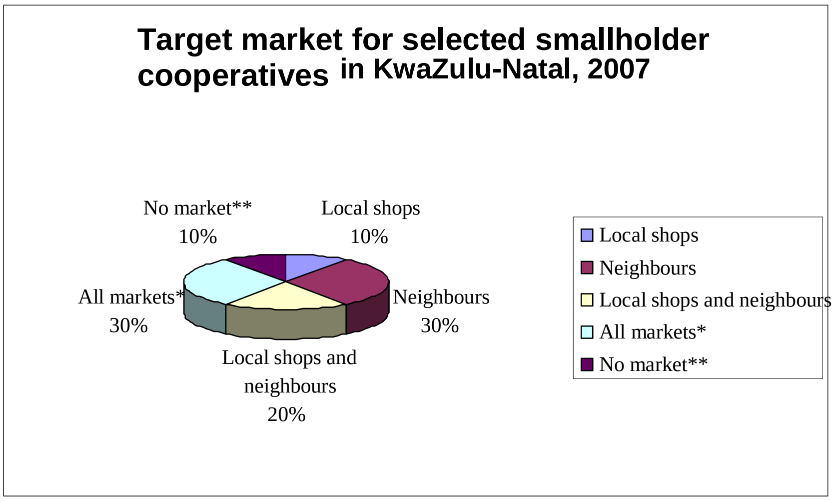

Figure 4.1: Target market for selected smallholder cooperatives, KwaZulu-Natal, 2007.

** "All markets" refers to neighbours, local shops, monthly pensioners and schools.*
*** "No market" means the cooperative does not rely on any market at present (beef cooperative).*

4.3.3 Characteristics of cooperative chairpersons of selected cooperatives

Leadership is not merely a function of traits that a person is born with; it is equally dependent upon the subsequent experiences, education and training (Gupta, 2008). All the selected cooperatives considered education as a prerequisite for their chairperson. The United States Department of Agriculture (USDA) agrees that education is an investment but argues that too many cooperative leaders and advisers consider it only as a cost that must be cut whenever times get tight (Hardesty, 2004). Members' interests are protected by putting in place a management committee with the relevant commercial skills (O'Connor and Thompson, 2001).

Table 4.4: Gender and age composition of cooperative members, KwaZulu-Natal, 2007.

Cooperative type	Total membership	Gender		Membership age	
		Male (%)	Females (%)	> 40 years (%)	<40years (%)
Vegetable cooperative 1	11	27	73	73	27
Vegetable cooperative 2	8	75	25	100	0
Vegetable cooperative 3	5	20	80	100	0
Vegetable cooperative 4	17	0	100	41	59
Vegetable cooperative 5	6	100	0	33	67
Beef cooperative	11	55	45	100	0
Bakery cooperative	7	0	100	71	29
Poultry cooperative 1	8	25	75	88	12
Poultry cooperative 2	12	17	83	83	17
Poultry cooperative 3	8	25	75	50	50

Table 4.5 shows the gender, age and qualification of the chairperson of each selected cooperative, and the minimum skills required for a chairperson to be appointed.

4.4 Sources of finance for selected cooperatives

The sources of finance for the cooperatives' activities were members' equity, government donations and loans from banks (especially Ithala Bank, a parastatal mandated to support enterprises undertaken by previously disadvantaged people). For example, the beef cooperative obtained 50 Nguni cows and cattle feed as initial capital from the KZNDAEA as a donation. The bakery cooperative obtained R250000 (40% grant and 60% loan) from the KZNDAEA which was used to purchase their baking equipment (Table 4.6). In addition to members' equity, vegetable cooperative 2 obtained extension support (i.e., advice on vegetable production) and additional capital in the form of fertiliser, fencing, and use of a tractor as a donation from the KZNDAEA. Financial assistance to registered cooperatives by the government through Ithala Bank was provided based on a project proposal which had to be submitted to the KZNDAEA for approval.

Table 4.5: Characteristics of chairpersons of selected cooperatives, KwaZulu-Natal, 2007.

Cooperative type	Chairperson			
	Gender	**Age (years)**	**Highest Qualification**	**Minimum skills required for chairperson appointment**
Vegetable cooperative 1	Female	55	Grade 10	- Business minded - Trustworthy - Goal orientated
Vegetable cooperative 2	Male	42	Grade 7	- Committed - Good communication skills - Trustworthy
Vegetable cooperative 3	Male	50	Grade 12	- Experience in agricultural activities - Good communication skills
Vegetable cooperative 4	Female	57	Grade 12	- Literate - Committed - Experience in executing plan of action
Vegetable cooperative 5	Male	27	Grade 12	- Good communication skills - Organisation and networking skills - Good leadership and analytical skills
Beef cooperative	Male	57	Grade 7	- Knowledge of farming - Loyalty
Bakery cooperative	Female	53	Grade 12	- Commitment
Poultry cooperative 1	Female	44	Grade 11	- Trustworthy - Active in cooperative activities
Poultry cooperative 2	Female	57	Grade 9	- Active cooperative member - Loyalty
Poultry cooperative 3	Female	63	Grade 10	- Experience in the cooperative business - Knowledge and drive for the business

According to a loan analyst from Ithala Bank, farmer cooperatives are funded by the KZNDAEA through Ithala Bank (Nhlapho, 2008). Since 2005 registered farmer cooperatives have been issued loans as long as the cooperative submitted its application with a sound business proposal; this took four to six weeks to approve. District coordinators were appointed by the KZNDAEA to screen cooperatives eligible for funding. These District coordinators would visit the site, study the business proposal and then register the cooperatives for business management training at a Further Education and Training (FET) College (FET Colleges are public organisations which provide diverse programmes of education and training to various communities). The business proposal would then be sent to the KZNDAEA head office for approval.

Four of the selected cooperatives (vegetable cooperatives 1 and 3, the bakery cooperative and poultry cooperative 1) obtained loans from Ithala Bank that were guaranteed by KZNDAEA, whilst others are still waiting for their loans to be approved. In most cases, the issue of loans for any cooperative is done through quotations provided by the cooperative; e.g., if a poultry cooperative requires poultry feed, they obtain a quotation from Epol (a company that sells feed) and Ithala Bank pays the feed company directly. This approach serves to avoid misuse of funds by cooperative members and highlights principal-agent control problems that are commonly perceived to result in mismanagement.

In the past, there was no defined criterion for measuring the creditworthiness of cooperatives. As long as the cooperative submitted a business plan, Ithala Bank would check the viability of the cooperative and issue the loan. However, the creditworthiness of cooperatives is currently under review by the KZNDAEA. Hence, the issue of loans to cooperatives has been suspended because levels of default were unacceptably high (Nhlapo, 2008). Cooperatives that fail to pay back their loans are not granted any further funds until they pay back their outstanding loan, otherwise the government hands over such cooperatives to attorneys to deal with the case. Initially, the maximum loan amount offered to cooperatives was R50000 in 2005 but was increased is R500000 in 2006 to allow for the funding of larger cooperative projects. According to the Ithala Bank loan analyst, interest charged on these loans varies depending on the loan amount. For example, loan amounts less than R100000 are charged an interest rate of 11% and any loans greater than R100000 carry the prime interest rate (at the time of the survey it was 14%). This is done to discourage members from borrowing large amounts in the absence of collateral to secure the loan (Nhlapho, 2008).

Table 4.6: Initial capital structure of selected smallholder agricultural cooperatives, KZN, 2007.

Case study	Number of members at the time of study	Equity capital (R)	Estimated value of grants/ donations/ other support for cooperatives (R)	Loans from Ithala Bank (R)	Interest rate on loans (%)**	Estimated total initial capital investment (R)***
Vegetable cooperative 1	11	1000	- A vegetable tunnel, seedlings, fertiliser and advice on tomato production from Film Flex (a private organisation) valued at R10000 in 2005. - Extension support in the form of marketing strategies training from KZNDAEA*.	163400	Prime	174400
Vegetable cooperative 2	8	800	- Fencing worth R10000, fertiliser worth R1500 in 2005, and use of a tractor for ploughing as a service from KZNDAEA.	0		12300
Vegetable cooperative 3	5	300	- R20000 grant from KZNDAEA. - Technical advice on vegetable production as a service from KZNDAEA.	5000	11	25300
Vegetable cooperative 4	17	1100	- Technical advice on vegetable production as a service from KZNDAEA.	0		1100
Vegetable cooperative 5	6	2500	- No grant or donation received.	0		2500
Beef cooperative	11	0	- 50 Nguni cows and feed worth R250000 in 2005 as a donation from KZNDAEA.	0		250000
Bakery cooperative	7	1000	- R100000 grant from KZNDAEA.	150000	Prime	251000
Poultry cooperative 1	8	240	- Technical support on poultry production as a service from KZNDAEA. - Three poultry pens, brooders, feeders, chicks valued at R75000 in 2005 from KZNDAEA.	200000	Prime	275240
Poultry cooperative 2	12	500	- Two weeks training on poultry production training from Further Education and Training (FET) College in EThekwini District at a cost of R25000 in 2005. - Poultry pen, brooders, feeders, chicks valued at R25000 in 2005 from KZNDAEA. - Chicks and feeds valued at R2500 in 2005 from Social Welfare.	0		53000
Poultry cooperative 3	8	3000	- Two weeks training on good business management skills and cooperative functions from FET College in EThekwini District at a cost of R25000 in 2004. -Technical advice on poultry maintenance from KZNDAEA as a service.	0		28000

** KZNDAEA = KwaZulu-Natal Department of Agriculture and Environmental Affairs*
***The prime interest rate at the time of survey in November 2007 was 14%*
***Includes equity capital, loans, and estimated value of grants and donations
Source: Selected cooperatives and Ngubane (2008).

Levels of equity contributed by members of the selected cooperatives depended on what each member could afford at the time of establishing the cooperative. Most of the selected cooperatives are currently financing their operations from government donations and sales turnover. It is clear that equity capital comprised a relatively small proportion of the estimated total initial capital investment. The beef cooperative relies on the KZNDAEA for their cattle feed, vaccines and other production inputs. Four of the cooperatives received loans from the KZNDAEA through Ithala Bank. Table 4.6 summarises the range of equity investments, grants (donations) and loans obtained by the selected cooperatives since inception.

Table 4.6 shows that the beef cooperative obtained a government donation of 50 head of Nguni cattle valued at R250000 as start-up capital in 2005 and also obtains production inputs in the form of cattle feed and winter licks. Nine of the case studies obtained at least some of their initial capital from the government in the form of a grant and/or donation. For example, vegetable cooperative 1 obtained a tunnel, fertiliser, seedlings and extension support from a private organisation (Film Flex). Vegetable cooperative 2 obtained fencing, fertiliser, and use of a tractor for ploughing from the KZNDAEA. According to an extension officer from Msunduzi sub-district, the only benefit available for registered cooperatives was the ability to apply for government funding for their proposed projects (Ngubane, 2008).

Traditional cooperatives are not allowed to seek capital from non-patrons (Hardesty, 2004), and often rely on government for loans. Commercial banks often require collateral (which smallholder cooperatives cannot provide) in order to issue loans. Traditional cooperatives have a problem in acquiring equity capital because the residual claimant (benefactor) is the patron of the firm, not the investor (IIiopoulos, 2003). In U.S. agricultural cooperatives, equity capital is typically provided by utilising these approaches: direct investment, retained patronage refunds, or per-unit capital retains (IIiopoulos, 2003). The fact that there is no evidence of any loans from commercial banks in Table 4.6 is evident that the study cooperatives are not creditworthy in the eyes of private sector lenders and investors. Table 4.7 shows the implications of equity and debt capital constraints faced by the study cooperatives to finance growth assets.

Table 4.7: Implications of equity and debt capital constraints faced by the selected cooperatives to finance growth assets, KwaZulu-Natal, 2007.

Case study	Implications of equity and debt constraints
Vegetable cooperative 1	- Currently operating on school premises with one vegetable tunnel, growing tomatoes in one season per year to generate funds. This makes it impossible for them to maintain a continuous supply of vegetables all year round and, hence, to generate regular income.
Vegetable cooperative 2	- Lack of adequate water supplies for their produce - Inadequate farm equipment, such as a tractor, to assist with land preparation.
Vegetable cooperative 3	- Currently using school premises which has no room for expansion - Inadequate farm equipment (such as a tractor), irrigation system for their vegetables and shortage of labour considering the cooperative comprises of five members only.
Vegetable cooperative 4	- Dry soil and lack of irrigation water for their vegetables - Lack of fencing creates more problems for them since animals such as cattle, goats and sheep graze in their fields if they are not guarded.
Vegetable cooperative 5	- Inadequate finance to erect a cold room to keep fruits and vegetables fresh.
Beef cooperative	- Lack of finance for daily operations since their cattle will only be sold in 2009 as per government order.
Bakery cooperative	- Limited baking equipment, which is a problem in that the cooperative cannot satisfy the demand for bread
Poultry cooperative 1	- Inadequate finance to repay the loan, purchase chicken feed and increase poultry pens for production.
Poultry cooperative 2	- Financial constraints for their daily operations such as supply of chicken feed and vaccines, and fencing.
Poultry cooperative 3	- Inadequate finance for daily operations and, hence, depend on the government for funding to finance daily operations.

Many of the case studies cannot afford to hire labour and purchase other operating inputs, which may suggest that these cooperatives are not sustainable. Members of eight of the study cooperatives were required to contribute equal labour hours and shared profits equally. However, members of two of the case studies (vegetable cooperative 1 and beef cooperative) contributed different labour hours but shared profits equally. Equal profit sharing for equal labour effort may not fully address the “labour free-rider” problem as members have an incentive to shirk while benefiting from the work of others.

All of the selected cooperatives mentioned limited equity and debt capital for financing growth assets as factors influencing their performance in terms of growth and diversification. Whilst some of the poultry cooperatives lost their chickens to theft due to lack of physical infrastructure (fencing), other cooperatives faced problems of inadequate farm equipment and implements such as poultry pens, tractors and irrigation systems. The poultry and vegetable cooperatives indicated that they required the installation of more poultry pens and vegetable tunnels, respectively, in order to improve their performance. The highest turnover (gross income) for the vegetable cooperatives in 2006/07 was R36000 and the lowest was R2300. With regards to poultry cooperatives, the highest turnover was R150000 and the lowest was R4800. The bakery cooperative had a turnover of R180000 in 2006/07 and the beef cooperative did not generate any income at the time of the survey since the cooperative was still breeding cattle.

4.5 Financial management of selected cooperatives

4.5.1 Banking

An active bank account is compulsory for each registered cooperative. According to the chairpersons of all selected cooperatives, the Treasurer manages the financial matters of the cooperative. Table 4.8 shows that seven cooperatives kept less than R5000 in their bank accounts at the time of the survey, while three cooperatives kept between R5000 and R10000. All the chairpersons felt that the actual amounts of their bank balances were confidential and, hence, only the range of funds kept in their bank accounts was provided.

Table 4.8: Range of funds kept in the bank by selected cooperatives, KwaZulu-Natal, 2007.

Cooperative type	Range of funds kept in bank account (R)
Vegetable cooperative 1	0 - 4999
Vegetable cooperative 2	0 - 4999
Vegetable cooperative 3	0 - 4999
Vegetable cooperative 4	0 - 4999
Vegetable cooperative 5	5000 - 10000
Beef cooperative	0 - 4999
Bakery cooperative	5000 - 10000
Poultry cooperative 1	0 - 4999
Poultry cooperative 2	5000 - 10000
Poultry cooperative 3	0 - 4999

Any surplus generated by vegetable cooperatives 1 and 3, the bakery cooperative and poultry cooperative 1 is first used to pay back loans from Ithala Bank. The remaining surplus is then used to purchase the required day-to-day production inputs before they distribute any surplus to cooperative members.

4.5.2 Turnover and distribution of net surplus

Table 4.9 shows the amount of turnover (gross income), the trend in turnover generated by each selected cooperative in 2006/07 and the distribution of any surpluses among members. The bakery cooperative generated the highest turnover per annum (R180000), followed by poultry cooperative 1 with R150000. The relatively high bakery turnover may be a result of the greater production generated with the use of advanced equipment for baking bread and other products, and a ready market for their product. The bakery cooperative not only supplies its neighbours but also receives large orders from local shops. Vegetable cooperative 3 had the least turnover per annum (R2300).

Table 4.9: Turnover (gross income) of selected cooperatives per annum, KwaZulu-Natal, 2006/07.

Cooperative type	Turnover per annum (R)	Trend in turnover since establishment	Distribution of surplus among members
Vegetable cooperative 1	26000	No change	Equally
Vegetable cooperative 2	6600	Increased	Equally
Vegetable cooperative 3	2300	Increased	Equally
Vegetable cooperative 4	5650	Increased	Equally
Vegetable cooperative 5	36000	Increased	Equally
Beef cooperative	Not applicable since the cooperative is still breeding cattle until 2009	Not yet applicable	Not yet applicable
Bakery cooperative	180000	Increased	Equally
Poultry cooperative 1	150000	Increased	Equally
Poultry cooperative 2	68000	Increased	Equally
Poultry cooperative 3	4800	Decreased	Equally

Seven of the chairpersons reported that the turnover of their enterprise had increased since establishment though most of it was used to repay the loan and purchase inputs. The chairpersons of poultry cooperative 3 and vegetable cooperative 1 reported that there has been a decrease and no change in the turnover of their enterprises, respectively, due to limited growth assets. With regards to the beef cooperative, no turnover was generated at the time of the interview. Any surplus generated by the selected cooperatives was distributed equally among members. Thus, as expected in a traditional cooperative, returns were not proportional to individual investment. The beef cooperative is currently not generating any surplus.

4.5.3 Growth

The chairpersons of two selected cooperatives (vegetable cooperatives 4 and 5) mentioned that for growing their business they had considered joint ventures with larger food chain organisations (such as fruit and vegetable stores or Pick ‘n Pay for organic foods) to add value to their produce; e.g., through warehousing, processing, branding and labelling (see Table 4.10). Joint ventures allow cooperatives to exploit economies of scale (Gripsrud *et al.*, 2000).

Table 4.10: Growth opportunities considered by selected cooperatives, KwaZulu-Natal, 2007.

Type of growth opportunity	Number of cooperatives acknowledging factor
Cooperatives considering joint venture only	2
Cooperatives considering converting to investor-owned firm (IOF) only	4
Cooperatives considering joint venturing and eventually converting to an IOF	3
Cooperatives not considering either joint venture or converting to IOF as a growth opportunity	1

According to Hardesty (2004), joint ventures may be the only way cooperatives can afford to own part of an expensive facility or market a new product nationally. With regards to converting to investor-owned firms (IOFs), four chairpersons confirmed that they had considered eventually converting to an IOF once their cooperatives were well established. Only one cooperative (vegetable cooperative 2) had not considered either joint venturing or converting to an IOF because, the chairperson stated, they were still at an early stage of development.

4.5.4 Auditing

The Cooperative’s Act of 2005 states that an audit of the affairs of a cooperative must be conducted annually in respect of each financial year in order to ensure financial statements are drawn up in conformity with generally accepted accounting practices (Government Gazette, 2005). In addition, the auditing report should state whether the assets and facilities of a co-operative are being properly managed and the operations of a cooperative are being conducted in accordance with cooperative principles (Government Gazette, 2005). All selected cooperatives had their books audited (either internally or externally) thereby revealing their willingness to promote good corporate governance. Internal auditing is an independent evaluation function established within an organisation to examine and evaluate its activities to improve the effectiveness of risk management, control and governance processes. External auditing, on the other hand, is a periodic examination of the books of account and records of a company conducted by an independent third party (an auditor) to evaluate the efficiency, economy and effectiveness of the company's internal control systems and business activities (Jackson and Stent, 2007). External auditing promotes transparency and, hence, accountability to investors (Lyne, 2008).

According to Chorafas (2001), well-planned and properly structured auditing programmes are essential to effective risk management and adequate internal control systems for any organisation. In addition, effective internal and external audit programmes are a critical defence against fraud and provide vital information to the board of directors about the effectiveness of internal control systems (Chorafas, 2001). Auditing allows cooperatives to take account of their financial business transactions, how much stock they acquired, how much they sold and to rectify any errors detected. Seven of the selected cooperatives carry out internal auditing while only three cooperatives use external auditors. External auditing is done by Ithala Bank whilst internal auditing is done by extension officers. All the selected cooperatives mentioned that they are audited at least once a year.

4.6 Government assistance needed by selected cooperatives

Table 4.11 shows some of the assistance that the chairpersons said their cooperatives required in order to improve their cooperatives' business performance. In addition, five of the selected cooperatives responded that they required bookkeeping training for management. Five of the cooperatives - vegetable cooperative 1, all three poultry cooperatives and the beef cooperative - required skills training on the production and maintenance of vegetables, poultry management, and cattle management and maintenance, respectively. Only vegetable cooperative 5 suggested training in conflict resolution.

Table 4.11: Government assistance needed by selected cooperatives, KwaZulu-Natal, 2007.

Cooperative type	General management and leadership	Production capacity	Financial assistance and management	Marketing
Vegetable cooperative 1	- Skills training for management	-Farm implements, e.g., tractor	-Financial advice on investment -Financial assistance for purchasing additional vegetable tunnel.	- Market research and development training
Vegetable cooperative 2	-Leadership and management training - Bookkeeping training for all members	-Farm implements provision, e.g., tractor and irrigation scheme	-Financial assistance for purchasing additional vegetable tunnel and pesticides.	- Market research and development training
Vegetable cooperative 3	- Leadership course for management - Bookkeeping training for all members	-Crop production training, from planting to harvesting	- No assistance required	- Market research and development training
Vegetable cooperative 4	-Leadership training for all members	-Provision of farm equipment, e.g., tractor and irrigation scheme -Vegetable production and pest and disease control	-Financial management and investment training -Financial assistance for diversification	- No assistance required (have had training).
Vegetable cooperative 5	- Leadership training for all members - Bookkeeping training for management - Conflict resolution training	-Post harvest monitoring of cooperatives by the KZNDAEA to ensure that cooperatives are operating well	- Financial assistance for diversification	- Market research and training
Beef cooperative	- Cattle maintenance and management	-Provision of farm equipment, e.g., tractor	- Financial assistance for daily operations	- No assistance required (have had training)
Bakery cooperative	- Bookkeeping training - Leadership and management training	-No assistance required	-Financial assistance to purchase baking equipment	- No assistance required
Poultry cooperative 1	-Skills training on poultry production for all cooperative members - Bookkeeping training for all members -Poultry management training	-Provision of additional chicken runs - Security for their chickens	-Financial advice and investment - Financial assistance for growth	- Market research and development training
Poultry cooperative 2	- No assistance required	-No assistance required	- Financial assistance for building more chicken runs	- No assistance required
Poultry cooperative 3	- Poultry management training - Bookkeeping training for all members	-No assistance required	- Financial assistance for building more poultry pens	- Market research and development training

4.6.1 General management and leadership

Chairpersons of the five selected vegetable cooperatives indicated that they required training on the general leadership and management of their cooperative. The training is usually done by a FET College or KZNDAEA as extension support.

4.6.2 Production capacity

In terms of production, three of the five vegetable cooperatives required farm implements such as a tractor to till the land and an irrigation scheme in order to improve vegetable yields. The beef cooperative required a tractor to diversify into other enterprises such as vegetable production in order to generate funds required for daily operations. One poultry cooperative required support in the form of more poultry pens and security fencing for their enterprise. In addition, vegetable cooperative 3 required skills training on vegetable crop production from planting to harvesting. The chairperson of vegetable cooperative 5 stated that there was a need for post-harvest monitoring in order to evaluate if extension support was used effectively and efficiently. The chairperson for vegetable cooperative 4 stated that they required government to assist with pest and disease control for their vegetables.

4.6.3 Financial assistance and management

With regards to financial management, nine of the cooperative chairpersons stated that they required financial assistance for various purposes such as erecting more vegetable tunnels, more poultry pens for the poultry cooperatives, to finance daily operations, and financial and investment training. Three of the chairpersons stated that they required some education on financial management and investment since they wish to expand their businesses into other enterprises, such as post-harvest processing, to improve their performance.

4.6.4 Marketing

Cooperatives need to develop a plan to address how they will react to the various strategies that competitors may use to retain their business (Harris, 2007). Chairpersons of six selected cooperatives stated that they did not have access to education and training on marketing research and development, which includes finding information on choosing the best product the cooperative should invest in, finding the best place to sell their products, deciding on the best price to sell their produce and how the cooperative should go about promoting their product once it is available.

CHAPTER 5

CLUSTER ANALYSIS

5.1 Introduction

The main objective of cluster analysis is to identify homogeneous groups or clusters of variables in a multivariate data set (Everitt, 1980). In this chapter, cluster analysis is performed on variables to test for positive relationships hypothesised between cooperative performance indicators, institutional indicators and governance indicators.

5.2 Cluster analysis

The basic aim of cluster analysis is to find the “natural groupings”, if any, of a set of individuals (cases or variables). Whilst cluster analysis can be used in several ways, the kind of cluster analysis utilised in this research is a way to form similar sets of variables rather than similar sets of cooperatives (Chatfield and Collins, 1980). The purpose of the analysis is, therefore, to draw inferences about theoretical propositions and not about a population of cooperatives. In essence, cluster analysis aims to allocate a set of individuals/variables to a set of mutually exclusive groups such that the individuals/variables within a group are similar to one another while individuals/variables in different groups are dissimilar (Chatfield and Collins, 1980:212). Hierarchical clustering is appropriate for small samples (typically $n < 250$) and can also be applied to qualitative (dummy) variables (Garson, 2008). In this study, cluster analysis is used to test the proposition that good cooperative performance depends on good institutional arrangements and good governance.

5.3 Institutional, governance and performance indicators

Table 5.1 represents the variables used for the cluster analysis, their definitions, the constructs to which they relate and the relevant scores (0 or 1). Decisions regarding the desirability of these attributes were informed by the NIE literature (Williamson, 1985; North, 1990; Cook, 1995; Kherallah and Kirsten, 2002). NIE is concerned with the social, economic and political institutions that govern everyday life (Kherallah and Kirsten, 2002).

Table 5.1: Indicator variables observed in the cooperative case studies.

Variable	Definition of variables	Score	Empirical construct
Surplus	Is the cooperative generating a net surplus or price advantage for its members?	Yes = 1, No = 0	**Performance Indicators**
Lowequity	Low levels of equity capital?	No = 1, Yes = 0	
Reliance	Was the cooperative financed mainly with government grants/loans?	No = 1, Yes = 0	
Lowasset	Low levels of growth assets?	No = 1, Yes = 0	
Lossmem	Loss of membership?	No = 1, Yes = 0	
Skillstrain	Did the cooperative members obtain skills training for the enterprise (e.g., poultry, vegetables)?	Yes = 1, No = 0	
Lackmark	Poor market arrangements?	No = 1, Yes = 0	
OpenMem	Non-members qualify for the same prices paid by/to members?	No = 1, Yes = 0	**Institutional indicators**
PropSurp	Net surpluses are/will be distributed in proportion to individual equity contributions?	Yes = 1, No = 0	
CapGains	Members can buy shares that can appreciate in value?	Yes = 1, No = 0	
Horizon	New members pay par value to join the cooperative?	No = 1, Yes = 0	
Influence	Voting rights to elect directors are proportional to individual equity contributions?	Yes = 1, No = 0	
Unity	Members share same investment preferences?	Yes = 1, No = 0	
Labinput	Members are rewarded according to their labour input?	Yes = 1, No = 0	
Election	Directors duly nominated and elected at annual general meeting (AGM)?	Yes = 1, No = 0	**Governance indicators**
Ballot	Voting by secret ballot?	Yes = 1, No = 0	
Audit	Annual accounts subject to independent audit?	Yes = 1, No = 0	
Lackinfo	Audited accounts accessible by all members?	Yes = 1, No = 0	
Notice	Sufficient notice period for AGM?	Yes = 1, No = 0	
Minutes	Minutes of AGM available to all members?	Yes = 1, No = 0	
Education	Management of the cooperative is trained?	Yes = 1, No = 0	

Seven variables, presented in Table 5.1, were selected as indicators of enterprise performance. These variables are *surplus, lowequity, reliance, lowasset, lossmem, skillstrain and lackmark*. *Surplus* reveals the ability of the business to reward members. The variables *lowequity* and *reliance* suggest that the study cooperatives are not creditworthy in the eyes of private sector lenders or investors; hence, the enterprises are constrained to raising their capital through government donations and loans. Low equity and debt have implications for the availability of growth assets for these cooperatives (*lowasset*). From the members' perspective, performance is measured by the variables *surplus, lossmem* and *skillstrain.* There has been a loss of members *(lossmem*) from the majority of the study cooperatives since they registered due to financial constraints, which resulted in some members losing hope, and some members misusing cooperatives to pursue political goals. Smallholder cooperatives often face a number of barriers, e.g., transport constraints to accessing the market for their produce (Magingxa and Kamara, 2003). Hence, the availability of a market (*lackmark*) and transport for cooperatives' produce is crucial to the overall performance of cooperatives.

Seven variables, presented in Table 5.1, were selected as institutional indicators. These variables are *openmem, propsurp, capgains, horizon, influence, unity* and *labinput*. Although cooperative membership is open to new members, o*penmem* reflects that non-members qualify for the same prices paid to/by existing members, so creating an external free-rider problem. As expected in a TC, returns are not proportional to individual investment (*propsurp).* In TCs shares are non-transferable and non-appreciable (*capgains)* creating a disincentive for members to invest (Chaddad and Cook, 2004). The variables *horizon* and *unity* suggest the possibility of free-rider problems since the gains from cooperative action can be accessed by individuals that did not fully invest in developing the gains, whether those individuals are new(er) members or non-members. In TCs all members of a cooperative have equal voting power (one-member, one-vote). *Influence* suggests that members are discouraged from investing because their voting rights are not proportional to their individual equity contributions. Failure of cooperatives to reward members according to their labour input (*labinput*) creates an incentive for some members to shirk.

Seven variables, presented in Table 5.1, were selected as indicators of governance. These variables are *election, ballot, audit, lackinfo, notice, minutes and education*. The variables *election* and *ballot* reveal the possibility of institutional flaws of TCs, leading to an influence problem (Cook, 1995). According to the Cooperatives Act of 2005, an audit *(audit)* of the affairs of a cooperative must be conducted annually to ensure that financial statements are drawn up in conformity with generally accepted accounting practices. In addition, cooperatives are required to provide a report on whether their assets and facilities are being properly managed and the operations of a cooperative are being conducted in accordance with cooperative principles. They should also provide information on any other matter the auditors are required to report on in terms of a cooperative's constitution (Government Gazette, 2005). Positive scores on the variables a*udit, lackinfo, notice* and *minutes* indicate that provisions for good governance stipulated by the Cooperatives Act of 2005 have, in fact, been implemented. Access to necessary skills for members and education of management *(skillstrain* and *education*) are expected to have positive implications for the ability of members to improve overall performance of their cooperative (Ortmann and King, 2007a).

Ranking the cooperatives according to the seven indicators of performance (listed in Table 5.1) distinguishes the vegetable cooperatives 3, 4 and 5, and the poultry cooperatives 2 and 3 as better performers (since they contain the most good characteristics or positive attributes of performance) and vegetable cooperatives 1 and 2 as the worst performers (since they contain the least number of positive attributes of performance). The ranking is presented in Table 5.2. Cooperative scores on institutional and governance indicators are presented in Appendices 2 and 3, respectively.

Table 5.2: Ranking of cooperative case studies according to performance indicators, KwaZulu-Natal, 2007.

	Enterprise performance indicators *							**Total positive attributes**	**Ranking**
	Surplus	Lowequity	Reliance	Lowasset	Lossmem	Skillstrain	Lackmark		
Vegetable cooperative 3	1	1	0	0	0	1	1	4	**1**
Vegetable cooperative 4	1	0	0	0	1	1	1	4	**1**
Vegetable cooperative 5	1	0	1	0	0	1	1	4	**1**
Poultry cooperative 2	1	0	0	0	1	1	1	4	**1**
Poultry cooperative 3	1	0	0	1	1	1	0	4	**1**
Poultry cooperative 1	1	0	0	0	0	1	1	3	**6**
Bakery cooperative	1	1	0	0	0	1	0	3	**6**
Beef cooperative	0	0	0	1	0	1	0	2	**8**
Vegetable cooperative 1	0	0	0	0	1	0	0	1	**9**
Vegetable cooperative 2	1	0	0	0	0	0	0	1	**9**

Notes: *For all enterprise performance variables, 1 represents the presence of a positive attribute or good characteristic, and 0 otherwise. Scores are based on cooperative members' responses.

5.4 Cluster analysis of variables

In this study, cluster analysis was applied to the 21 indicators representing the three constructs in the empirical model: good performance, good institutions and good governance indicators (Table 5.3). The specific aim of the analysis was to identify ‘natural groupings’ of these 21 variables. This was done by minimising the squared Euclidean distance within a decreasing number of clusters containing an increasing number of positively related variables. In this way, a relatively small number of clusters or natural groupings can be identified, each containing a reasonably homogenous group of variables. The conceptual model of cooperative performance (Figure 2.1) proposed in this study predicts that the ‘natural groupings’ identified by cluster analysis should contain a healthy mix of variables drawn from each of the different constructs because positive relationships are expected between sound institutional arrangements, good governance and good enterprise performance. In other words, **the natural groupings detected through cluster analysis should <u>not</u> coincide with the empirical constructs, as this would indicate the absence of strong positive relationships between the empirical constructs.**

5.5 Interpretation of results

Cluster analysis revealed two distinct natural groupings or clusters of variables. The mean Euclidean distance within clusters increases markedly from 2.318 to 5.057 when the number of clusters diminishes from two to one, indicating a sudden loss of homogeneity within the group of variables when fewer than two clusters are retained (Table 5). The cluster analysis undertaken in this study shows that institutional and governance variables affect performance in quite distinct ways as there is little mixing of these constructs in the clusters. There is little overlap between positive institutional and governance indicators, which is not consistent with the theoretical model illustrated by Figure 2.1. Perhaps this is because the cooperatives complied with the good governance requirements of the new Cooperatives Act and also with its bad institutional arrangements. Nevertheless, positive indicators of good institutional arrangements are correlated with the positive indicators of good performance captured in Cluster 1. Similarly, the positive indicators of good governance are correlated with the positive indicators of good performance captured in Cluster 2.

Table 5.3: Inter-relationships between performance, institutional and governance indicators, selected smallholder cooperatives, KwaZulu-Natal, 2007.

Causal indicators	Openmem	Propsurp	Capgains	Horizon	Influence	Unity	Ballot	Education	Labinput	Election	Audit	Lackinfo	Notice	Minutes
Performance indicators	**Cluster 1**								**Cluster 2**					
Lowequity														
Reliance														
Lowasset														
Lossmem														
Surplus														
Skillstrain														
Lackmark														

Key

Variables measuring institutional arrangements

Variables measuring governance problems

5.5.1 Cluster 1

Cluster 1 identifies positive relationships between the four performance indicators *lowequity, reliance*, *lowasset* and *lossmem*; six institutional variables *openmem, propsurp, capgains, horizon*, *influence* and *unity*; and two governance indicators *ballot* and *education*. Cluster 1 linked the subset of performance indicators that measure the ‘equity capital problem’ to institutional arrangements that discourage investment. *Openmem* indicates an external free-rider problem, which occurs when current members and non-members use resources for their individual benefit but property rights are not sufficiently well defined to ensure that current members or non-members bear the full costs of their actions and/or receive the full benefits they create. *Propsurp* indicates an internal free-rider problem, which arises when members of the cooperative are rewarded for patronage even if they invest very little in the cooperative. *Capgains* indicates a ‘portfolio problem’ because members of a TC cannot transact equity shares at their market value. *Horizon* indicates members’ disincentive to invest since shares in a traditional cooperative cannot appreciate in value, so new members’ free ride on the investments and efforts made by existing members without paying the full price for their shares. *Influence* indicates the inability of potential investors and lenders to influence the cooperative's investment decisions when voting power is not proportional to individual investment. Where benefit and voting rights are allocated in proportion to individual member investment, the investment and the influence problems would be eliminated. The institutional variable *unity* indicates that differing members' goals negatively impacts cooperative performance According to Pischke and Rouse (2004), harmonising members' interests and the cooperative's interests is the key to effective capitalisation.

Ballot indicates governance problems since voting was conducted by show of hands as opposed to voting by secret ballot in all selected cooperatives. A simple show of hands can bias the election of directors in favour of individuals with power rather than competency. A positive score on the governance variable, *education*, links strongly to positive scores on the institutional indicators. That is, *education* is positively correlated to good institutional arrangements suggesting that education is a prerequisite for the application of good institutions ('rules of the game').

5.5.2 Cluster 2

This cluster indicates positive relationships between the three performance variables *surplus, skillstrain and lackmark;* one institutional variable *labinput*; and five governance variables *election, audit, lackinfo, notice* and *minutes. Labinput* indicates that failure to provide equal work effort for an equal share of profit creates a 'labour' free-rider problem that discourages labour effort. This problem could sink the cooperative long before other institutional problems become evident.

In the main, Cluster 2 highlights positive links between indicators of good governance (*election,* a*udit, lackinfo, notice* and *minutes*) and good financial, training and marketing performance in the selected cooperatives. Cooperatives that performed well on these measures tended to conduct regular elections for directors, had their books audited (either internally or externally), notified members of meetings, kept minutes and made their records available to all cooperative members.

CONCLUSIONS AND RECOMMENDATIONS

This study indicates that the selected smallholder cooperatives are performing poorly and rely on government grants and donations for their sustainability. All of the selected cooperatives obtained at least part of their initial capital from the government. Descriptive results suggest that smallholder cooperative members do not fully understand the cooperative principles and have high expectations of possible benefits. This may be due to the fact that some members joined cooperatives in order to access government grants and some to achieve their political objectives.

Results of a cluster analysis of variables measuring three constructs (comprising performance, institutional and governance indicators) suggest that the performance of the 10 selected smallholder cooperatives was influenced by institutional and governance problems. Institutional problems, which stem from poorly defined property rights in traditional cooperatives, give rise to low levels of equity and debt capital, reliance on government funding, low levels of investment, and subsequent loss of members. With respect to governance problems, the results suggest that they are strongly linked with the absence of a secret ballot system, low levels of education, lack of production and management skills training, weak marketing arrangements and consequent low returns to members as patrons or investors. Good governance of organisations is characterised by discipline, transparency, independence, accountability, responsibility, fairness and social responsibility.

To promote good institutions and good governance among smallholder cooperatives in South Africa may require amendments to the Cooperatives Act of 2005. Current government support for cooperatives provides an incentive for businesses to compromise their institutional arrangements in order to access financial and extension support services. The findings of this study call into question the policy of giving support to cooperatives over other forms of business organisations that smallholders could use to increase their income and wealth. It is recommended that government support for cooperatives be extended to include other types of cooperative-styled businesses such as new generation cooperatives. Property rights need to be clearly defined to ensure that current members or non-members bear the full costs of their actions and/or receive the full benefits for their investment. Hence, the Act could be modified to provide flexibility to reward member investment in the cooperative. With regards to egalitarian voting rights, it is recommended that the Cooperatives Act of 2005 be amended to allow cooperatives flexibility to provide members with voting rights in proportion to their patronage, investment or shareholding.

In view of the history, development, problems experienced, and the fact that several large-scale cooperatives in South Africa have converted to investor owned firms, the question remains whether a traditional cooperative is the appropriate organisational form for emerging farmers in South Africa to use. Further research is still required to test the study's findings over a longer period of time using a larger and more representative sample of cooperatives. Currently, the government issues loans and grants to cooperatives registered under the Cooperatives Act of 2005. The study also recommends that further research be conducted on the criteria used to assess the creditworthiness and feasibility of smallholder agricultural cooperatives. Though this study cannot be generalised for the whole of KZN, it provides an entry point for government and other policy makers to revise policies such as the Cooperatives Act of 2005 and implement policy measures suitable for the development of appropriate organisations for smallholder groups.

This study has been based on smallholder production cooperatives producing and marketing various agricultural products in KZN. Further research could focus on smallholder cooperatives similar in product type other than their institutional arrangements. Differences in performance could then be attributed to differences in institutional arrangements (and not to differences in, say, product type). Finally, the cases selected for study did not display much variation on the institutional and governance variables thought to influence cooperative performance. Hence, future studies of this type need more *a priori* information about the cooperatives selected for case study to ensure sufficient variation on the variables used to test theoretical propositions.

SUMMARY

The history of cooperatives dates back more than 160 years (e.g., the Rochdale Equitable Pioneers' Society consumer cooperative was established in England in 1844). Smallholder cooperatives have significant economic incentives such as achieving more favourable prices, enhancing incomes and improving the viability of business activities of their members. They can be important in promoting employment, human welfare, and political stability in less developed countries.

The 2005/06 report of the South African (SA) Registrar of Cooperatives recorded a 79% increase in the number of registered agricultural cooperatives from 256 in 2001 to 459 in 2004. With regards to KZN, 57 new agricultural cooperatives registered in 2005. Despite these positive statistics, reports have indicated that it is difficult to ascertain the actual number of active and thriving registered cooperatives. Some of the smallholder cooperatives have registered but are not operating at all. Some of the contributory factors have been associated with lack of proper co-ordination between cooperative members; poor financial and institutional support; lack of markets; no mentorship, monitoring and evaluation programmes; and a lack of entrepreneurial skills.

Past research on poor-performing and failed cooperatives in former homelands of South Africa suggest that members did not clearly understand the purpose of a cooperative, its functions and what members' rights are. Some studies have suggested that poor performance of cooperatives is also caused by lack of membership identity with the cooperatives; lack of understanding of members' roles; the subsistence nature of cooperatives in the less-developed areas; and failure to involve cooperative members in decision making. In addition, failure of cooperatives to compete with other businesses; inability of cooperatives to keep adequate input stock; inability of cooperatives to provide sufficient credit; inability of members to dismiss inefficient management; and failure to provide transport for delivery for members' purchases were other contributory factors. Weak institutions and authoritative management have also been major factors contributing to cooperative failures.

This study presents an overview of the factors influencing the performance of 10 selected smallholder farmer cooperatives (case studies) in KZN. The broad objective of this study aims to gain a better understanding of the characteristics of these cooperatives, and to identify institutional and governance constraints affecting cooperative performance through an in-depth analysis of these 10 case studies. The study is based on work by Cook (1995) and Cook and IIiopoulos (2000) that highlights the importance of resolving institutional and governance problems in traditional cooperatives, and ways in which South Africa's cooperative legislation could be amended to mitigate these problems (Lyne and Collins, 2008).

The democratic South African government deemed the Cooperatives Act of 1981 to be unsuitable for the overall development of cooperatives because it focused on larger and commercial agricultural cooperatives. Concerns were expressed that it neither provided an adequate definition of a cooperative, nor did it explicitly enforce compliance with cooperative principles. The new Cooperatives Act (No. 14 of 2005) aimed at providing a legal environment conducive for cooperative development and to promote greater participation of the previously disadvantaged persons who were not supported by preceding Cooperative Acts. This new Act recognises the cooperative values (such as self-help, self-reliance, self-responsibility, and democracy), and argues that a viable, autonomous, self-reliant and self-sustaining cooperative movement is important for the economic and social development of the country, particularly among the previously disadvantaged people.

The New Institutional Economics (NIE) framework considers that institutions ("rules of the game") have an influence on individual and firm behaviour and, therefore, on outcomes such as economic performance, efficiency, economic growth and development. The basic idea of NIE is that the success of a market system depends upon the institutions to facilitate efficient private transactions. The recognition of institutions as important determinants of economic efficiency has created the basis for several applications of NIE to cooperatives. Traditional cooperatives are fraught with institutional problems such as free-rider, horizon, portfolio, control and influence-cost problems. The nature and extent of these problems in any setting is a function of the institutional arrangements as reflected in an organisation's constitution.

This study was based on 10 smallholder cooperatives in KwaZulu-Natal (KZN) that were selected, with the assistance of extension officers of the KZN Department of Agriculture and Environmental Affairs (KZNDAEA), to serve as detailed case studies. The survey was conducted during October and November 2007. Five of the cooperatives produce and market vegetables, three produce and sell poultry products, one is a beef production cooperative and one a bakery cooperative. Five of the selected cooperatives were from the EThekwini District, three from Msunduzi District and two from Camperdown District in KZN. Data were collected from the selected cooperatives using a structured questionnaire and in-depth interviews with the chairpersons, management committee and other members of the selected cooperatives. The data were analysed using descriptive and cluster analyses. The basic aim of cluster analysis is to find the "natural groupings" (clusters), if any, of a set of individuals (variables). In this study, cluster analysis of institutional, governance and performance variables was adopted to test for positive relationships hypothesised between cooperative performance, institutional arrangements and governance, and to identify homogeneous groups or clusters of variables in a multivariate data set.

Survey results indicate that members of the selected cooperatives generally do not understand the guiding principles of a cooperative. They have high expectations of the potential benefits of establishing a cooperative which poses institutional and governance problems. The results of a cluster analysis of variables measuring three constructs (comprising performance, institutional and governance indicators) suggest that the performance of the 10 selected smallholder cooperatives was influenced by institutional and governance problems. The findings suggest that institutional problems in traditional cooperatives stem from ill-defined property rights which in turn give rise to low levels of equity and debt capital, reliance on government funding, low levels of investment, and subsequent loss of members. On the other hand, governance problems stem from an open ballot (absence of secret ballot), low levels of education, lack of production and management skills training, weak marketing arrangements and consequent low returns to members as patrons or investors. Good governance of organisations promotes discipline, transparency, independence, accountability, responsibility, fairness and social responsibility.

To promote good institutions and good governance among smallholder cooperatives in South Africa may require amendments to the Cooperatives Act of 2005. Smallholder cooperatives under current government support have an incentive to compromise their institutional arrangements in order to access financial and extension support services. The findings of this study call into question the policy of giving support to cooperatives over other forms of business organisations that smallholders could use to increase their income and wealth. It is recommended that government support for cooperatives be extended to include other types of cooperative styled businesses such as new generation cooperatives. Many of these cooperative businesses may need to restructure as alternative types of businesses by clearly defining property rights in their constitutions to ensure that current members or non-members bear the full costs/benefits of their investments. Hence, the Act could be revised to provide flexibility to reward member investment in the cooperative.

This study examined smallholder cooperatives producing and marketing various agricultural products in KZN. Unfortunately, the cases selected for study did not display much variation on the institutional and governance variables thought to influence cooperative performance. Future studies of this type need more *a priori* information about the cooperatives selected for case study to ensure sufficient variation on the variables used to test theoretical propositions. In addition, future research could also focus on smallholder cooperatives similar in product type other than their institutional arrangements. Thus, differences in performance could then be attributed to differences in institutional arrangements and not to differences in, say, product type.

REFERENCES

Abdulai A and Delgado CL (1999). Determinants of non-farm earnings of farm-based husbands and wives in Northern Ghana. *American Journal of Agricultural Economics* 81(1):117-130.

Aldenderfer MS and Blashfield RK (1984). *Cluster Analysis*. Newbury Park (CA), Sage Publications, London, UK.

Anderberg MR (1973). *Cluster Analysis for Application*. Academic Press, Inc., London, UK.

Anderson BL and Henehan BM (2003). What gives cooperatives a bad name? Department of Applied Economics and Management, Cornell University. http://www.agecon.ksu.edu/accc/ncr194/Events/2003meeting/AndersonHenehan.pdf (accessed 20/10/07).

ARDI (Agri-Food Research and Development Initiative) (2003). History of cooperatives. University of Manitoba, Winnipeg, Manitoba. http://www.umanitoba (accessed 26/07/07).

Barratt N (1989). The co-operative model as an instrument in the community economic development process. Institute of Social and Economic Research, Working Paper No. 41, Rhodes University, Grahamstown, South Africa.

Barton DG (1989). What is a cooperative? In *Cooperatives in Agriculture*, ed. D. Cobia, 1-20. New Jersey, USA: Prentice-Hall, Inc.

Bhuyan S and Olson F (1998). Potential role of non-agricultural cooperatives in rural development: a report on focus group studies conducted in rural North Dakota. Agricultural Economics Report No. 383. North Dakota State University, USA.

Birchall J (2004). Cooperatives and the Millennium Development Goals. International Labour Office (ILO), Geneva. Switzerland. http://www.ilo.org/ (accessed 15/10/07).

Bouckova B (2002). Agricultural cooperatives: perspective for the 21st Century. *Agricultural Economics* 48(4):166-170.

Brown BR and Merrett CD (2000). The limited liability company versus the new generation cooperative: alternative business forms for rural economic development. Rural Research Report, Volume 11, Issue 7. Western Illinois University, Illinois Institute for Rural Affairs, Macomb, Iliopoulos, USA.

Buccola ST (1994). *Encyclopedia of Agricultural Science*, Vol 1 A-D. Academia Press, Gent, Belgium.

Chaddad FR and Cook ML (2004). Understanding new cooperative models: an ownership-control rights typology. *Review of Agricultural Economics* 26(3):348-360.

Chaddad FR, Cook ML and Heckelei T (2005). Testing for the presence of financial constraints in US agricultural cooperatives: an investment behaviour approach. *Journal of Agricultural Economics* 56(3):385-397.

Chatfield C and Collins AJ (1980). *Introduction to Multivariate Analysis.* Second Ed., Chapman and Hall, London, UK.

Chorafas DN (2001). *Implementing and Auditing the Internal Control System*. Palgrave Macmillan Ltd., New York, USA.

CIPRO (Companies and Intellectual Property Registration Office) (2006). Annual report. http://www.cipro.co.za (accessed 04/09/07).

Clarke RL (1991). The measurement of physical distribution productivity: South Carolina, a case in point. *Transportation Journal* 31(1):14-21.

Clover S.A. (2007). Our history, from a Creamery in Natal to a giant South African organization. http://www.clover.co.za/ (accessed 10/10/07).

Coase R (1937). The nature of the firm. *Economica* 4(16):386-405.

Coase R (1960). The problem of social cost. *Journal of Law and Economic* 3:1-44.

Coltrain D, Barton D and Boland M (2000). Differences between new generation cooperatives and traditional cooperatives. Arthur Capper Cooperative Centre, Kansas State University. Kansas, USA. http://www.agecon.ksu.edu/accc/kcdc/PDF%20Files/DiffTrad3.pdf.

Competition Commission (2004). Research report: the South African agricultural industry in context. http://www.compcom.co.za/policyresearch/policyresearch.asp (accessed 08/07/07).

Cook LC (1995). The future of U.S. agricultural cooperatives: a neo-classical approach. *American Journal of Agricultural Economics* 77(5):1153-1159.

Cook ML and Iliopoulos C (2000). Ill-defined property rights in collective action: the case of US agricultural cooperatives. In: Menard, C. (Ed.), *Institutions, Contracts and Organization. Perspectives from New Institutional Economics*. Edward Elgar, Cheltenham, UK.

Crawford IM (1997). *Agricultural and Food Marketing Management*. Food and Agricultural Organisation (FAO), Rome, Italy.

Crow R (2006). Publishing cooperative: An alternative for society publishers. A SPARC Discussion paper. The scholarly publishing and academic resources coalition. USA. http://www.arl.org/sparc/bm~doc/cooperatives_v1.pdf. (accessed 20/06/08).

Delgado C (1999). Sources of growth in smallholder agriculture in sub-Saharan Africa: The role of vertical integration of smallholders with processors and marketers of high value-added items. *Agrekon* 38(Special issue):165-189.

Demsetz H (1967). Toward a theory of property rights. *American Economic Review* 57 (2):347-359.

Dess GG and Robinson RB Jr (1984). Measuring organizational performance in the absence of objective measures: the case of the privately held firm and conglomerate business unit. *Strategic Management Journal* 5:265-73.

Doner RF and Schneider BR (2000). The New Institutional Economics. Business associations and development. *Brazilian Journal of Political Economy* 20(3):39-62.

Dorward A, Kydd J, Morrison J, Poulton C, and Smith L (2000). New Institutional Economics: insights on innovation, dissemination and uptake. Pp. 97-103. In: *Sustaining change: proceedings of a workshop on the factors affecting uptake and adoption of the Department for International Development (DFID) Crop Protection Programme (CPP) research outputs*. Hainsworth, SD and Eden-Green SJ (Eds.). Imperial College at Wye, Kent, UK.

DTI (Department of Trade and Industry) (2004).
http://www.thedti.gov.za/Co-operative/Cooperativespolicy.pdf (accessed 15/02/08).

Environmental, Planning and Development Consultants (2007). UMgungundlovu District Municipality Spatial Development Framework (SDF) review as part of the 2006/07 to 2011/12 IDP implementation 2nd draft. Volume 1. Udidi, Pietermaritzburg, South Africa. http://devplan.kzntl.gov.za (accessed 30/05/08).

Everitt B (1980). *Cluster Analysis.* 2nd Edition, Halstead Press, New York, USA.

Frances J (2004). Institutions, firms and economic growth. New Zealand Treasury, Working paper 04/19. Wellington, New Zealand.

Gassenheimer JB, Sterling JU and Robicheaux RA (1989). Long-term channel member relationships. *International Journal of Physical Distribution and Logistics Management* 19 (12):15-28.

Garson GD (2008). Cluster analysis. Statsnotes from North Carolina State University. http://www2.chass.ncsu.edu/garson/pa765/discrim.htm (accessed 02/08/08).

Government Gazette (2005). Cooperatives Act 2005. Republic of South Africa, Vol 482, No. 27912. http://www.info.gov.za (accessed 08/06/07).

Gertler M (2001). Rural cooperatives and sustainable development. Research paper: Centre for Study of Cooperatives. http://www.coopdevelopmentcenter.coop/ (accessed 18/07/07).

Gripsrud G, Lenvik GH and Olsen NV (2000). Influence activities in agricultural cooperatives: The Impact of Heterogenity. Centre for Research on Cooperatives, Norwegian School of Management. Paper submitted to "The Food Sector in Transition – Nordic Research", June 14-15, Oslo, Norway.

Gupta A (2008). Governance issues in cooperatives – Agenda for research. http://www.coopdevelopmentcenter.coop/Anaylsis/governanceGupta.pdf (accessed 10/08/08).

Hakelius K (1996). Cooperative values. Farmers' cooperatives in the minds of farmers. SLU Uppsala. www.cazv.cz/2003/2002/ekon4_02/bouckova.pdf (accessed 05/05/07).

Hanson MJ (2000). *Starting a Value-Added Agribusiness*: The Legal Perspective. Macomb: Illinois Institute for Rural Affairs, Macomb, Illinois, USA.

Hardesty S (2004). Positioning California's Agricultural Cooperatives for the future. *Agriculture and Resource Economics Update* Vol 8, No 3. University of California, Davis, USA.

Harrigan KR (1985). An application of clustering analysis for strategic groups analysis. *Strategic Management Journal* 6(1):55-73.

Harrington TC, Lambert DM and Christopher M (1991). A methodology for measuring vendor performance. *Journal of Business Logistics* 12(1):83-104.

Harris A, Stefanson B and Fulton M (1996). New generation cooperatives and cooperative theory. *Journal of Cooperatives* 11:15-28.

Harris A (2007). Agricultural cooperatives: a start-up guide. http://www.agf.gov.bc.ca/busmgmt/bus_arrange_pdf/coop1.pdf (accessed 19/03/08).

Hendrikse G and Veerman C (2001). Marketing cooperatives and financial structure: a transaction cost economic analysis. *Agricultural Economics* 26: 205-216.

Herath G (2005). Analysis of the potential and problems of New Institutional Economics for third world development. *International Journal of Social Economics* 32(10):877-892.

Hu Y, Huang Z, Hendrikse G and Xu X (2006). Organization and strategy of farmer specialized cooperatives in China. Poster paper prepared for presentation at the International Association of Agriculture Economists Conference, Gold Coast, Australia.

ICA (International Cooperative Alliance) (2005). http://www.ica.coop/ (accessed 18/07/07).

IFAD (International Fund for Agricultural Development) (2003). Promoting market access for the rural poor in order to achieve the Millennium Development Goals. Discussion paper No. 25. Rome, Italy.

IIiopoulos C (2003). Long-term financing in US and European Agricultural Cooperatives: emerging methods for ameliorating investment constraints. National Agricultural Research Foundation, Athens, Greece.

IMF (International Monetary Fund) (2003). World economic outlook: growth and institutions. International Monetary Fund, Washington D.C., USA. http://www.imf.org/external/pubs/ft/weo/2003/01/ (accessed 20/10/08).

Jackson ROC and Stent WJ (2007). *Auditing Notes for South African students*, 6th Edition. Audico Publishers, Hillcrest, South Africa.

Jarrow RA and Oldfield S (1981). Forward contracts and future contracts. *Journal of Financial Economics* 9:373-382.

Kherallah M and Kirsten JF (2002). The New Institutional Economics: applications for agricultural policy research in developing countries. *Agrekon* 41(2):110-133.

King ME (2002). *King Report on Corporate Governance for South Africa 2002*. Institute of Directors in southern Africa. Parklands, South Africa.

Klein PG (1999). New Institutional Economics. Working paper 0530. Department of Economics, University of Georgia. http://encyclo.findlaw.com/0530book.pdf. (accessed 16/08/07).

Knapp JG (1962). The scope of farmer cooperatives: present and future. *Journal of Farm Economics* 44(2):476-488.

Knight S, Lyne M and Roth M (2003). Best institutional arrangements for farm-worker equity-share schemes in South Africa. Department of Agricultural and Applied Economics. University of Wisconsin-Madison, USA.
http://www.basis.wisc.edu/live/institutions/institutions0302c.pdf. (accessed 12/12/07).

Koller EF (1947). Cooperatives in a capitalistic economy. *Journal of Farm Economics* 29(4) Part 2: 1133-1144.

Krivokapic-Skoko B (2002). The concept and classifications of agricultural cooperatives. Australian Centre for Cooperative Research and Development (ACCORD) paper. Sydney, Australia.

Kyriakopoulos K (2000). *The Market Orientation of Cooperative Organisations*. Uitgevery Van Gorcum Publishers, Breukelen, The Netherlands.

Kyriakopoulos K, Meulenberg M and Nilsson J (2004). The impact of cooperative structure and firm culture on market orientation and performance. *Agribusiness* 20(4):379-396.

Landell-Mills P and Serageldin I (1992). Governance and the external factor. In *Proceedings of the World Bank Annual Conference on Development Economics 1991*. Washington, D.C., USA.

Le Vay C (1983). Agricultural cooperative theory: a review. *Journal of Agricultural Economics* 34:1-44.

Ling CK (2005). Dairy cooperative growth challenges: technology, ingredients (proteins) and equity financing. Research Report 206. United States Department of Agriculture (USDA), Washington, D.C., USA.

Lyne MC (1996). Transforming developing agriculture: establishing a basis for growth. *Agrekon* 35(4):188-192.

Lyne MC (2007). Personal communication. Associate Professor of Agribusiness Management, Lincoln University, New Zealand.

Lyne MC and Collins R (2008). South Africa's new Cooperative Act: a missed opportunity for small farmers and land reform beneficiaries. *Agrekon* 47(2):180-197.

Machethe CL (1990). Factors contributing to poor performance of agricultural cooperatives in less developed areas. *Agrekon* 29(4):305-309.

Machethe C and Van Rooyen J (1983). Accelerating agricultural development through cooperatives. *Agrekon* 22:13-17.

Magingxa LL and Kamara AB (2003). Institutional perspectives to enhancing smallholder market access in South Africa. Contributed paper presented at the 41st annual conference of the Agricultural Economics Association of South Africa (AESA), October 2-3, 2003, Pretoria, South Africa.

Makhura MN, Kirsten J and Delgado C (2004). Overcoming transactions cost barriers to participation of smallholder farmers in high value agricultural markets in the Limpopo Province of South Africa. Department of Agricultural Economics, Extension and Rural Development, University of Pretoria, South Africa.

Matungul PM, Lyne MC and Ortmann GF (2001). Transaction costs and crop marketing in the communal areas of Impendle and Swayimana, KwaZulu-Natal. *Development Southern Africa* 18(3):347-363.

McBride G (1986). *Agricultural Cooperatives: Their Why and Their How?* The AVI Publishing Company, USA.

Nabli MK and JB Nugent (1989). The New Institutional Economics and its applicability to development. *World Development* 17(9):1333-1347.

NCBA (National Cooperative Business Association) (2007). http://www.ncba.org/ (accessed 10/08/07).

Ngubane Z (2008). Personal communication. Extension Officer, KwaZulu-Natal Department of Agriculture and Environmental Affairs, Allerton, Pietermaritzburg, KwaZulu-Natal, South Africa.

Nhlapho L (2008). Personal communication. Loan analyst, Ithala Bank, Langalibalele Street, Pietermaritzburg, KwaZulu-Natal, South Africa.

Nilsson J (1997). New generation farmer cooperatives. *Review of International Cooperation* 90:32-38.

Nilsson J (2001). Organizational principles for cooperative firms. *Scandinavian Journal of Management* 17(3):329–356.

North D (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge, UK.

North DC (2000). A Revolution in Economics. Chapter 4 in: Menard C (ed), *Institutions, Contracts and Organisations: Perspectives from New Institutional Economics.* Edward Elgar: Cheltenham, UK.

Norusis MJ (1994). SPSS Professional Statistics 6.1. SPSS Inc, Chicago, USA.

O' Connor J and Thompson G (2001). *International trends in the structure of Agricultural cooperatives: A report for the Rural Industries Research and Corporation*. RIRDC Publication 01/06. Melbourne, Australia.

Olson M (1975). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press, Cambridge, USA.

Ortmann GF (2005). Promoting the competitiveness of South African agriculture in dynamic economic and political environment. *Agrekon* 44(3):286-320.

Ortmann GF and King RP (2006). Small-scale farmers in South Africa: can agricultural cooperatives facilitate access to input and product markets? Staff Paper P06-4, Department of Applied Economics, College of Agricultural, Food and Environmental Sciences, University of Minnesota, USA.

Ortmann GF and King P (2007a). Agricultural cooperatives I: history, theory and problems. *Agrekon* 46:40-68.

Ortmann GF and King RP (2007b). Agricultural cooperatives II: can they facilitate access of small-scale farmers in South Africa to input and product markets? *Agrekon* 46(2):219-244.

Ostrom E (1990). Governing the commons: the evolution of institutions for collective action. Cambridge University Press, Cambridge, UK.

Philip K (2003). Cooperatives in South Africa: their role in job creation and poverty reduction. http://www.sarpn.org.za (accessed on 04/04/07).

Pischke JD and Rouse JG (2004). New strategies for mobilising capital in agricultural cooperatives. Food and Agricultural Organisation (FAO) of the United Nations, Rome, Italy.

Porter P and Scully G (1987). Economic efficiency and cooperatives. *Journal of Law and Economics* 30: 489–512.

Read WF and Miller MS (1990). The state of quality in logistics. *International Journal of Physical Distribution and Logistics Management* 21(6):32-47.

Reynolds BJ (1997). Decision making in cooperatives with diverse member interests. Research Report 155. United States Department of Agriculture (USDA), Washington, D.C., USA. http://www.rurdev.usda.gov (accessed 27/03/08).

Rhodes VJ (1983). The large agricultural cooperative as a competitor. *American Journal of Agricultural Economics* 65:1090-1095.

Romesburg HC (1984). *Cluster Analysis for Researchers*. Lifetime Learning Publications. Belomont, California, USA.

Rosario GM, Eduardot GZ and Andromualdob G (1999). Indicators of Good Governance: Developing an Index of Governance Quality at the LGU Level. *Journal of Philippine Development* 48, 26(2):149-212.

Royer JS (1999). Cooperative organisational strategies: a neo-institutional digest. *Journal of Cooperatives* 14:44-67.

Sandler T (1992). *Collective action: Theory and Applications*. The University of Michigan Press, USA.

Smith DJG (1979). The co-operative field: an overall overview. *Agrekon* 18(3):11-15.

Stockbridge M, Dorward A and Kydd J (2003). Farmer organisations for market access: learning from success. Briefing paper. Centre for Development and Poverty Reduction, Imperial College, London, UK.

Strickland CF (1937). The co-operative movement in South Africa. *Journal of the Royal African Society* 36(145): 461-468.

Szabo GG (2006). Reclaiming the economy: the role of cooperative enterprise, ownership and control. An international conference on cooperative forms of organization. University of Wales Institute, Cardiff. http://www.sciencedirect.com/ (accessed 27/04/07).

Trewin R (2004). Cooperatives: issues and trends in developing countries. Report of a workshop. Australian Centre for International Agricultural Research, Canberra. http://www.aciar.gov.au/system/files/node/530/tr53.pdf (accessed 02/12/07).

Umarov AA (2002). Equity valuation for New Generation Cooperatives. Unpublished PhD Dissertation, University of Dakota, USA. http://www.ext.nodak.edu/~aedept/aemisc/Umarov-Thesis.pdf (accessed 30/08/07).

USDA (United States Department of Agriculture) (2002). Agricultural cooperatives in the 21st Century. Cooperatives information report 60. http://www.rurdev.usda.gov/RBS/pub/cir-60.pdf (accessed 18/11/08).

UWCC (University of Wisconsin Center for Cooperatives) (1998). Cooperatives - a tool for economic development. Proceedings of the 1998 cooperative development training conference. Madison. www.wisc.edu/uwcc (accessed 10/09/08).

Van der Walt (2005). The resuscitation of the cooperative sector in South Africa. Paper prepared for the International Co-operative Alliance XXI. International cooperative research conference. Cork, Ireland.

Van Niekerk JAS (1988). *Cooperative Theory and Practice.* Silverton, Promedia Publications, Pretoria. South Africa.

Vitaliano P (1983). Cooperative enterprise: an alternative conceptual basis for analyzing a complex institution. *American Journal of Agricultural Economics* 65:1078–1083.

Warman M and Kennedy TL (1998). *Understanding agricultural marketing cooperatives*. United States Department of Agriculture (USDA). Washington, D.C., USA.

Waters NM and Barr BM (1980). A comparative evaluation of firms behavioral environments based on two forms of cluster analysis. *Human Geography* 62(2):81-90.

Wikipedia (2007). KwaZulu-Natal. http://wikipedia.com (accessed 24/08/07).

Williamson OE (1985). *The Economic Institutions of Capitalism: Firms, Markets, and Relational Contracting.* The Free Press, New York, USA.

Williamson OE (1996). *The Mechanisms of Governance*. Oxford University Press, New York, USA.

Williamson OE (2000). The New Institutional Economics: taking stock, looking ahead. *Journal of Economic Literature* 38: 595-613.

World Bank (1997). *The State in a Changing World.* World Development Report. Washington, D.C., USA.

Yavas U, Luqmani M and Quraeshi ZA (1989). Purchasing efficacy in an Arabian Gulf Country. *International Journal of Physical Distribution and Logistics Management* 19(4):20-5.

Zaibet LT and EG Dunn (1998). Land tenure, farm size and rural market participation in developing countries: the case of Tunisia Olive Sector. *Economic Development and Cultural Change* 46(4):831-848.

Zeuli KA and Cropp R (1980). Cooperatives: principles and practices in the 21st century. University of Wisconsin Extension-Madison, publication A1457. http://www.community-wealth.org/ (accessed 03/09/07).

Zulu G (2007). Personal communication. Deputy Manager of agricultural cooperatives in KZN. KwaZulu-Natal Department of Agriculture and Environmental Affairs, Cedara, KwaZulu-Natal, South Africa.

APPENDICES

Appendix 1: Principles of cooperatives

Principle	Role
Voluntary and Open Membership	Cooperatives are voluntary, open to all persons who are capable of using their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
Democratic Member Control	Cooperatives are democratic organizations controlled by their members who actively participate in setting policies and making decisions. The elected representatives are accountable to the membership. In primary cooperatives, members have equal rights (one member, one vote)
Members' Economic Participation	Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, part of the surplus is set aside as reserves and not distributed to members; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.
Autonomy and Independence	Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintaining their cooperative autonomy.
Education, Training and Information	Cooperatives provide education and training for their members, elected representatives, managers, and employees so that they can contribute effectively to the development of their cooperatives. Cooperatives inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.
Cooperation among Cooperatives	Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national and international structures.
Concern for community	While focusing on members' needs, cooperatives work together in order to sustain community development through policies approved by their members.

Source: Barratt (1989); Competition Commission (2004); ICA (2005)

Appendix 2: Cooperative scores on *institutional* indicators

	Institutional indicators*						
	Openmem	Propsurp	Capgains	Horizon	Influence	Unity	Labinput
Vegetable cooperative 1	0	0	0	0	0	1	0
Vegetable cooperative 2	0	0	0	0	0	0	1
Vegetable cooperative 3	0	0	0	0	0	0	1
Vegetable cooperative 4	0	0	0	0	0	1	1
Vegetable cooperative 5	0	0	0	0	0	1	1
Beef cooperative	0	0	0	1	0	0	0
Bakery cooperative	0	0	0	0	0	0	1
Poultry cooperative 1	0	0	0	0	0	1	1
Poultry cooperative 2	0	0	0	0	0	1	1
Poultry cooperative 3	0	0	0	0	0	0	1

Notes: *For all enterprise institutional variables, 1 represents the presence of a positive attribute or good characteristic, and 0 otherwise.

Appendix 3: Cooperative scores on *governance* indicators

	Governance indicators*						
	Election	Ballot	Audit	Lackinfo	Notice	Minutes	Education
Vegetable cooperative 1	1	0	1	1	1	1	0
Vegetable cooperative 2	1	0	1	1	1	1	0
Vegetable cooperative 3	1	0	1	1	1	1	0
Vegetable cooperative 4	1	0	1	1	1	1	0
Vegetable cooperative 5	1	0	1	1	1	1	0
Beef cooperative	1	0	1	1	0	1	0
Bakery cooperative	1	0	1	1	1	1	0
Poultry cooperative 1	1	0	1	1	1	1	0
Poultry cooperative 2	1	0	1	1	1	1	0
Poultry cooperative 3	1	0	1	1	1	1	0

Notes: *For all enterprise governance variables, 1 represents the presence of a positive attribute or good characteristic, and 0 otherwise.

Appendix 4: Questionnaire

UNIVERSITY OF
KWAZULU-NATAL

University of KwaZulu-Natal
School of Agricultural Sciences and Agribusiness
Discipline of Agricultural Economics

QUESTIONNAIRE SURVEY:

FACTORS INFLUENCING THE PERFORMANCE OF SELECTED SMALLHOLDER AGRICULTURAL COOPERATIVES IN KWAZULU-NATAL

YOUR SURVEY RESPONSES WILL BE KEPT STRICTLY CONFIDENTIAL.

THANK YOU FOR YOUR PARTICIPATION IN THE STUDY

Identification

Name of the Cooperative ……………………………………………….....
Total Membership…………………………………………………………
Location ………………………………..…………………………......
Name and position of the respondent………………………………….
……………………………………..

SECTION A: GENERAL INFORMATION

Formation

1. When did your cooperative start? dd/mm/yyyy

2. When was your cooperative registered? dd/mm/yyyy

3. What were the reasons to start the business, and who initiated the idea?

4a). Are the founding members still part of your cooperative YES ☐ NO ☐

b). If NO, why have they left?

1. Financial crisis ☐ 2. To start own cooperative ☐ 3. Social conflict ☐

4. Death ☐ 5. I don't know ☐ 6. Other (specify) ☐

5. What is the current vision for your cooperative?

6a). Has this vision changed since the cooperative started? YES ☐ NO ☐

b). If YES, what has changed and what caused the change of the vision?

7. What are the objectives of the cooperative?

Registration and operations

8. What benefits were / are available for registered cooperatives? (for example, funding, external support, extension support, etc)?

a) Before the 2005 Cooperatives Act?

b) After the 2005 Cooperatives Act?

9. How would you categorise your cooperative?

1. Input supply cooperative ☐
2. Marketing cooperative ☐
3. Producer cooperative ☐

10. What other activities is your cooperative engaged in?

11. ***Input supply cooperative***
If your cooperative focuses mainly on supplying farm inputs, what inputs do you sell?

1. Seed ☐
2. Fertiliser ☐
3. Chemicals ☐
4. Feed ☐
5. Other (specify) ____________

12. ***Marketing cooperative***
If your cooperative focuses mainly on selling agricultural products which products do you sell?

1. Poultry/Broiler ☐
2. Beef ☐
3. Vegetables ☐
4. Maize ☐
5. Other (specify) ____________

13. ***Producer cooperative***
What are the main products produced by your members

1. Poultry/Broiler ☐
2. Beef ☐
3. Vegetables ☐
4. Maize ☐
5. Other (specify) ____________

14a). ***Post harvest processing***
Does your cooperative carry out some value-adding activity after harvesting (post-harvest processing)?

YES ☐ NO ☐

b). If YES, what products do you produce?

Specify:
____
____
____

15. What is the target market for your products?

1. Local shops ☐ 2. Neighbours ☐ 3. Monthly pensioners ☐

4. Nearest big cities ☐ 5. Other (specify) ☐

b) Rank the various sources of economic support listed below in order of the support your cooperative gains from them, where:

5 = absolute support
4 = most support
3 = moderate support
2 = least support
1 = no support at all

Please circle the relevant number

Local shops	*5 4 3 2 1*
Neighbours	*5 4 3 2 1*
Monthly pensioners	*5 4 3 2 1*
Nearest big cities	*5 4 3 2 1*
Other	*5 4 3 2 1*

16. What was the initial capital investment in your cooperative when you started operating?

R

17a). Where did you get the capital?

Member's equity	☐	Amount	R
Donations from Government	☐	Amount	R
Donations from NGO's	☐	Amount	R
Banks	☐	Amount	R

Other (specify)

____
____
____

b) What was the range of each member's investment / equity? R to R

18. How are you currently financing your operations?

Members' equity

Grants from Government

Credit from Government

Donations from NGO's

Bank loans

Other (specify)

SECTION B

Structure and Organisation of the Cooperative

1. What is the current composition of your cooperative membership in terms of gender and age?

Gender		Age	
Male	Female	> 40 years	< 40 years

2. How has your total membership changed over the past years?

Increased *Decreased* *No change*

3. How has the composition of membership changed since registration, with respect to gender?

Gender	Increased	Decreased
Males		
Females		

4. What is the size of the Management Committee? Members

5. What is the management structure of your cooperative (use diagram if possible)?

6. How are members of the Management Committee chosen?

7. What is the name of the chairperson?

8. What is his/her gender, age and highest education qualification?
Gender Age Qualification

9. What is the minimum experience and business skills required for the Chairperson in terms of leading the cooperative?

10. What is the minimum experience and business skills required for the Manager in terms of leading the cooperative?

____
____
____
____

11. Do they go through formal/informal training on leadership or management?

Formal ☐ Informal ☐

12. How was the Leadership of the cooperative chosen?
Appointment ☐ Elections ☐ Other (specify) ☐

13. What is the length of tenure in office of members of the Management Committee?

☐

14. What are the functions of the Management Committee?

____
____
____
____
____
____

Transparency

15. How many times per year does the cooperative management hold general meetings?
Times per year ☐

16. Does each cooperative member get a copy of the minutes of previous management meetings?

YES ☐ NO ☐

17. What issues does the management meeting cover?

____
____

Governance

18. Who drafted the initial constitution?
1. Founders ☐ 2. Existing members ☐ 3. Other (Specify) ☐

19a). Do you have access to the cooperative constitution?
YES ☐ NO ☐

b). Do you understand what the cooperative constitution entails?
YES ☐ NO ☐

20. When was the last constitution last amended, and why?

Accountability

21. How often are elections for directors held?
1. Annually ☐ 2. Every 2 years ☐ 3. Other (specify) ☐

22a). How are these elections held?

1. Open ballot (raise of hands) ☐ 2.Secret ballot ☐ 3.Other (specify) ☐

b). How does management ensure a free and fair election?

SECTION C

Financial management

Banking

1. Does your cooperative have a bank account? YES ☐ NO ☐

2. Does your bank offer credit / allow overdraft? YES ☐ NO ☐

3. What range of funds do you keep in your account?

R5000-R10000 ☐ R10000-R20000 ☐ R20000+ ☐

4. How many signatories do you have? ☐

5a). Have you ever borrowed money from your bank in the past? YES ☐ NO ☐

b) If YES, how much was the loan, the interest rate charged, and the payback period?

Amount R ☐ Interest rate ☐ Payback period ☐

Growth

Investment and equity

6. What is the value of your total assets? (i.e., machinery, stock etc)?

☐

7. What is the value of your debt and equity held by the cooperative at present?

Total Debt (loan, any short and long-term debt) R ☐

Equity (shareholders capital) R ☐

8a). Has the cooperative got bank overdraft facilities?

YES ☐ NO ☐

b). If YES, does the cooperative make regular use of this bank overdraft facility?

YES ☐ NO ☐

9. Has the cooperative ever shown a profit?

YES ☐ NO ☐

10. How is your surplus distributed?

1. According to Patronage ☐ 2. Dividends ☐ 3. Other (specify) ☐

11. ***Patronage (volume of business the members do with the cooperative)***
Is most of your cooperative business conducted with?

a) A small group of relatively large farmers ☐

b) A large group of small farmers ☐

12a) Do you charge a par value for shares to new members?

YES ☐ NO ☐

b) If YES, how much does each new member pay for shares?

R

Comments:

13) What is the cooperative's net asset value (i.e., assets minus liabilities) in the balance sheet?

R

14a). Does the cooperative redeem the shares of leaving members?

YES ☐ NO ☐

b.)If YES, is it at par value?

YES ☐ NO ☐

15. What have you done to encourage existing and new member investment? (e.g., change cooperative rules, offer better services, etc.).

____
____
____
____
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Auditing

16. Who manages the financial matters of the cooperative?

Financial manager ☐ Other (specify) ☐

17. What type of financial audits does the cooperative have?

Internal ☐ External ☐

18. When was the last auditing report produced? ☐

19a). Have you ever experienced a problem of embezzlement (misuse) of funds?

YES ☐ NO ☐

b). If YES, how much did you lose and how did you deal with the issue?

____
____
____
____

Turnover

20. On average, what is the cooperative's total turnover (gross income) from all enterprises per annum?

R

21. What is the turnover for each enterprise your cooperative is involved in, and how has it changed over the past?

Enterprise	Turnover (R)	Trend (increased, decreased, no change)
1.		
2.		
3.		
4.		
5.		

22. Where do you get advice on investment opportunities?

1. Financial advisor ☐ 2. Banks ☐ 3. Other (specify) ☐

____

____

23. List the organisations (Private, NGO`s and Government departments) who have or are assisting your organisation, and specify the type of support which you are receiving from them.

Organisation	Type of assistance / support
Private companies	
Government departments	

NGO's	

24a). Suppose your cooperative is considering expanding the business. How would your planned investment be financed?

1. Member equity ☐

2. Sale of shares (non-redeemable) ☐

3. Partnership with an external investor ☐

4. Other (specify) ☐

____
____
____

b) If your response above is "Other", why?

____
____
____
____

25a). Has the cooperative ever considered working together with another organisation (joint venture) to add value to produce through warehousing, processing, branding and labeling?

YES ☐ NO ☐

b) If YES, how have you planned to achieve this, and reason for the chosen criteria?

1. Joint venture through Equity partner ☐

2. Contract relationship ☐

3. Other (specify) ☐

____
____
____
____

26. Have you considered converting your cooperative to an investor-owned firm (e.g., new generation cooperative, private company)?

YES ☐ NO ☐

Reasons:

27. Where do you see your organisation in the next 5-10 years?

28. List the five most important challenges / problems which your cooperative is facing?

29. Which ones do you think might lead to the total collapse of your cooperative?

30. What services and products does your cooperative aim to produce and sell in the future?

Interventions

31. What type of assistance do you need to improve the following areas in your cooperative, and where do you think you can get such assistance?

a. General management and leadership

____
____
____

b. Financial management

____
____
____

c. Resource mobilisation and fundraising

____
____
____
____

d. Production capacity
____
____
____
____

e. Marketing
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____
____

32. What type of training do you like your cooperative members to receive?
____
____
____
____
____
____

33. What do you think the Government could do to improve the performance of smallholder farming cooperatives?

____

34. What do you think are the major causes of failure for smallholder farmers' cooperatives in your area?

____

35. How could these problems be solved, and by whom?

____

THE END

THANK YOU FOR YOUR PATIENCE AND PARTICIPATION