

CHAPTER ONE

INTRODUCTION

1.1 CONTRACTUAL RELATIONSHIPS IN AGRIBUSINESS

Contractual relationships today form the backbone of the agribusiness market structure. This is shown by the marked increase in the number of closer and well-defined relationships between firms with the aim of engaging in long-term business relationships (Achrol, 1997). Contractual relationships in this study refer to an agreement or an option to an agreement under which there is an exchange of goods, services or money between parties to the agreement. It encompasses the contractual terms governing a relationship and comprise of relationship, risk apportionment, division of responsibilities, and the reimbursement mechanism (Cox and Thompson, 1997). It is a form of vertical coordination, where vertical coordination is broadly defined as various methods used to manage vertical stages in a supply chain. The three main types of vertical coordination include the spot market, contracting (production and marketing) and vertical integration (Frank and Henderson, 1992; King, 1992; Williamson, 1975; Barry *et al.*, 1992; Sporleder, 1992). Contracting may involve the processing firm committing itself to purchase a product from the supplier at a price formula established or negotiated in advance of the purchase.

A firm decides on the activities it would include in its domain, based on the associated transaction cost efficiency (Williamson, 1981). In the event that a firm would increase the transaction costs by including more activities into its organisational domain, then a well-managed contractual relationship becomes the best option that lends considerable control to the firm's critical activities (Weitz and Jap, 1995; Dwyer *et al.*, 1987).

The most important aspect of a contractual relationship is its continuity. Therefore, a firm is judged by its ability to sustain itself and grow, despite changes in the environment. Hence, understanding business continuity in contractual relationships is indispensable in determining the behaviour of the partners in a supply chain (Anderson and Weitz, 1989). Milgrom and Roberts (1992) argue that the core unit of a business relationship is an exchange. However,

an exchange alone is not enough to provide clear linkages and the basis for relationship evaluation. Social factors also play a role in the exchange process. This study attempts to investigate the relationship of the cane growers and millers in the sugar industry in Swaziland and the impact of social factors on the performance of the industry supply chain.

1.2 CONTRACTUAL RELATIONS IN THE SWAZILAND SUGAR INDUSTRY

The sugar industry is the backbone of Swaziland's economy, with annual revenue exceeding R1440 million (US\$ 160million). Therefore, the economy of Swaziland is to a great extent based on the sugar industry. In terms of national income accounting, cane growing is regarded as an agricultural activity, while sugar processing is classified as an industrial activity. In 1999, cane growing contributed 56% to the total agricultural output and 37% to the total agricultural wage employment. During the same season, sugarcane milling contributed 25% to the total manufacturing output and 27% to the total manufacturing wage employment. The sugar industry as a whole contributed 18% to the national output, 22% to private sector employment and 15% to national employment, while sugar exports contributed 16% to total exports (UNCTAD, 2000). The total contribution of the sugar industry to the economy is estimated at over R 900 million and exports to international markets are valued at more than R 500 million, or one third of all export earnings (UNCTAD, 2000).

When contrasted with other sugar industries around the world, most of the sugar industries of Southern Africa, including Swaziland, are unusual in that there is a high degree of vertical integration between farming and processing, the most notable exception to this being South Africa. Moreover, although some sugar industries have taken steps to increase smallholder participation, the contribution of these smallholders, though often large in terms of numbers is generally small in terms of sugarcane production (Todd, 2001). Among the major sugar-producing countries in Southern Africa, smallholders play the largest role in Mauritius (producing around 25% of sugarcane by volume), Zambia (20%) and South Africa (15%). In Malawi, Swaziland and Zimbabwe, they account for less than 5% (Todd, 2001). Nevertheless, there are some important characteristics of the sugar production process that enhance the potential for smallholder participation in the farming sector. These stem from the need for a very close working relationship between growers and processing firms. Both farming and processing are economically viable only if sugarcane is processed within a radius

of 50 km of the farm and within a couple of days of being harvested. As a result, one cannot exist without the other, and usually, this arrangement works very well. Some smallholder farmers, for example, combine their plots and farm them as larger units.

Smallholder farmers are usually attracted to growing sugarcane, rather than alternative crops for reasons other than pure economic return. These reasons include:

- The fact that farmers do not have to market their product (sugar is sold by the Swaziland Sugar Association (SSA))
- Access to credit (which is either provided by or channelled through the mill) and
- The provision of extension services by the industry, and also by the Government in the case of Swaziland.
- Enhanced access to the EU sugar market provides opportunities for Swaziland to expand its sugarcane production area and thus encouraging greater smallholder farmers' participation in the sugar industry.

1.3 STAKEHOLDERS AND INSTITUTIONS IN THE SUGAR INDUSTRY

1.3.1 An overview

There are three main participants in the sugar industry, these include the Swaziland Sugar Association, the millers (Mhlume, Ubombo (Bigbend), and Simunye sugar mills) and the cane growers. The Swaziland sugar industry is regulated by the Swaziland Sugar Association (SSA) as mandated by the Sugar Act of 1967¹. The SSA regulates the functions of the industry, while the millers are responsible for producing sugar and the cane growers for producing sugarcane and delivering it to the mills.

Apart from producing sugar, the millers also own sugar estates from which they produce sugarcane (UNCTAD, 2000; Westlake, 1995).

¹ The Sugar Act itself consist of 16 paragraphs, paragraph 3 and 5 define the Swaziland Sugar Association and its functions: “ *There is hereby established a body corporate, to be known as the Swaziland Sugar Association, which shall be capable of suing and being sued in its corporate name and of performing all such acts as prescribed from time to time in its constitution and as are necessary for, or incidental to, the carrying out of its functions under the Agreement and under this Act*”.

Historically, cane production and sugar processing have been vertically integrated in mill-cum plantations. Out-grower activities have never had a significant role in the history of the sugar industry in Swaziland. However, gradually large private farmers and smallholder farmers have started to play a greater role in the Swaziland sugar industry. A quota or a licence is required before a farmer can grow sugarcane. Each grower's delivery quota is set by the Swaziland Quota Board, which is a component of the SSA. The Quota Board consist of 10 members composed of three growers' representatives, three millers' representatives, three other members nominated by the Minister for Enterprise and Employment, and a chairman nominated by the SSA. The quota in effect represents a contract between the grower and the miller. Growers are required to provide the full amount of their quota to the mill to which they are attached and the mill in turn is required to accept all cane delivered to it up to each grower's quota. In essence the contract is limited to the amount of sucrose indicated in each farmer's quota. It is however, silent about the price to be paid for the sucrose, as that is determined by the SSA. The contract is enforced through the rejection of cane or withdrawal of the quota for those who fail to meet the standards set out in the Sugar Agreement of 1967² (SSA, 2001) as well as through price discrimination between quota cane and segregated cane. Quota cane refers to the amount specified in the quota and segregated cane is any cane beyond that specified by the quota.

Under a previous arrangement, quotas were divided into "A" and "D" groupings, where the "A" quota was the confirmed quota held by a grower allocated on the basis of previous performance, which could be reduced only by failure to produce the required total in two out of three consecutive years, whilst the "D" quota was an additional amount allocated to new growers to be converted into "A" quota over a period of years depending on the performance of the grower. This system has since been phased out and a single quota structure adopted from the 2001/2002 season. The aim of the quota system is to ensure that the miller can handle the crop, that the grower has water to grow a disease-free crop, has land or the right to use the land, and that he/she is conversant with the rules of growing sugarcane and the relevant legal obligations (UNCTAD, 2000). These rules are applicable to millers too since

² The Swaziland Sugar Industry Agreement is introduced in paragraph 6 and states "*The Agreement.... Shall be binding upon all millers, growers, miller-cum-planters, refiners, and any other persons engaged in any aspect of the sugar industry*".

they also grow sugarcane. Table 1.1 shows the amount of sugarcane grown in each mill area and the proportion grown by millers and by growers for each mill area.

Table 1.1: Cane production by milling companies and growers (in 1999)

Mill Area	Mill Co. (tonnes)	Growers (tonnes)	Total (tonnes)	Mill Co. (%)
Ubombo	727,534	811,491	1,539,025	47.27
Mhlume	816,714	446,832	1,263,546	64.63
Simunye	923,729	125,390	1,049,119	88.04
National total	2,467,977	1,383,713	3,851,690	64.08

Source: UNCTAD (2000)

Growers can produce and deliver more sucrose than provided for in their quota, but for deliveries over and above their quota they are paid a “segregated price”, which is a price lower than the price for quota sucrose. Normally, growers retain their quota, which is carried over to the following year. However, when a grower fails to deliver his allocated quota for two consecutive years he risks a reduction in his quota to the highest average level recorded in those two years. In most cases additional quota becomes available for allocation either as a result of an increase in the global quota, which is the quota for sugar marketed in the preferential markets, or as a result of quota reduction because of delivery defaults by other growers.

1.3.2 Distribution of proceeds between the sugar industry’s stakeholders

In accordance with the Sugar Act of 1967 the SSA operates a pooled payment system in which the annual revenue earned from the sales of sugar is distributed to the millers and growers after deducting the industry obligation costs. This system of pooling revenues ensures that the payment per tonne of sugar produced by millers is not affected by the timing of their sugar production. It also ensures that payment to the growers, per tonne of sucrose delivered, is not affected by the timing of deliveries of cane through the season. Through the pooling system both millers and growers benefit from the best prices the industry receives from its preferential markets.

The SSA divides the total net payment to the mills according to quota sugar and segregated sugar. Quota sugar is sugar produced during the year to the maximum aggregate of all quotas attached to the mill (the amount of brown and white sugar the mill should produce) plus any quota shortfall reallocated from another mill. The price the millers and growers receive for producing sugar and for producing sugarcane respectively is determined by the Sugar Association, which after identifying and projecting all the revenue from the sale of sugar and sugar by-products, such as molasses, and deducting all industry obligations it then passes the remainder to millers and growers. Millers and growers however, negotiate the ratio of the price split for sugarcane processing and production. The price split for the 2001/2002 season was set at 67.5 percent to growers³ and 32.5 percent to millers (Table 1.2). Millers are paid on the basis of their sugar output and payments are made a week after production. The millers in turn, pay the cane growers based on the amount of sucrose extracted from their cane. They are paid a week after delivering their cane to the mill. These payments are financed through a commercial bank overdraft since the season's sugar would not yet have been sold.

Table 1.2: Percentage price split between cane processing and production (1996-2001)

Season	Cane processing (%)	Cane production (%)
1996/97	35.0	65.0
1997/98	34.0	65.5
1998/99	34.5	66.0
1999/00	33.5	66.5
2000/01	33.0	67.0
2001/02	32.5	67.5

Source: Revised Sugar Act of 1967 (2001)

³ Growers in this case refers to cane growing farmers and cum-mill planters

1.3.3 Representation of cane growers and millers in the sugar industry

The Swaziland sugar industry is highly regulated by the Swaziland Sugar Association, which derives its structure from the Sugar Act of 1967. The Swaziland Sugar Association is made up of twelve members from the Swaziland Sugar Millers Association (SSMA) and twelve members from the Swaziland Cane Growers Association (SCGA). The two bodies are of equal status, and hence are both represented in the council of the Sugar Association, which administers the business and affairs of the Association. The functions, powers and duties of the Swaziland Sugar Association are set out in the Swaziland Sugar Industry Agreement.

The Swaziland Sugar Quota Board, which is responsible for allocating sucrose quotas to producers, is made up of millers, growers, and independent members who have no interest in the sugar industry. In allocating production quotas, the Board has to be satisfied that those requesting quotas have access to suitable land and that they have a permit from government to draw irrigation water. This ensures that growers do not reduce production in response to a drop in prices. It also ensures that production does not exceed what the industry views as the potential demand at economic prices.

Each mill has a mill group committee, which consists of an equal number of representatives from the miller and growers attached to that particular mill. The mill appoints miller representatives, while the Swaziland Cane Growers Association appoints the cane growers' representatives. Although the mill group committee is accountable to the SSA it is financed locally in a manner agreed upon by growers and the mill representatives. One of the responsibilities of the mill group committee is to determine the quality standards of cane delivered to the mill to which growers are attached. If for any reason a grower delivers cane that does not comply with these standards, the relevant mill group committee is entitled to reduce payment for cane produced by the defaulting grower(s) and pay the amount deducted to the other growers attached to the mill pro rata to the production of the remaining growers (Sugar Act, 1967).

The mill group committee is also charged with the responsibility for making estimates of the quantity of cane that will be produced by each grower attached to the mill, in its area, during each season and to convert such estimates into tonnes of sucrose. The grower has to supply his mill group committee with the accurate information it requires otherwise the mill group

committee has to make estimates. This information would include area of land available for cane production, estimated tonnage of cane, area of land under cultivation in the current year and any area still to be planted (Sugar Act, 1967; UNCTAD, 2000).

If there appears to be a shortfall in the amount of sucrose quantity a grower is supposed to deliver to the mill and the deliveries estimated by the mill group committee, the committee has a right to aggregate all such shortfalls and re-allocate the total quantity of the shortfalls among those growers who have surpluses that year, pro-rata to the quotas of these growers. However, such allocation should not be in excess of the surplus of any of the grower's quota. In order to enable the shortfalls that are re-allocated to be fulfilled during the season (under consideration by the growers with surpluses, to whom they are re-allocated) every grower has to render to his mill group committee a final estimate as per set date six weeks prior to the estimated closing of the season, at which point the surpluses and shortfalls are finally established by the mill group committee for the season under consideration. Every grower is obliged to nominate the fields to be harvested, when rendering their final estimates and also harvest and deliver all cane from these fields to fulfil the final estimated to be delivered.

In the event of re-allocation of shortfalls resulting in the exhaustion of surpluses for any mill group area, the mill group committee must advise the SSA of any shortfall still remaining. The SSA then re-allocates this shortfall amongst all other mill groups who have surpluses remaining after the exhaustion of their shortfalls in the proportions that the totals of all quotas deliverable to each mill bear to one another to a maximum in each case of the recipient's surplus.

1.4 ISSUES AND CHALLENGES IN THE SWAZILAND SUGAR INDUSTRY

1.4.1 Socio-economic issues

A perception of unfairness exist in regard to the relationship between cane growers and millers. Farmers feel that they are competing with millers since millers not only process sugar, but are also involved in cane production. Hence, they are paid for both activities while growers are only paid for the production of cane. Through discussions with cane growers, it became evident that they would be more comfortable if millers would concentrate on the

processing activities and leave the production of sugarcane to the cane growers. This implies that as long as millers still have their own estates, farmers will feel insecure in their relationship with millers.

During discussions with farmers, it was observed that farmers perceive an element of competition between themselves and the millers. This perception could be a result of unaligned goals, with each trying to maximise their own goals. While the millers' objectives would involve profit maximisation, maintaining their monopolistic status and power, the smallholder cane growers would want to increase their income through the sale of sugarcane, maintain a food supply source, improve their standard of social services, ensure maximum utilisation of their resources and minimum exposure to risks, crop failure and imposed authority by the processing firm (Baumann, 2000). Participants in any supply chain like the sugar industry need to realise that as important as it is to achieve economic objectives within the relationship, it is also important to ensure that there is continuity in the relationship and strengthening of factors that are crucial to the improvement of the relationship because these complement each other and facilitate better performance throughout the supply chain.

Ideally, trust and good intentions should characterise the relationship between exchange partners. However, in practise exchange partners do not always behave in this manner and attempt to exploit their exchange partners through opportunism (Williamson, 1985). Some farmers complain that at times the millers deliberately record low levels of sucrose in their cane and view this as a strategy to reduce the amount to be paid for cane delivered. However, the sugar industry does allow farmers to cross check the laboratory tests of their cane sucrose content if they have any suspicions of this kind. This suspicion by farmers implies that they have no confidence in the millers. This fear of being cheated by the millers implies that their trust in the millers is limited. By verifying their results, they incur more costs in terms of time and money used when travelling to the mill or making phone calls. In line with Moorman *et al.* (1993), trust in this study is defined as "a willingness to rely on an exchange partner in whom one has confidence". Trust is a multi-dimensional construct, which includes reliability, integrity, competence, honesty, fairness, responsibility, helpfulness, and confidence (Moorman *et al.*, 1993; Morgan and Hunt, 1994). Macneil (1978) described the firm as a bundle of contractual relations, while Klein, Crawford and Achian (1978) argue that contracts and social elements are equally important in an exchange relationship, such as the one

between cane growers and millers. Therefore, trust forms part of the social elements in a contractual relationship.

Opportunistic behaviour increases transaction costs and negatively affects trusting relationships (Morgan and Hunt, 1994) and cooperation. It directly violates the norms of reciprocal relationships. When farmers perceive opportunistic behaviour practised by the millers, their ability to trust and spirit of cooperation is reduced. Thus, they would try to find means of counteracting this opportunism. Anderson and Narus (1990) defined cooperation as "similar or complementary coordinated actions taken by firms in an interdependent relationship to achieve mutual or singular outcomes with expected reciprocation over time." Cooperation represents the willingness by farmers and the millers to extend their exchange beyond basic transactions, and towards building a relationship (Nielson and Wilson, 1994), which is a precursor for continued exchange (Moller and Wilson, 1988). The CEO of the SSA, Dr. Matsebula, indicated during the launching of a smallholder growers competition in April 2002, that for smallholder cane growers to develop, they should not only be familiar with the constitution, rules and regulations of the sugar industry, but should also strictly abide by them. He argued that "Flouting the rules places at risk other growers and the sugar industry as a whole. It also increases enforcement costs, which fall even on the innocent members of the industry. Flouting the rules and regulations is to be discouraged in the strongest terms." He noted that there are many areas of cooperation in the sugar industry like that of sharing experiences and information (Swaziland today, 2002).

UNCTAD (2000), in a study on the policies for small-scale sugarcane growing in Swaziland, points out that farmers on Swazi Nation Land (SNL) are still subsistence and have minimal education, and thus unfamiliar with modern business practises and commercial agriculture. Although the sugarcane extension specialists provided by the Swaziland Government in conjunction with the industry's extension service provide assistance to smallholder farmers on production and crop husbandry, they are still not commercially oriented. This implies that smallholder cane growers still lack commercialisation skills (which involves more than just the marketing of output and product choice, but encompasses decisions on input use, which are based on the profit maximisation principle). Commercialisation skills in agriculture refer to the ability to move from subsistence-oriented to market-oriented patterns of production and use of inputs.

One characteristic of sugarcane farming is that harvesting must be done according to a schedule that allows all growers the possibility of delivering a predetermined daily quantity during the crushing season. Therefore, the lack of experience and business skills by smallholder cane growers result in misunderstandings and conflict when it comes to enforcing the necessary disciplinary action on defaulters. This happens because the methods used to draw up the delivery schedules by the different participants in the industry are not understood by these growers (UNCTAD, 2000). For example, some farmers fail to comply with the industry's agreement of implementing disease control measures because of the high costs involved. When the mill rejects the cane from such farmers as per instruction by the SSA, farmers tend to regard such discipline as an unfair treatment by the mill. This is further confirmed by farmers complaining of not being allowed to deliver their cane at the start of the season, while others want to deliver all their cane in the middle of the season when the sucrose content is high. However, a rateable mechanism has been devised, whereby each farmer is allowed to have repetitive deliveries throughout the crushing season. This makes the growers to go through all the stages of change in sucrose content as the season progresses.

1.4.2 Economic issues

The success of any supply chain depends not only on the formal governance mechanisms, but also on the level of cooperation that exists between the individuals that make up the supply chain links and the economic returns realised by each individual. All chain participants are expected to work towards achieving a common goal. The farmers and the millers' ownership steps in the sugar supply chain occur in different combinations. At every change of ownership along the value chain, competition occurs for returns between farmers and millers, thus resulting in "pricing of value added" to be negotiated. This involves the negotiation of the farmer's cane input versus the miller's manufacturing input.

Smallholder cane growers complain of an unfair distribution of the sugar industry's proceeds from sugar by-products. They argue that they are paid only on the basis of the cane they deliver, when in fact they are also entitled to the proceeds from by-products, such as molasses. Although the distribution of the industry's proceeds to farmers and the millers is based on an agreed formula, the formula allows farmers to only obtain proceeds from the resulting sugar stream. Outputs containing residual sugar after mill processing, like molasses and bagasse (fibrous remainder of cane after processing sugarcane) for instance are treated as

the property of the mill. Bagasse is regarded as an un-priced fuel source and the mills use it for the generation of mill processing steam and electricity in the mill.

Economically, if millers were to operate the whole industry without out-growers, there would be no competition and essentially each stage in the value chain would be treated as a cost centre. Similarly, if the whole industry were in the hands of the farmers, value-adding stages up to the marketing of sugar would be treated as cost centres. Therefore, the farmers would like to have their value added share, priced during the transfer of ownership of the cane using a payment formula instead of a distribution of the surplus after the sale of the product. Farmers consider this distribution of proceeds as unfair, and regard millers as being opportunistic. By-products, for instance, have some economic value, but are used by millers without paying anything to the cane growers. Opportunism is defined as self-interest seeking with guile and it includes misrepresentation, manipulation, cheating, and deception (Anderson, 1988; John, 1984). The essence of opportunism is the element of deceit (Williamson, 1985). However, self-interest seeking without guile such as hard bargaining or intense disagreement is not considered opportunism (Provan and Skinner, 1989). A firm is more likely to behave opportunistically when its exchange partner is dependent on it (Klein *et al.*, 1978; Provan and Skinner, 1989; Williamson, 1985), when the firm has made a smaller commitment to the relationship than its partner (Gundlach *et al.*, 1995), when a high degree of environmental uncertainty exists, and when monitoring efforts by the exchange partner are insignificant (Stump and Heide, 1996).

1.4.3 Transaction costs issues

Sugarcane must be processed within 24 hours of harvesting to avoid a loss of sugar sucrose content due to decomposition and the subsequent production of degraded products. This limits the distance that a mill can be located from a farm section or out-grower (Rabobank International, 1999). Rabobank International argues that usually the distance between the mill and the farm should not exceed 25km. However, in the case of the Swaziland sugar industry some cane growers are situated up to 100 km away from the mill. The issue of distance between the mill and the farmers does not only affect the quality of the cane but it also influences the costs of transporting the cane to the mill. Even if farmers were to experience the same transport costs per tonne, the difference in distance would result in differences in the farmers' profits. The Swazi observer (2000) reported that apart from huge debts as a result of

expensive seed and sugarcane operations, smallholder cane growers complain of high transport costs by transporters. This is more serious for those farmers further away from the mills.

Challenges in the sugar industry include, among other things, understanding each participant's goals, roles, avoiding the use of power, and ensuring smooth flows of sugarcane and money up and down the supply chain, as well as valuing the role of social capital in the relationship. The inherent conflicts in the sugar industry result from perceived opportunism, and limited trust and cooperation between millers and cane growers. One of the main problems facing the sugar industry seems to be a lack of goodwill trust in the millers and dissatisfaction by cane growers resulting from (1) perceived unfair pricing systems for sucrose, (2) perceived unfair value sharing on sugarcane by-products, (3) misunderstanding of rules and their enforcement in the industry, 4) lack of skills and information, and (5) conflicting objectives of cane growers and the millers. The industry is also faced with a wide dispersion of production areas for smallholder farmers, which contributes to the total costs incurred by the farmers, hence affecting their profit margins as well as the performance of the whole supply chain.

1.5 BACKGROUND AND THEORETICAL SETTING OF CONTRACTUAL RELATIONSHIPS

1.5.1 Theoretical positioning of the study

This study's intellectual point of departure is based on Williamson's transaction costs economics (Williamson 1975, 1979). In line with Coase (1937), Williamson explained the existence of firms in terms of comparative cost advantages, regarding transactions as the basic unit of analysis. Vertical integration was then considered as a solution to the organisational problems posed by transaction costs. Transaction costs can occur in several arrangements, from the simple acquisition in spot markets to vertical integration. In a continuum between the two structures arise hybrid forms of contracts. According to Williamson (1985) when specific assets are low, the spot market is the efficient governance structure as it possesses minor transaction costs, while for medium specific assets the hybrid forms are more efficient, and in highly specific assets the hierarchy or vertical integration is more advantageous.

Williamson (1991, 1996) argues that the costs of governance in a market, hybrid forms and hierarchy structures are non-decreasing functions of asset specificity. Hence, it is important to choose the governance structure with the lowest governance or transaction costs⁴. Williamson (1991) argues that since it may not be possible to adapt hybrid forms in disruptions without mutual agreement between parties, hybrid forms are therefore not appropriate for transactions with frequent disruptions. Developing this idea further, Menard (1996) argues that the key idea is a strong enough bilateral dependence to require close coordination, but not strong enough to induce full integration. Therefore, the purpose of hybrid forms is to manage the lock-in situation originating from the existence of specific assets and appropriable quasi rents.

The resource dependence theory argues that because organisations cannot generate all the resources they need, they are bound to rely on their environment (other organisations) for resources (Pfeffer and Salanick, 1978). According to this theory, organisations depend on other organisations and the patterns of this dependence tend to produce inter-organisational power, which influences the organisational behaviour. Anderson and Narus (1990) contend that dependent firms will accept direction and changes as requested by the dominant partner in order to sustain the relationship and that the dominant firm will direct actions that will achieve its individual preferences over those acceptable to both parties. Johnson (1999) argues that a firm's deliberate choice to work within what could be considered a negative structural constraint (dependence) may generate positive consequences. Weitz and Jap (1995) supported this argument by proposing that dependent relationships may exhibit relationship norms, counteracting the need for controlling behaviour. Therefore, the impact of dependency on the performance of relationships is likely to be related to the degree that hierarchical governance structures are implemented through relational governance mechanisms (Heide and John, 1992).

Although resource dependence theory is appropriate for many types of interactions, it is based on conflict and power, assuming that goal conflict is inherent in the relationship. However, there have been difficulties explaining long term relationships resulting from coordinative behaviour based on social mechanisms such as trust. Exchange partners can rely on cooperation, collaboration, and coordination instead of power, influence and control. Morgan

⁴ The different approaches to the governance of contractual relationships are discussed in detail in Chapter two

and Hunt (1994) argue that the presence of relationship commitment and trust is central to successful relationship marketing, not power and its ability to condition others. Similarly, Weitz and Jap (1995) argue that the use of power as a coordinating mechanism is limited to asymmetric relationships, whereby one party is more powerful than another. Thus, proponents of transaction cost theory criticize resource dependence theory for its focus on descriptive issues and its failure to examine the efficiency implications of various structural arrangements (Heide and John, 1990).

According to classical transaction cost economics (TCE) relations are characterised by specific investments that create dependence and vulnerability to opportunism (Williamson, 1985). The transaction cost theory assumes that participants are frequently inclined to opportunism, which is self-interest seeking with guile. However, the TCE does not assume that all participants are opportunistic. Williamson (1975) argues that since it may be costly to distinguish ethical participants from opportunistic ones, entering into an economic exchange where significant investments in specific assets are placed at risk, it tends to expose the parties to the risk of opportunism. Parties may try to reduce the risk of opportunism ex-ante through contingent claims such as non-performance penalties, and auditing provisions as deterrents and or through the creation of hostage investments or by bonding their firms through co-specialised assets and bilateral dependence (Deeds and Hill, 1998). Opportunism occurs when one or more of the partners in a relationship find it to their advantage to maximise their individual returns at the expense of the other partner. Thus, any action or structures, which reduces potential benefits of either partner resulting from opportunistic behaviour, will also reduce the incidence to opportunism in the exchange relationship. Therefore, TCE advocates for formal structures as means to counter opportunism (Williamson, 1985).

The conflicting goals of cane growers and the millers are addressed in Besanko *et al.* (2000), who contend that an agency relationship arises when one party referred to as the 'principal' (the miller) passes obligations to another agent (the cane grower). In protecting the interests of the principal, there is a need to align the agent's interests with those of the principal in order to discourage the agent from shirking. However, Besanko *et al.* (2000) argue that using contracts to rationalise the principal's and the agent's interests, is not a complete solution to the agency problems, because of moral hazards and adverse selection. They point out that

culture is one of the factors that need to be considered in the development of efficient agency solutions.

In contrast to transaction cost theory, relational contracting views economic exchanges as taking place within the framework of historical and social context (Deeds and Hill, 1998). It views enforcement of obligations to be a result of the mutuality of interest of the parties in the exchange (Heide, 1994). It is argued that relational contracting implies that the cost of coordinating exchange is a function of both the actual type of structure underlying the transaction and the process by which the exchange partners interact. This is because, if in the process of renegotiation the negotiations become difficult, tends to increase the ex post negotiation costs, which in turn offsets the flexibility advantage of relational contracts. It assumes that the governance of relational exchanges is best achieved through the use of normative processes in which parties to the exchange adopt certain norms and values (Heide, 1994). Relational contracting operates in a bilateral system in which the goals and benefits of the exchange can be achieved through joint action. Therefore, the healthier the relationship the stronger the deterrence of opportunism (Deeds and Hill, 1998). This study therefore adopts the relationship centred approach to analyse contractual relationships between smallholder cane growers and millers.

1.5.2 The importance of social structures in relational exchange

In business practise, firms have frequently made deliberate attempts to establish stronger relationships with suppliers and customers. As a way of reducing costs, increasing efficiency, improving quality and technology, and enhancing competitive advantage, many firms are moving away from traditional “arms length” business relationships and are forging closer and more collaborative ties with supply chain partners. Spekman (1988: 75) argues that “competition from offshore producers, technological innovations, and shortened product life cycles have changed buyer-seller relationships. Traditional arms length contractual relationships no longer suffice, but closer collaborative approaches are needed.” Anderson and Weitz (1989) argue that the development of inter-organisational relationships is an approach that combines the advantages of vertically integrated distribution systems (control, coordination and information processing) with the advantages of systems utilising independent chain participants (flexibility, scale economies, efficiency and low overheads). However, inter-organisational relationships come with associated costs and risks.

Smallholder farmers are generally considered to be dependent and vulnerable in such relationships because of significant resource inequalities, opportunism and the abuse of asymmetric power advantages to expropriate proprietary assets and obtain concessions from the other partner (Barringer, 1997; Williamson, 1985).

Despite the positive contribution of smallholder cane growers to the sugar industry, for example some of them records of high yields and high sucrose content, the shortcomings in the understanding of their relationship practises and performance, as well as the lack of consensus on the probable implications of relationships between smallholder farmers and large multinational firms, like the millers, suggests that there is still a need for empirical research concerning the relationship between smallholder farmers and large processing firms. Ellram (1991) stated that as more firms enter into a relational exchange, a guide is needed to help the firms to develop and implement their relationships. Heide (1994: 74) contends that “... on the basis of the existing literature, it is not clear what specific conditions favour bilateral governance over other forms of governance”. However, research on inter-firm relationships implies an assumption that partnerships are successful when used in appropriate circumstances and environmental conditions.

The use of contracts to govern transactions between supply chain partners limits the behaviour of the parties substantially, by reducing their flexibility and not allowing them to benefit from market changes. This study proposes that the development of relational exchanges between supply chain participants is an appropriate strategy for smallholder farmers. This is even more rewarding when undertaken under appropriate facilitating conditions. These can be created by social control mechanisms like trust and cooperation.

Cannon *et al.* (2000) have found that increasing contractual specificity and details is not effective in promoting performance in a study including measures of efficiency and effectiveness in exchanges involving high levels of transactional uncertainty. It has been found that inter-firm relationships do not to provide direct financial benefits for small businesses in environments with highly competitive output markets (Gales and Blackburn, 1990). Achrol and Gundlach (1998) argue that firms who are willing to play by the rules of mutually oriented cooperative relationships are able to share vital information and innovations, spread their risks by developing coordinated strategies to meet environmental

contingencies, benefit jointly from opportunities presented to the social group, and are assured of relatively stable supply and demand markets.

The issue of trust has received much attention in social science (Fukuyama, 1995; Bradach and Eccles, 1989; Wilson and Kennedy, 1999; Gambetta, 1988) and economists have long recognised the critical role of trust in economic performance (Slemrod and Katuscak, 2002). For example, Arrow (1972) points out that “virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence”. In high trust societies, individuals need to spend less time and resources protecting themselves from exploitation in economic transactions (Slemrod and Katuscak, 2002). Williamson (1993) argues that it is impossible to reliably judge possible limits to other people’s opportunism, and that trust does not yield a reliable safeguard. He further points out that if trust goes beyond calculative self-interest, then it yields blind, unconditional trust, which is not wise and will not survive in the market. Since one has no reliable ex-ante knowledge of whether and when opportunism will occur, one should employ safeguards against this opportunism. These safeguards would constitute a formal control mechanism. It is the use of such hard formal control mechanisms that leads to the criticism of transaction cost economics.

From a sociological point of view, trust is viable without necessarily being unconditional or blind and can be an important element of formal control in the mitigation of relational risks (Nooteboom, 1996). Trust can be based on the social norms of reciprocity or obligation, personal bonding, and routine behaviour. This can yield voluntary compliance to an agreement that goes beyond self-interest. As a result of partners voluntarily refraining from opportunism, trust enables a jump between expectations that reasoning and experience alone would not permit. This goes beyond formal control mechanisms. Trust does not necessarily entail the absence of conflict, but it facilitates the reduction of threat resulting from conflict. The joint solution of conflict can deepen trust in several ways. First, it may yield learning, which confirms the value of the relationship and increasing mutual commitment. Second, the fact that problems are being solved, in itself, reduces perceived risk in the relationship (Nooteboom, 1996)

Sako (1992) analysed the role of trust in electronic industries in England and Japan. In her study, she extended the transaction cost theory of Williamson, by proposing that exchange relations involve trust. She concluded that party firms in England are developing more cooperation in their exchange, which were similar to what she termed obligational contractual relations. Sako (ibid.) emphasised the importance of the parties' perceptions of the past and future relations and the supporting role of informal links in an exchange relationship.

1.5.3 Trust and performance in contractual relationships

Most contractual exchanges tend to emphasise the contract-centred view of contractual relationship, but both contract and relationship centred views are regarded as essential by the relational exchange theory. The contract plays the role of a safeguard in case insoluble differences arise and the relationship fails (Nooteboom, 1996). The contract is most important at the beginning of the relationship. However, once contracted, there is an expectation of a shift of emphasis and the relationship is expected to be sustained through a mutual orientation. Therefore, a complementarity of the contract and relationship centred view is an ideal one for the sustainability and performance of the exchange relationship between farmers and the millers.

Inherent conflicts between millers and cane growers could be managed at three levels. First, is the complementarity of strengths, which forms the basis for the relationship and intrinsically provides a common interest. Second, the contractual mechanism which refers to the formal documents governing the relationship, and thirdly, the informal and normative coordination mechanisms, which result in flexibility and compromise. Heide and John (1992) emphasise that when structural and social mechanisms function effectively, contractual mechanisms become less important. In a sense a contract provides certain decision rights, while relational norms provide a safeguard against exploitative use of these rights. A concomitant to these rights are the responsibilities outlined in the contract, while trust provides the expectation that such responsibilities will be met.

While large multi-national firms may reap benefits from contractual relationships with smallholder firms with financial cognitive limitations and fewer strategic options (Gales and Blackburn, 1990), such relationships are frequently accompanied by problems of instability, poor performance and collapse. Garneys and Wilkinson (1994) noted that often small firms

partnering with large corporations find themselves locked into a path shaped by the needs of their powerful corporate partners which reduces their capacity to adapt their strategy to changing circumstances. The transaction costs theory points out that it is imprudent to assume that parties in an exchange will forgo opportunistic behaviour and as a result of this firms have to safeguard their investments from the possibility of relationship termination and perceived opportunism.

In practise, though smallholder farmers are in contractual relationships with the large corporations (for examples the smallholder cane growers and the millers), smallholder farmers indicate perceived vulnerability, inability to trust the millers and unwillingness to relinquish control as common features, which impact the performance of their relationship with the millers. The access to scale economies, stable input and output markets, greater flexibility, learning opportunities and improved competitive position might encourage millers and smallholder cane growers to move towards a closer relationship. However, the question of trust and commitment are important to the relationship maintenance, cooperation and satisfaction of both smallholder farmers and millers. These factors also become important sources of the relationship strength.

Given the evidence of smallholder farmers' concerns of vulnerability to the power of the millers (as indicated in Section 1.4.1) and the sensitivity of the sugar industry, this investigation of the influence of social factors on the performance of smallholder cane growers, their relationship with millers, and hence, the performance of the sugar industry supply chain is very important. As Mariotti (1999) puts it "the weakest link in the most advanced supply chains is not technology, not software or hardware, but people...or rather the level of trust between the people who must cooperate and collaborate to get results." Bonama and Zeltman (1978) stated, that in their discussions with purchasing managers and others intimately involved in the marketing area, they found that the major factors influencing the industrial purchasing decisions are social ones, but not rational-economic ones. Relatedly, Bonama and Johnston (1978) argue that the most important variables in a dyadic analysis are the relational variables between the two parties, for example trust and cooperation. Spekman (1988) points out that philosophically, inter-firm relationships can be built only if trust and cooperation exist between the buyer and the supplier.

Trust has long been thought to be important to organisational success (Davis *et al.*, 2000). The top managers' general trust does not only affect his or her actions, but also plays an important role in shaping trust in the whole organisation (organisational trust). It thus affects organisational operation and performance in two ways: both between and within organisations. Within organisations, researchers have argued that the level of trust affects organisational structures, processes and performance (Bromiley and Cummings, 1992; Creed and Miles, 1995). Bromiley and Cummings (1992) argue that trust reduces transaction costs, optimal expenditures on control, monitoring and other kinds of transaction costs that should be partially a function of the probability of opportunism, which in turn depends on the level of trustworthy behaviour in an organization. They suggest that the level of trust and trustworthiness in organisations affects their structures, processes, and performance. Creed and Miles (1995) provide a conceptual framework that explores organisational trust through the personality and behaviours of managers. They suggest that trust affects the firm performance. The failure to meet minimal trust requirements can result in performance failures or in costs associated with additional controls substituted for trust.

In terms of inter-organisational relations, Sako (1998) concludes that inter-organisational trust may enhance business performance in a number of ways. These include (1) reducing transaction costs, mainly resulting from a reduced need for contractual or monitoring devices, (2) investment with future returns, and (3) continuous improvement and learning. She found that mutual trust between a customer and a supplier organisation is conducive to good supplier performance and that this positive link is stronger for goodwill than for other types of trust. Barney and Hansen (1994) suggest that trust can be used to create and maintain competitive advantage in firms and improve their performance.

The question of whether trust enhances organisational performance receives conflicting answers in the available literature. Williamson (1993) claims that trust has no role to play at all. However, within organisations, England and Lee (1974) found that the relationship between the success indices and manager's trust is significantly negative for America, Australia, and India. Between organisations, Kern (1998) argues that in certain circumstances trust is connected with sub-optimal performance. Lane (1998) suggests that the majority of organisational scholars connect trust with highly positive effects on performance. The inconsistency in the literature on the effect of social control measures like trust motivates this study.

The sugar industry is characterised by numerous specificities, such as production site location, physical assets, human assets, dedicated assets specificity and time specificity (Williamson, 1991; Marino and Machado, 2000; Rabobank International, 1999), which makes it obvious that the spot market would not be ideal as it cannot fulfil the necessary requirements. Similarly, vertical integration would have problems with supply deficiencies and high costs. Therefore, long-term contracts allow the production and division of an activity's risks to be planned beforehand. Since these governance structures are complex, long-term contracts tend to coordinate the growers and the millers in that it allows for long range strategic planning to be made. The high frequency of transactions between growers and millers creates an incentive for both parties to reduce transaction costs. Hence, negotiated amounts, quality of the sugarcane, location of production sites, frequency and reputation of the millers and cane growers become very important elements in the performance of the sugar supply chain.

Sugarcane producers have to stay with the firm, to which they are allocated, thus leading to a relation of dependence. On the other hand the milling company has to deal with smallholder producers whose volumes may collapse, with the exception of pooling producers. Hence, with sugarcane being costly to produce, demanding highly specific investments and the length of time required before harvesting, it becomes imperative for the cane growers and the millers to maintain their interdependence and their long-term contractual arrangements. Therefore, empirical research is required to establish the role of these contractual and social mechanisms in enhancing the performance of the smallholder cane growers and millers in the sugar industry chain.

The relative importance of the different types of mechanisms governing contractual relationships is still being debated, as there are variations in importance across situations. As a result there is little consensus on the importance of trust as a governance mechanism in relationships. Williamson (1994) identifies an exaggerated emphasis on the use of legal courts by institutions of the state instead of parties resolving disputes by themselves. Deakin *et al.* (1997) on the other hand observe that there is wide consensus to the effect that institutions of contract law are largely marginalized in the processes of business contracting. In line with economic literature, Klein and Leffler (1981) and Klein (1996) argue that contracts are not enforceable by government or any third party, while advocates of contract law argue in favour of the law and legal institutions playing a major role in contractual matters.

Macaulay's (1963) findings in his seminal paper are credited for introducing a new view on the role of contracts, and his preliminary study is the most cited in contractual studies. Very few studies focus on the different transactional strategies, the exception being Fafchamps (1996, 1997) and Fafchamps and Minton (1999), who analysed the enforcement of commercial contracts in Ghana and Zimbabwe and the importance of relationships for traders in Madagascar. Therefore, there is a need for studies on specific markets and specific contractual practises.

This study will provide an overview of the governance of contractual relationships in the agricultural supply chains focusing specifically on the sugar industry in Swaziland. Emphasis is placed on the significance of social factors as self-enforcement mechanisms in promoting the performance of relationships between millers and smallholder cane growers. This study uses a relational paradigm to analyse the contractual relationship in the sugar industry supply chain.

1.6 HYPOTHESES

The main hypothesis of this study is that supply chains that are characterised by social factors such as trust, commitment, and cooperation perform better than those characterised by opportunistic behaviour and lack of trust. These social factors are embedded in the behaviour of the units that form the supply chain and they are important in enhancing the performance of the supply chain.

The following are the specific hypotheses to be tested in this study:

- Social factors such as trust are important mechanisms that can complement formal governance mechanisms in exchange relationships between smallholder cane growers and millers.
- Smallholder cane growers' perceptions of their relationship with the millers can be explained by the detailed relationship structure outlined in Chapter three (Figure 3.3).

- The lack of trust between cane growers and millers, the cane growers' perceptions of opportunistic behaviour by millers as well as perceived poor cooperation, compounded by lack of skills, knowledge, and proximity to the mills tend to have a negative impact on the cane growers' performance, and hence the performance of the whole supply chain.

1.7 JUSTIFICATION

Although contracting between smallholder farmers and processing firms has been in place for a long time and is of economic benefit to both parties (Rhodes Grimes, 1992; Kleibenstein and Hillburn, 1992; Zering and Beals, 1989, 1990; Clap, 1994; Goldsmith, 1985) early research in agricultural contracts focused mainly on the economics of contracting (Glover, 1994; Goldsmith, 1985) and ignored the structure of social relations within contracts (Levin, 1988). However, it is only recently that the focus has broadened to include both economic and social aspects of contracting. Social aspects of contracts focus on measuring the effectiveness of the relational contract within the supply chain system by investigating its conflict resolution, inter-firm cooperation, the role of trust, the balance of power in the relationship and the satisfaction of the participants in the supply chain. However, very little empirical information is available on the factors that affect the quality of the relationships between smallholder farmers and the processing firms. This section provides the conceptual and empirical justification for this study.

1.7.1 Conceptual justification

Given the wide range of research conducted on relationship exchange, both in marketing and management, one would expect a consensus in the concepts used in relational studies. However, most definitions are still broad and without clarity. Other studies (Sako, 1998; Fukuyama, 1995) indicate that the use of formal contracts is not enough to discourage opportunistic behaviour among parties in an exchange relationship and subscribe to the inclusion of implicit non-written contracts that make use of social norms. However, it is still not clear how these contractual relationships should complement the formal written contracts.

1.7.2 Empirical justification

According to Fukuyama (1995) the link between trust and business performance is plausible, however not proven. In business strategy, trust between organisations focuses on the possibility of using it to create competitive advantages (Barney and Hansen, 1994). Sako (1998) points out that though there are plenty of theoretical explorations on the link of trust and performance, empirical studies in this area are rare. Sako (ibid.) continues to say trust can adapt to unforeseen circumstances. Therefore, trust reduces transaction costs, allows investments to increase returns since investments themselves are considered a measure of performance, and trust between buyer and seller is a relation-specific skill that is developed with time. She argues that trust does not only lower transaction costs and increase net benefits from investments, but it also gives rise to rapid innovation and learning.

Artz and Brusck (2000) point out that, while studies have demonstrated the viability of relational contracting in influencing performance and maintaining relational exchange, none of these directly examined inter-firm bargaining or transaction costs or applied it to agricultural supply chains. The main reasons for this include, that instead of one or two governance regimes, relational governance involves a continuous range of relational norms. Exchange partners usually develop relational norms with the intent of minimizing bargaining costs resulting from asset specificity and uncertainty. The issue of greater relational norms in lower bargaining costs for firms with the same level of specific assets and uncertainty is an empirical question (Artz and Brush, 2000). There is still a lack of research on the relationships of farmers and processing firms in the agricultural supply chain. Hence, there is a need to investigate the role of the social properties of the parties in the exchange. A study of this nature is necessary to identify the factors affecting the performance of cane growers, and hence the sugar industry supply chain, and determine the role of social factors in enhancing the relationship and the performance of the supply chain participants.

This study attempts to bring to light the quality of the relationship between smallholder farmers and processing firms and the importance of social factors in enhancing the relational exchange performance. The study will be of practical benefit to sugar millers (through developing a series of "lessons of best practise" for the development of contractual and business relationships and organisational and supply chain structures), cane growers, policy

makers and the SSA (by presenting appropriate recommendations for future market restructuring and regulation).

1.8 OBJECTIVES

This study is concerned with the relationship of smallholder cane growers and the millers in the sugar industry supply chain in Swaziland. It attempts to identify and analyse the factors affecting the performance of the smallholder cane growers and their exchange relationship with millers, and hence the performance of the sugar industry supply chain. The study further models the relationship of the farmers and the millers based on the perceptions of the farmers.

The specific objectives are:

1. To identify the role of social factors in the cane growers' and millers' exchange relationship.
2. To identify factors influencing the performance of cane growers, and hence, the whole sugar industry supply chain.
3. To model and evaluate the contractual relationship between cane growers and millers.

Therefore, the study aims at quantifying intangible behavioural assets like trust and cooperation as well as determining their importance as governance mechanisms in enhancing performance in the agricultural supply chains.

1.9 METHOD OF ANALYSIS

The study utilises several methods to test the stated hypotheses. In the first instance, descriptive statistics were employed to describe the nature of the relationships between millers and cane growers. Secondly, multiple regression analysis was applied to determine factors affecting the performance of the smallholder farmers. Lastly, hierarchical regression and structural equation modelling (SEM) estimations were used to test the conceptualised model of cane growers' and millers' relationships.

1.10 DELIMITATIONS OF THE STUDY AND ASSUMPTIONS

The focus of the study is on the smallholder sugarcane farmers and millers in the sugar industry in Swaziland. The smallholder cane growers only account for a small amount of production compared to the total cane produced in the country. This is because of the complicated nature of long-term contracts in an environment where the smallholder firms having different and diverse objectives to large-scale cane growers, which all things being equal have to be aligned with the objectives of the industry as a whole. The study focuses on the relationship between smallholder cane growers and millers and its influence on their performance as contractees and contractors, respectively, and also as participants in the supply chain.

1.11 ORGANISATION OF THE STUDY

This study is organised into seven chapters. Chapter two discusses the literature review on contractual relationships. Chapter three presents the theoretical and conceptual framework and also proposes a model of the relationship between cane growers and millers. The methodology followed in conducting the study is presented in Chapter four. It includes the different types of analyses and their justification in the study. Descriptive results of the study are presented in Chapter five, while the model estimations are discussed in Chapter six. Finally, Chapter seven presents the discussion, conclusions and implications of the study.