

# CONTRACTUAL RELATIONSHIPS BETWEEN SMALLHOLDER SUGARCANE GROWERS AND MILLERS IN THE SUGAR INDUSTRY SUPPLY CHAIN IN SWAZILAND

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## Abstract

*This paper proposes and analyses a model of relationships between smallholder sugarcane growers and millers in the Swaziland sugar industry supply chain. In particular, it identifies the behavioural factors that contribute to the level of satisfaction that sugarcane growers perceive in their relationship with the millers. Using recursive models and multiple regression analysis, the results indicate that higher levels of trust lead to higher levels of cooperation that, in turn, lead to higher levels of commitment by the smallholder growers to the business relationship. Cooperation is also an antecedent of the benefits and of the satisfaction that these growers gained from the relationship. These results agree with a priori theory that trust, cooperation, strategic benefits, commitment and absence of opportunistic behaviour are essential elements for a successful relational exchange. The findings imply that both cane growers and millers need to focus on initiating, signalling and disclosing their behaviours in an effort to improve their relationship with each other. A relationship founded on trust and mutual respect is more likely to succeed than a relationship of convenience supported by legal contingencies. Therefore, relationships characterised by trust and physical and psychological commitment as well as cooperation between exchange parties is more important for mutual benefit and good quality relationship.*

## 1. INTRODUCTION

The Swaziland economy is to a great extent based on the sugar industry. In terms of the national income accounting, cane growing is classified as an agricultural activity while sugar processing is classified as an industrial activity. During 1999, cane growing contributed 56% to total agricultural output and 37% to total agricultural wage employment. During the same season, sugar cane milling contributed 25% to total manufacturing output and

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27% to total manufacturing wage employment. The sugar industry as a whole contributed 18% to national output, 22% to private sector employment and 15% to national employment (UNCTAD, 2000).

The Swaziland sugar industry derives its present structure from the Sugar Act of 1967. Growers and millers belong to the Swaziland Cane Growers' Association (SCGA) and Swaziland Sugar Millers' Association (SSMA) respectively. These two bodies hold equal status in the Swaziland Sugar Association (SSA). The marketing and sale of sugar is the sole responsibility of the SSA. As sugar is produced it becomes the property of SSA, which arranges its storage, transport and sales (UNCTAD, 2000; Westlake, 1995; Sugar Act, 1967; SSA, 2001).

Cane growers are responsible for growing cane and also bear the costs of cane delivery to the mill that they supply. All growers, including the milling companies, are subject to delivery quotas, specified in terms of the weight of sucrose in cane delivered. This is meant to ensure that (1) national sugar production is restricted to the quantity that the market for sugar produced in Swaziland can accommodate at satisfactory prices, and (2) there is sufficient milling capacity to accommodate additional deliveries (Westlake, 1995). These delivery quotas are set by the Industry Board and in essence represent a contract between the cane grower and the miller. Growers are required to provide the full amount of their quota to the mill to which they are attached. In turn the mill is required to accept all cane delivered to it up to each grower's quota, and if a grower has more cane than stipulated by the quota, a segregated price is applied (a price lower than the price paid for quota sucrose).

One of the main aims of the Swaziland national strategy for agriculture is to enhance private sector involvement in the uplifting of Swazi Nation Land (SNL) farmers from subsistence to commercial farming, whilst maintaining economic efficiency in production and promoting cane production by smallholder cane growers (The Swaziland Government, 1996).

Considerable research and development capacity of both the state and large-scale sectors has been orientated towards large-scale farmers, with a focus on industrialization (Boehlje & Doering, 2000) and emphasis on maximising production through increased inputs. While policy is now oriented more in favour of smallholder farmers, institutions often lack the skills, experience and inclination for this new orientation. Most are still embedded in a high input/output paradigm, and understand the task as one of adapting and transferring large scale farming technologies to smallholders. Understanding

of smallholder reality, with its particular complex, diverse, risk prone and dynamic nature, is typically still poor. Hence, this study focuses on the smallholder farmers in the Swaziland sugar industry.

Levin (1988) suggested that most development planners argue that out-grower schemes and contract farming arrangements involving smallholder producers can provide alternatives for rural development or, rather, modernization. Glover (1984) and Goldsmith (1985) attempted to demonstrate the technical efficiency of out-grower schemes and the positive role that they can play in overall agricultural development. However, they did not analyse the relationship between small commodity producers and the multinational companies that engage in contracts with them. Furthermore, they ignored the structure of social relations that contract farming creates (Levin, 1988). This paper attempts to partly close this gap in research by analysing the contractual relationships between smallholder sugarcane farmers and processors (sugar millers) in Swaziland. Identification of important behavioural factors in this relationship will assist both smallholder farmers and millers by providing areas that need focus and direction for improving the quality of their relationship, hence their performance.

This paper begins by conceptualising relational contracting between smallholder sugarcane farmers and millers in Section 2. This section discusses the behavioural factors used in the study and their importance in the development and maintenance of an exchange relationship. The development of hypotheses is also presented in this section. Section 3 presents the data analysis and results. The discussion and conclusions are presented in Section 4. Finally, Section 5 considers the implications of the findings.

## **2. CONCEPTUAL FRAMEWORK**

Relational contracting is a means of coordinating successive stages in commodity systems (MacNeil, 1980; Contractor & Lorange, 2002). Contracts can reduce uncertainty via the assurance of an outlet for raw sugarcane, the assurance of a quantity to process, and the potential increased efficiency from harmonising stages from production to processing operate to the advantage of both contracting parties. Both growers and millers can benefit from the certainty associated with the enforcement of a contract. The growers need to have the confidence that they will be able to supply cane on reasonable terms, which implies that all their cane will be accepted. The millers need to know they are going to obtain cane supplies on reasonable terms, implying that growers will supply the required quantity timeously. Since contracts cannot cover all contingencies, appropriate adaptations will not be evident for many

contingencies until circumstances materialize. A range of processes and techniques, including arbitration as a final measure if others cannot resolve the problem, will likely be used to maintain the needed flexibility. Relational contracting thus encompasses an adjustment process, whereby the reference point is not only the original agreement, but also the entire relationship between the parties over time (Anderson & Weitz, 1992).

## **2.1 Relationship performance**

There are two schools of thought about what constitutes the success of a business relationship. The first school of thought advance that the concept of success is associated with the general satisfaction of participants with the inter-organizational relationship (Anderson & Narus, 1990). They define satisfaction as a positive emotional state resulting from the assessment of all the aspects of a well-functioning relationship maintained by one organization with another (Anderson & Narus, 1990). The concept of satisfaction is based on the premise that success is determined by a partner's positive experience of the other partner's ability to meet the norms and expectations of performance (Anderson & Narus, 1990).

The second school of thought advanced by Johnston & Lawrence (1988) refers to success in inter-organizational relationships as a quantitative measure of mutual benefit obtained by organizations participating in the relationship. Organizations use measurements of financial results, such as profits, or market share, inventory and reduction of costs (Beamon, 1999). However, Beamon (1999) argues that such measurements may not be adequate for the analysis of the entire supply chain. Anderson & Narus (1990) considered that many relationships could require a long time to pass before such results can be measured. They argue that success refers to the overall assessment of an inter-organizational relationship by the associated organizations. Therefore, success is nothing else but the generation of satisfaction for the organizations participating in the relationship, resulting from the fulfilling of the expectations of performance. Thus, this paper uses satisfaction as a qualitative measure of the performance of a business relationship. Satisfaction is a close proxy for perceived effectiveness and also has the potential to predict the future actions of chain participants (Anderson & Narus, 1990).

## **2.2 Relationship commitment**

Relationship commitment is regarded as the central outcome variable in business exchange relationships that ensures the strength, stability, durability and even the profitability of a relationship (Dwyer, Schurr & Oh, 1987;

Morgan & Hunt, 1994; Wilson, 1995). It is argued, therefore, that commitment is a crucial variable that determines the value of relationships between partners. Commitment is a dynamic concept, though the link between relationship performance and commitment may not be straightforward (Wilson, 1995). Other authors argue that satisfaction is an important, however, not a necessary condition for a party to become committed (Wilson & Mummalaneni, 1986). Commitment is regarded as “an implicit or explicit pledge of relational continuity between exchange partners” (Dwyer & Schurr, 1987:337). Therefore, commitment is a measure of strength or success in business relationships and has been regarded as a dependent variable for trust and cooperation.

### **2.3 Trust and relational exchange**

Central to the success of relationship exchange is trust between the buyer and the supplier (Morgan & Hunt, 1994). Trust may be defined as “the belief that a party’s word or promise is reliable and that a party will fulfil his/her obligation in an exchange relationship” (Schurr & Ozanne, 1985). Sako (1998) distinguishes between three types of trust: (1) Contractual trust, which implies shared norms of honesty and promise keeping according to contractual agreements; (2) Competency trust, which implies shared understanding of professional conduct, as well as technical and managerial standards, and (3) Goodwill trust, which rests on the consensus of fairness. Morgan & Hunt (1994) argue that trust is a determinant of commitment because relationships characterized by trust are highly valued, such that the parties involved will desire to commit themselves to such relationships. Commitment expresses the extent to which a partner is willing to maintain a valued relationship (Moorman *et al*, 1992). Trust is regarded as an important antecedent to relationship commitment in exchange relationships (Dwyer *et al*, 1987; Morgan & Hunt, 1994; Hunt *et al*, 2002). The presence of trust in a relationship results in commitment of the trusting party in two ways. Trust has a direct and an indirect relationship with contractual commitment via cooperation. Trust does not necessarily entail the absence of conflict, but it reduces the threat of conflict, so that the presence of trust lowers the probability that one partner will act opportunistically even if he has the opportunity to do so. Hence trust has both a direct relationship with satisfaction and an indirect relationship via cooperation (Andaleeb, 1996).

### **2.4 Opportunistic behaviour**

Opportunistic behaviour could be aimed at exploiting 'quasi-rents' generated by the capital committed to an activity. Quasi-rents result from the investment

of dedicated capital, which once invested, cannot be used for other activities, and the output of which is dedicated to a single or very limited number of buyers. In the case of the Swaziland sugar industry, the single buyer (mill) can bargain the price (of cane) down below the level necessary to provide a return on the capital invested (in cane growing). The buyer is essentially only contributing to operating and maintenance costs and not to the cost of capital. Because of the limited opportunity to shift the capital once committed, the supplier is still better off continuing to supply rather than closing down. The benefit to the buyer from this action is regarded as a 'rent' in economic terms as its appropriation does not change the level of economic activity (that is, the supplier continues to supply), but because in the longer term this action will discourage future investment by suppliers, it is essentially a short-term or quasi rent. The likelihood of this sort of behaviour in the Swaziland sugar industry would appear to be small, despite the existence of specific capital in cane-growing and limited buyers. At worst, it is a short-term strategy that would seriously discourage long-term investment in cane growing.

## **2.5 Relationship benefits**

The threat of rivalry from competing sellers, especially in the new global marketplace, requires that firms continually seek out products, processes, and technologies that add value to their own offerings. The relationship benefits for the cane growers can be categorized as either "strategic" (money, market, or technological) or "psycho-social", for instance the satisfaction derived from being in a relationship. Further, these dimensions will have associated strategic costs such as costs of maintaining or coordinating the relationship, for example investment on trust, and costs associated with governance mechanisms and psychosocial costs such as anticipated switching costs that could be incurred when the relationship is terminated (Nielson, 1994). The main strategic benefit to the farmer is the actualisation of the strategic aims or goals that motivated the relationship.

## **2.6 Cooperation between cane growers and millers**

Cooperation refers to the interaction of organizations with (a) limited use of power and harmonious resolution of conflict (Frazier, Spekman & O'Neal, 1988); (b) flexibility and the use of "give and take" (MacNeil, 1980); (c) the willingness to share valuable proprietary information and not reveal confidences, and (d) joint decision making, planning, problem solving, and goal identification (Speckman, 1988). The value of the exchange of information and the ensuing strategic benefits are a function of the extent to which cooperation is established in the relationship. The cooperative functional

interactions are conceptualised as an iterative and evolving process of increasing levels of interaction leading to higher levels of trust and cooperation which in turn, generates relatively high levels of exchange of valuable information. The recognition by participants that the relationship is creating valuable information exchange (leading to realization of objectives) further increases the level of trust and cooperation. Hence, cooperation is a "key" factor contributing to a successful business relationship, since higher levels of cooperation turn to encourage higher levels of commitment of human and other resources to the relationship (Mavondo & Rodrigo, 2001) and also results in satisfaction of the cooperating parties in their relationship.

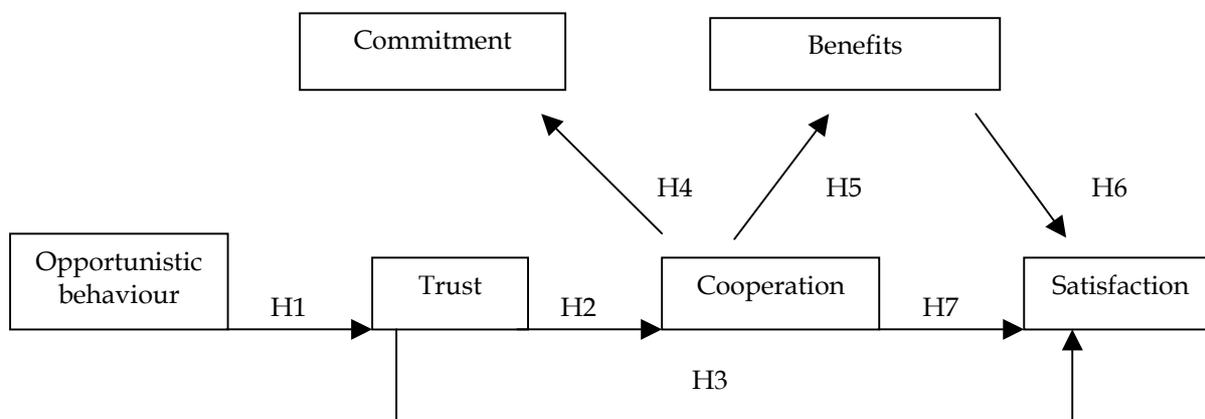
Figure 1 presents a proposed model of the relationship between cane growers and millers. It further indicates the link between relational factors, such as opportunistic behaviour, trust, commitment, cooperation, benefits and satisfaction in this relationship.

## **2.7 Research hypotheses**

The following seven research hypotheses (H1 to H7 in Figure 1) are suggested by the concepts of relational performance and commitment, trust, opportunistic behaviour, relationship benefits and cooperation discussed above in sections 2.2 to 2.6:

- H1: The presence of opportunistic behaviour has a negative effect on the level of trust that the cane growers' have in their relationship with the millers;
- H2: The growers' level of trust in their relationship with the millers has a positive effect on their level of cooperation;
- H3: The growers' level of trust in their relationship with the millers is positively related to their level of satisfaction with the relationship;
- H4: Higher levels of trust in their relationship with the millers leads to higher levels of cooperation by the growers with millers and, in turn, to higher levels of commitment to the relationships by growers;
- H5: Cooperation between cane growers and the millers will positively influence the benefits that accrue to cane growers;
- H6: Farmers' realization of the benefits from their business relationships with millers enhances their satisfaction with these relationships; and

H7: Farmers' perceptions about the level of the millers' cooperation directly affects their levels of satisfaction in their business relationship with millers.



**Figure 1: Model of smallholder sugarcane growers' relationships with millers in the Swaziland sugar industry**

### 3. DATA ANALYSIS AND RESULTS

The study used data collected in 2001 from a sample of 124 smallholder cane growers who supply sugarcane to the three sugar mills in Swaziland (Simunye, Ubombo (Bigbend) and Mhlume) and with a maximum land size of 100ha per farmer. In addition to individual farmers, the respondents included representatives of farmers association<sup>2</sup>.

Data were collected by means of personal interviews, using a structured 4-point Likert-type scale, where 1 was equal to 'strongly disagree' and 4 equal

<sup>2</sup> The farmers associations included in the study are: Nzama Farmers Association; Vukani Association; Mankontshane Association; Ntisheni Farmers Association; Makhabeni Association; Lilanda Farmers Association; Loboovu Farmers Cooperative; Logoba Farmers Association; Sukumani Bomake Farmers Association; Maphobeni Farmer Association, Mavalela Farmers Association, Mbanana Farmers Association, Madlenya Irrigation Scheme; Magwanyana Farmers Association; Mabhudlweni Farmers Association; Ntengenyane Farmers Association; Bambanani Association; Hlomani Association; Emadoodza Association; Manyoovu Farmers Association; Nsutumutwe Farmers Association; Mshumpula Farmers Association; Vulamehlo Farmers Association; Bambanani Association; Mshumpula Farmers Association; Vulamehlo Farmer Association, Maphobeni Farmer Association; Mndobandoba Farmers Cooperation, Mdalantomb Agricultural Service; Yemshikashika Farmers Association; Phasentsaba Farmers Association; Vuoulane Cooperative and Vuoulane Irrigation Scheme.

to 'strongly agree', and 'very much dissatisfied' and 'very much satisfied' respectively for the satisfaction construct.

The most important criterion in selecting a sample is to increase the validity of the collected data (Carmines & Zeller, 1988). In this study the data selection criterion was designed to increase validity, rather than to ensure that the sample was representative of the given population. Therefore, the study uses purposive sampling, which is most desirable when certain important segments of the target population are intentionally represented in the sample. The sample incorporated 10% of members from those farmer associations with farmers operating individually. A farmer was only interviewed if he/she had sold sugarcane to the mill at least once. Those farmers that had not yet sold sugarcane to the mill were not included in the sample.

Purposive sampling is a deliberate non-random method of sampling that aims to sample a group of people or settings with a particular characteristic, such as where they live in society, or specific cultural knowledge. The power of purposive sampling lies in selecting information rich cases for study, where information rich cases refer to those cases that provide insight into the issues of central importance to the research study (Patton, 1990). Appendix A presents the questions that were asked to collect the data on the different behavioural concepts presented in the framework. The mean score of each construct variable was obtained by averaging the response of each respondent for all the questions measuring a particular construct. Since a 4 point-type Likert scale was used in the study, therefore the midpoint score was 2.5. Any score above the midpoint of 2.5 implies that the respondent agrees with the statement, while a score of less than 2.5 implies the respondent disagrees. Taking the average of all the respondents resulted in the average score for all respondents on each behavioural factor. For example, Trust was measured by 5 questions, and taking the average of the responses to the 5 questions by each respondent gives the score for trust for that particular respondent. However, taking the average of the scores for trust for all the respondents gives the overall score for trust.

### **3.1 Internal consistency of scales used to measure conceptual constructs**

The internal consistency of scales used to measure constructs was ascertained by calculating Cronbach's coefficient alpha and item-total correlations. Items with low correlations were deleted if their deletion improved the alpha ( $\alpha$ ). Table 1 provides a summary of the refined scales. Correlating the scales measuring each construct assessed the convergent validity and they were found to be significant at the 10% level of significance.

**Table 1: Indicators of internal consistency of scales used to measure conceptual relationship constructs (n=124)**

Construct	Number of items	Number of growers	$\alpha$	Mean Score	Standard Deviation
Trust	5	124	0.71	2.81	0.55
Commitment	3	124	0.60	3.26	0.53
Cooperation	3	124	0.74	2.79	0.65
Benefits	4	124	0.67	1.54	0.58
Satisfaction	4	124	0.59	2.87	0.52
Opportunistic behaviour	3	124	0.62	2.92	0.64

Although some authors suggest that a reliability level of 0.7 is preferable (Nunnally, 1978), others argue that this is only a rule of thumb. Alpha levels of less than 0.7 and even less than 0.6 have been reported in the literature (Hatcher, 1994). Based on Hair *et al*, (1995), Table 1 shows that all constructs are satisfactorily reliable. According to Hair *et al* (1995) an alpha level of 0.5 is acceptable since anything smaller means that more than 50% of the construct variance would be error variance.

### 3.2 Hypothesis testing

Recursive models and multiple regression analysis were used to help test hypotheses H1 to H7 specified in Section 2.7 above. The results reported in Table 2 support the seven hypotheses and show the associated adjusted R<sup>2</sup>, F-statistic, t-statistic and parameter (B) estimates. All parameter estimates are statistically significant at the 5 per cent level or below. As expected, the perception by growers of opportunistic behaviour (H1) by their miller partners has a negative impact on the growers' levels of trust in their business relationships. Variability in opportunistic behaviour explained about 37 percent of the variability in the smallholder cane growers' level of trust in working relationships with the millers. Trust then has a positive influence on the growers' perceived level of cooperation with millers (H2). Trust explained about 14% of the variation in cooperation. An increase of 10% in growers' trust to the millers would indirectly<sup>3</sup>, via cooperation, increase their commitment in the relationship by 1%.

<sup>3</sup> An indirect effect of trust on commitment is the product of the coefficient of trust and cooperation and cooperation and commitment.

**Table 2: Factors governing contractual relationship between smallholder cane growers and millers in the Swaziland sugar industry, 2001 (n=124)**

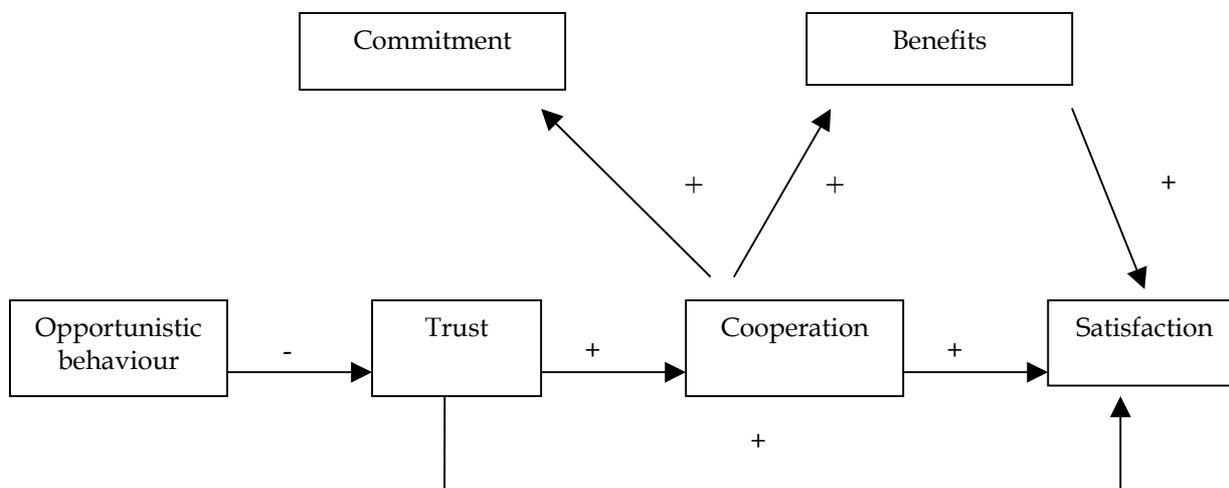
Dependent variable	Independent variable(s)	Adjusted R <sup>2</sup>	F-statistic	B estimate	t-statistic
Trust	Opportunistic Behaviour	0.373 (0.422) <sup>a</sup>	73.014 <sup>***b</sup>	-0.615 (0.059)	8.545 <sup>***</sup>
Cooperation	Trust	0.136 (0.603)	19.266 <sup>***</sup>	0.465 (0.106)	4.389 <sup>***</sup>
Commitment	Cooperation	0.040 (0.636)	5.972 <sup>***</sup>	0.220 (0.109)	2.444 <sup>**</sup>
Benefits	Cooperation	0.028 (0.579)	4.411 <sup>**</sup>	0.191 (0.082)	2.100 <sup>**</sup>
Satisfaction	Benefits	0.356 (0.416)	21.967 <sup>***</sup>	0.336 (0.069)	4.300 <sup>***</sup>
	Cooperation			0.277 (0.066)	3.377 <sup>***</sup>
	Trust			0.238 (0.080)	2.891 <sup>***</sup>

Notes: <sup>a</sup> Figures in brackets are the standard errors of the parameter estimates.

<sup>b</sup> <sup>\*\*\*</sup> and <sup>\*\*</sup> indicate statistical significance at the 1% and 5% levels of significance, respectively.

As expected *a priori*, there is a positive relationship between trust and satisfaction with the working relationship. Trust has a direct and indirect impact on satisfaction. The indirect effect of trust on satisfaction is shown via cooperation and benefits. The results show that a 1% increase in the cane growers' trust would result in a 24.63% increase in their satisfaction with their relationship. About twenty four percent (23.8%) of the change is the result of direct effects, while 0.83% is a result of the indirect effect via cooperation and realized benefits. The fourth hypothesis (H4) also posited the link from higher levels of cooperation to higher levels of commitment by smallholder cane growers to the business relationship. This hypothesis is supported by the results, since there is a significant positive relationship between cooperation and commitment. Receiving benefits (economic and/or non-economic) from the working relationship is crucial to the players' gaining satisfaction from any relationship. The cooperation of participants in any relationship will result in those involved realizing rewards for their cooperation (H5). This is likely to make these players willing to continue with the relationship into the future, which is an indication of satisfaction with the relationship (H6 and H7). About 36% of the variation in the cane growers' satisfaction is explained by their perceived cooperation, realization of benefits and trust to the millers. Figure 2 presents the model of the smallholder cane grower and millers

business relationships showing the signs of the linkages between the components of these relationships.



**Figure 2: Model showing the direction of components of smallholder sugarcane growers’ relationships with millers in the Swaziland sugar industry**

#### 4. DISCUSSION AND CONCLUSIONS

Relational contract systems are social as well as economic systems (Anderson & Narus, 1990). Therefore, it is critical to consider the quality of the relationships within the supply chain, as a social system. This paper has attempted to estimate the behavioural factors that are responsible for the level of satisfaction that smallholder sugarcane growers derive in their business relationships with the millers in the Swaziland sugar industry. A review of relevant literature confirms that developing and maintaining long-term relationships with your exchange partners can reduce uncertainty; farmers can gain access to markets, and more reliable market information and hence improve performance (Noordewier, John & Nevin, 1990).

The model supports theory that suggests that there is a positive relationship between trust, cooperation, and relationship benefits and satisfaction. There seems to be a causal link that runs from trust to cooperation to commitment. Dwyer, Schurr & Oh (1987) state that it is plausible that commitment leads to trust. On the other hand Ganeson (1994) challenged the theory, by suggesting that trust is a consequence of the relationship rather than a determinant. Hence, trust is related to satisfaction.

The results concur with theory that trust, cooperation, relationship benefits, commitment and the absence of opportunistic behaviour are essential elements in a relational exchange. Although the findings were informative in terms of critical elements for a successful relationship, the study focused on the cane growers' perceptions of their relationships with the millers. However, it would be important to compare the importance of the relationship constructs on a model based on the perceptions of the millers as well.

## **5. MANAGERIAL IMPLICATIONS**

The prime purpose of the paper was to present and empirically test a model of the relationship between smallholder cane growers and millers in the Swaziland sugar industry. In addition to contributing to our understanding of business relationships, the study's findings provide practical implications for both cane growers and millers. The study also provides empirical evidence for the theoretical linkages of relational behaviours in business relationships.

The results in this study suggest several ways in which both smallholder sugarcane growers and millers can actively manage their exchange relationship. The results suggest that both cane growers and millers need to focus on initiating, signalling and disclosing their behaviours in an effort to improve their relationships.

It is worth noting that a contract works on compliance, while relational exchange requires trust and commitment. A relationship founded on trust and mutual respect is more likely to succeed than a relationship of convenience supported by legal contingencies. Therefore, relationships characterised by trust and physical and psychological commitment as well as cooperation between exchange parties is more important for mutual benefit and good quality relationships. Trust is more important in facilitating exchange relationships between smallholder farmers and millers. Since smallholder farmers have limited access to legal recourse (Lyon, 2000), it would be to their benefit to rely on trust as their principal governance mechanism for their exchange relationship with millers. Both cane growers and millers can develop trust by having confidence on each other and by not acting opportunistically.

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## APPENDIX A

## Questions used as indicator items for behavioural constructs\*

Construct	Items
Opportunistic behaviour	<ol style="list-style-type: none"> <li>1. The mill takes advantage of the farmers' ignorance.</li> <li>2. The miller is concerned with maximizing its own profits.</li> <li>3. The mill cheats when testing farmers' sugarcane.</li> </ol>
Trust	<ol style="list-style-type: none"> <li>1. The mill's decisions are meant to benefit both growers and the mill</li> <li>2. The mill treats cane growers with care</li> <li>3. There is a mutual understanding between the mill and the cane growers.</li> <li>4. The mill can be relied upon for its technical ability.</li> <li>5. One has to monitor and double check whatever information the miller provides.</li> </ol>
Cooperation	<ol style="list-style-type: none"> <li>1. The mill is very much cooperative.</li> <li>2. The mill seeks farmers' opinions whenever it considers implementing changes that will affect farmers as well.</li> <li>3. Together with the mill you plan productions and delivery schedules.</li> </ol>
Commitment	<ol style="list-style-type: none"> <li>1. You have invested a lot of capital in the sugarcane business.</li> <li>2. Given a chance you would change and supply another mill (R)**.</li> <li>3. You do not care whether you meet your quota, as long as you make profit (R).</li> </ol>
Benefits	<ol style="list-style-type: none"> <li>1. There is good profit from growing sugarcane.</li> <li>2. There are no hassles looking for a market.</li> <li>3. Use of mill equipment by farmers.</li> <li>4. Loans provided by the mill to farmers.</li> </ol>
Satisfaction	<ol style="list-style-type: none"> <li>1. Price paid for sugarcane.</li> <li>2. Procedures for testing sucrose content.</li> <li>3. Time taken to pay after sugarcane has been delivered to the mill.</li> <li>4. Technical assistance provided by the sugar association.</li> <li>5. This mill is a good one to work with.</li> </ol>

\* All statements were measured using a 4 point Likert scale of 1 = strongly disagree and 4 = strongly agree and the scale for satisfaction was 1 = very much dissatisfied and 4 = very much satisfied.

\*\* R denotes reversed scores.