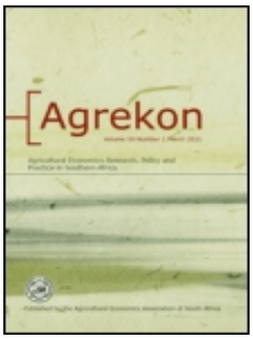

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Agricultural Economics Research, Policy and Practice in Southern Africa

ISSN: 0303-1853 (Print) 2078-0400 (Online) Journal homepage: www.tandfonline.com/journals/ragr20

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To cite this article: Henry Jordaan & Bennie Grové (2013) Transaction cost analysis of raisins marketing by emerging farmers from Eksteenskuil, South Africa, Agrekon, 52:4, 21-42, DOI: 10.1080/03031853.2013.847033

To link to this article: https://doi.org/10.1080/03031853.2013.847033

TRANSACTION COST ANALYSIS OF RAISINS MARKETING BY EMERGING FARMERS FROM EKSTEENSKUIL, SOUTH AFRICA

Henry Jordaan* and Bennie Grové**

ABSTRACT

Despite the existing vertically coordinated (specifications contracting) relationship between the raisin producers from Eksteenskuil and their buyer, the farmers still face relatively high transaction costs. High transaction costs may cause the farmers to lose their share in the highly profitable fair-trade market for raisins and consequently decrease the contribution of raisin production to the livelihoods of the farmers from Eksteenskuil. The aim of this paper is to investigate whether a higher degree of vertical coordination will be more appropriate to economise the transaction costs faced by the farmers in order to allow them to continue benefitting from the fair-trade initiative. Based on the application of the frameworks of Mahoney (1992) and Peterson et al. (2001), a higher degree of vertical coordination in the form of a relation-based strategic alliance will be more appropriate than specifications contracting. The complementarity between the farmers and their buyer, created by the fair-trade initiative, contribute to the viability of a more vertically coordinated strategy. Similar incentives for private sector-buyers to procure from emerging farmers may create a similar degree of complementarity, and hence an incentive for such buyers to enter into vertically coordinated relationships with emerging farmers.

Keywords: transaction cost economics, governance structures, vertical coordination, emerging farmers, raisins

JEL: L14; M31; O13; Q13

1 INTRODUCTION

Eksteenskuil raisin producers are a group of emerging farmers in the Northern Cape Province of South Africa who collectively export their choice grade raisins via the fair-trade initiative (Kok, 2008). In order to export raisins via the fair-trade initiative, the farmers from Eksteenskuil have to meet stringent quality

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Agrekon
Vol. 52 (4) 2013 • ISSN Print 0303-1853/Online 2078-0400

DOI: 10.1080/03031853.2013.847033

requirements from the "new kinds of consumers" that resulted from changes in the agri-food systems that were caused by the global forces of globalisation and liberalisation (Louw *et al*., 2005). Through the fair-trade initiative the farmers receive a fair price[1] for their raisins, which is higher than the market price, and a fair-trade premium that has to be spent according to strict guidelines in order to contribute to uplift the whole community. Until 2010 the raisin producers from Eksteenskuil were the sole suppliers of fair-trade raisins in the world, giving them exclusive access to a highly profitable niche market. In 2010 raisin producers from Chile and India also received fair-trade-accreditation (Kok, 2010), hence the farmers from Eksteenskuil now have to compete for their share in the fair-trade market. Small-scale farmers face high levels of transaction costs that constrain their participation in formal markets (De Bruyn *et al.*, 2001; Matungul *et al*., 2001; Ortmann and King, 2010; and Shiimi *et al*., 2012). High levels of transaction costs may also constrain the ability of the farmers from Eksteenskuil to effectively compete for their share in the fair-trade market.

The farmers from Eksteenskuil who participate in the fair-trade initiative are contracted to the fair-trade accredited raisin processing company, the South African Dried Fruits Company (SAD), which processes and exports the raisins. The contract relates to the specifications type of contract on the vertical coordination continuum as described by Peterson *et al*. (2001). A certain level of vertical coordination thus is occurring between the farmers and their buyers, albeit only the first level after the spot market type of governance. Although it is recognised that the contracting relationship with SAD has already contributed to reducing transaction costs, the transaction still exhibits relatively high levels of transaction costs. The problem is that the farmers entered into the contractual relationship based on the requirements from the fair-trade initiative and not as a means to economise transaction costs. Thus, it is not known whether the specifications contract type of governance structure actually minimises the transaction costs faced by the farmers from Eksteenskuil.

Transaction cost economics (TCE) theory suggests that the optimal vertical coordination strategy would economise the transaction costs associated with the transaction (Williamson, 1998). Recent studies within South Africa that applied TCE to investigate vertically coordination strategies include, among others, Jordaan and Kirsten (2008), Sartorius and Kirsten (2005), and Sartorius and Kirsten (2007). Jordaan and Kirsten (2008) use a decision-making framework developed

1 In the case of Eksteenskuil, the farmers first receive the market price for their raisins when delivering to SAD. In order to realise the higher price, the farmers receive a second payment from SAD when the processed raisins are exported. The second payment is the difference between the price SAD receives from the fair-trade buyer for the exported raisins minus a small percentage that they keep, and the market price (Koch, 2009).

by Peterson *et al*. (2001) to qualitatively investigate the need for more vertical coordination in the mohair supply chain of South Africa. Their focus of attention was on the whole mohair industry in South Africa. Sartorius and Kirsten (2005) and Sartorius and Kirsten (2007) apply a decision-making framework of Sartorius and Kirsten (2005) to investigate contracting arrangements between small-scale farmers and agribusinesses in the sugar and timber industries in South Africa. While they have considered the relationship between small-scale farmers and their buyers, their focus of attention was more from the agribusiness's perspective. None of the studies focused on the transaction costs faced by the small-scale farmers, and the optimal vertical coordination strategy that will economise the transaction costs they face.

The aim of this paper is to investigate the transaction between the farmers from Eksteenskuil and SAD, with special attention to the farmers' perspective, to determine whether the farmers should change their current vertical coordination strategy to a strategy with even higher degree of vertical coordination (relation-based or equity-based alliances, or full vertical coordination) in order to economise the transaction costs. Firstly, the transaction is assessed in terms of its attributes that cause transaction costs. Secondly, two decision-making frameworks are employed to identify the governance structure that will economise the transaction costs, given the attributes of the transaction. If the change to an alternative governance structure would contribute to reducing the transaction costs, the farmers from Eksteenskuil may be able to more effectively compete for their share in the fair-trade market and consequently allow them to continue benefitting from the fair-trade initiative. The next section covers a discussion of the data and procedures used within this paper. The results are presented and discussed thereafter, followed by the conclusions and recommendations based on the results.

2 DATA AND PROCEDURES

2.1 Data

Data was obtained by means of personal interviews with key roleplayers within the raisin industry, and a questionnaire survey. The questionnaire was compiled from a literature review on the theory of Transaction Cost Economics and discussions with key roleplayers within the raisins industry. Special emphasis was placed on the attributes of the transactions between the farmers and their buyers that may contribute to transaction cost. All 60 members of Eksteenskuil Agricultural Cooperative (EAC) were invited to participate in the study. The survey was conducted in June 2009 with a total of 43 of the farmers interviewed. Due to incomplete questionnaires, only 26 questionnaires were deemed to be acceptable

to be included in the study. Table 1 represents summary statistics of some of the socio-economic characteristics of the respondents.

Table 1: Summary statistics of the socio-economic characteristics of the respondents.

	Average	Minimum	Maximum	Standard deviation
Age (years)	49.12	24.00	72.00	10.69
Education[1] (years)	9.04	5.00	16.00	3.05
Experience (years)	17.52	1.00	39.00	9.98
Farm Size (ha)	6.25	0.50	27.49	5.74

Notes: [1] Education was measured as the number of years of formal education completed by the respondent. Completion of Grade 12 implies 12 years of formal education, and the completion of a three-year tertiary qualification implies 15 years of formal education.

Table 1 shows that the average age of the respondents is almost 50 years, ranging from 24 years to 72 years. The high average age is typical of groups of emerging farmers in South Africa. The younger generation is not interested in agricultural activities, mainly due to the low profit margins associated with farming. The average level of education (9.04 years) suggests that the majority of the respondents attended school until high school level, however, most farmers have not completed Grade 12. On average, the respondents have 17.52 years of experience in the production of raisins, which suggests that the majority of farmers have ample experience in the art of raisin production. The average size of the farms is small (6.25ha), ranging from 0.5ha to 27.49ha. The largest farm size actually inflates the average size as documented in Table 1. The median farm size of 4.60ha may be a more accurate reflection of the typical size of the farms at Eksteenskuil. About 90% of the respondents operate on less than 10ha of farm land. The small size of the farms implies that the farmers are unable to benefit from scale advantages. Given that an economic unit for a farming enterprise specialising in raisins production is about 20ha (Visser, 2009), more than 90% of the farmers from Eksteenskuil operate on less than one half of the size considered to be an economic unit. Again, the small scale of operations is typical of agricultural activities among emerging farmers in South Africa.

Within the next section the focus shifts to the procedures used to analyse the governance structure employed by the raisin producers from Eksteenskuil when selling their raisins.

2.2 Procedures

The approach of Milagrosa (2007) is first used to assess the attributes of the transaction that contribute to the transaction costs faced by the farmers from Eksteenskuil and SAD. A decision-making framework developed by Mahoney (1992) is used thereafter to identify a vertical coordination strategy that will match the degree of coordination control to the attributes of the transaction. Lastly, the approach by Peterson *et al*. (2001) is used to assess the question whether there is a need for more vertical coordination by Eksteenskuil raisin producers.

2.2.1 Analysing the attributes of the transaction between the farmers from Eksteenskuil and SAD

Following the approach of Milagrosa (2007), the specific types of asset specificity are elicited using proxies. If the respondent, for example, owns a vehicle specific for the transaction under consideration it is an indication that the transaction exhibits a higher level of physical asset specificity. As proxies for human asset specificity, the number of years of formal education and experience in the specific activity can be used. The higher the number of years of formal education and experience, the higher is the level of human asset specificity. Site specificity is also an observable characteristic and is relevant when referring to agricultural production. Farmers invest, for example, in crop production on their farms, which indicates that there should be some level of site specificity. However, if farmers also reside on the farms where they produce the crops, the level of site specificity is lower than initially expected. With regard to temporal asset specificity, Milagrosa (2007) argues that the presence of physical assets that may have an effect on the timing of delivery, and the value of the product that is sold may also be an indication of temporal asset specificity.

Primary uncertainty is observable through analysing changes in the demand for the underlying product and consumer preferences. The level of secondary uncertainty needs to be elicited directly from the respondents. Respondents are asked whether they received delayed payments from their trading partners (Yes/No). The presence of delayed payments represents higher levels of secondary uncertainty and therefore also higher levels of transaction costs. Similarly, respondents are asked whether or not they believe their trading partners are withholding important information from them (Yes/No). Withholding important information relates to opportunistic behaviour, which occurs when one of the

transacting parties deliberately withholds important information in order to increase his/her own benefit from the transaction. Again, the perception that the other party withholds important information is associated with higher levels of secondary uncertainty and thus also higher levels of transaction costs.

As the last attribute of a transaction that causes transaction costs, the transaction frequency is elicited by asking the farmers to indicate the number of times they have sold produce to the specific buyer during the past season (Milagrosa, 2007).

Other proxies used to represent transaction cost associated with the transaction include search and information cost, negotiation cost, and the ability to influence the price of the product (Milagrosa, 2007). Farmers were asked in the questionnaire to indicate the number of processing companies they have contacted before deciding to whom to sell their crop. Negotiation costs are represented by the time lapse (hours) in the negotiation process. Farmers were asked to indicate the number of hours it took for them to decide to which processing company to sell the crop. Lastly, farmers were asked to rank on a Likert-scale from one to five the level to which they are able to influence the price they receive for their raisins (one, if they have no influence, and five, if they have total control over the price). After a comprehensive understanding of the attributes of the transaction is achieved, the next step is to identify an appropriate type of governance structure that will economise the transaction cost associated with the transaction.

2.2.2 Selecting the appropriate governance structure: Is there a need for change?

Mahoney (1992) developed a framework to guide the choice of vertical coordination strategy (governance structure) based on the attributes of the transaction. Based on this framework of Mahoney's, there are three conditions that have to be considered when deciding on a coordination strategy, namely, separability, asset specificity, and task progammability. Separability refers to the ability to determine and measure the value of the contribution of each of the parties, and hence the reward for each participant in the transaction. Asset specificity refers to the level to which the assets are specific to the transaction under consideration. Lastly, task programmability refers to the degree of uncertainty within the transaction. Based on these three conditions, the framework of Mahoney recommends a certain vertical coordination strategy to best fit the attributes of the transaction under consideration. Table 2 shows the recommended strategies for different transaction attributes.

Table 2: Predicting the organisational form of vertical control

	Low Task Programmability[1]		High Task Programmability	
	Low Specificity	High Specificity[2]	Low Specificity	High Specificity
Low non-separability	1: spot market[3]	2:long-term contract[4]	5: spot market	6: joint venture[5]
High non-separability[6]	3: relational contract[7]	4: clan[8] (hierarchy)	7: inside contract[9]	8: hierarchy[10]

Source: Mahoney (1992)

Table 2 shows that a transaction where the output of individuals can easily be measured (low non-separability), and if the transaction is characterised by low levels of asset specificity (cases one and five in Table 2), there is no need for any form of vertical coordination, regardless of the levels of uncertainty associated with the transaction. On the other hand, when the output of the individual parties cannot be easily measured, and the transaction is characterised by high levels of asset specificity (cases four and eight), complete vertical integration (hierarchy) is required, regardless of the degree of uncertainty associated with the transaction. A transaction where the outputs of the individual parties can be measured and if the transaction is characterised by high levels of asset specificity, would require a long-term contract in the presence of low levels of uncertainty (case two), while a joint venture may be needed in the presence of high levels of uncertainty (case six). Lastly, a transaction $\hat{\varepsilon}_t$ where the output of individual parties cannot be measured and the levels of asset specificity are low, would require a relational contract if the $\hat{\varepsilon}_t$ transaction face low levels of uncertainty (case three), while an inside contract would be required in the presence of high levels of uncertainty.

After matching the attributes of the transaction with the recommended vertical coordination strategy using the Mahoney framework, a decision-making framework (Figure 1) that was developed by Peterson *et al*. (2001) is used to determine whether there is a need to change the current vertical coordination strategy. Essentially, the second decision-making framework is concerned with the question whether an alternative type of governance structure will better match the cost of coordination control with the costliness of coordination errors associated with the current governance structure (Jordaan & Kirsten, 2008; Peterson *et al*., 2001). The framework consists of five questions and will only recommend a change in governance structure if all five questions are answered positively (Jordaan & Kirsten, 2008; Peterson *et al*., 2001). The application of the second decision-making framework thus also allows for the validation of the recommendations from the application of the framework by Mahoney (1992). The procedures for

applying this decision-making framework are well documented by Jordaan and Kirsten (2008), and consequently are not presented in detail here.

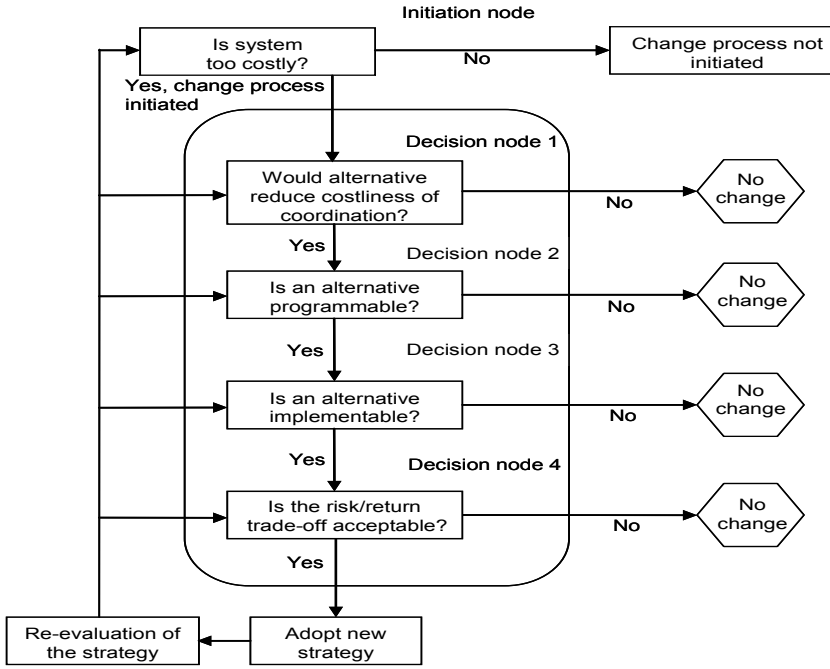

Figure 1: A decision-making framework for changing vertical coordination strategies.

Source: Peterson et al. (2001)

Next, the transaction between the raisin producers from Eksteenskuil and SAD is characterised in terms of its attributes, followed by the results from the application of the two decision-making frameworks to identify the optimal type of governance structure that best suits the attributes of the particular transaction under consideration.

3 TRANSACTION ATTRIBUTES

The attributes of the transaction that affect the level of transaction cost within a transaction include the levels of asset specificity, the uncertainty within the transaction and the frequency of transactions (Milagrosa, 2007).

3.1 Asset specificity

For the purpose of assessing the level of *physical asset specificity* associated with the production of raisins, the different aspects considered include farmers' investment in a vehicle specifically for the production or transporting of raisins, drying infrastructure, storage facilities and package material. At first glance there is evidence that the farmers from Eksteenskuil are well invested in physical assets specific to the production and marketing of raisins. About 50 % of the farmers indicated that they have a vehicle they use specifically to deliver their raisins to SAD. All the respondents have laid cement slabs that are used for sun drying raisins (Thompson's Seedless), while about 23 % of them indicated that they have also invested in drying trays (drying infrastructure) that are used to dry the golden raisins. Some farmers (about 12 %) have also invested in storage facilities where they can store their raisins prior to delivering it to SAD. However, note that the level of physical asset specificity actually refers to the investment in physical assets specific to the transaction under consideration. The vehicles also can be used to deliver raisins to other buyers, and also for other purposes on the farms. Similarly, the raisins that are dried on the cement slabs and/or on the trays can also be sold to other processing companies. Lastly, the storage facilities can also be used to store other products and raisins that are sold to other buyers. Since the assets can also be used for other transactions and/or purposes, the opportunity cost for those assets is high. The high opportunity cost of the physical assets implies that the levels of physical asset specificity for the farmers from Eksteenskuil who sell their raisins to SAD via the fair-trade initiative are in fact low.

When assessing the levels of *physical asset specificity* for the raisin processing company (SAD) that buys the raisins from the farmers from Eksteenskuil, it is evident that SAD does have some highly sophisticated machines that perform the washing, sorting and packing of raisins. SAD also uses sophisticated machinery to remove foreign objects from the raisins. Those machines are used exclusively for the processing of raisins. The requirement of such specific assets to process and pack raisins may suggest that raisin processing is associated with high levels of physical asset specificity. However, the level of physical asset specificity relates

only to the transaction between the farmers from Eksteenskuil and SAD. SAD uses those same machines for the processing of raisins produced by non-members of EAC. The opportunity cost of the machinery is thus still high, which implies a low level of physical asset specificity. It is, however, important to note that, once SAD starts processing raisins delivered by producers from Eksteenskuil, they are required to use that specific processing line exclusively to process raisins from Eksteenskuil. This is done to ensure that only raisins produced under the name of Eksteenskuil Agricultural Cooperative (EAC) are considered for export via the fair-trade initiative. Such a requirement contributes to the transaction costs faced by SAD. Overall, however, both the farmers and SAD face relatively low levels of physical asset specificity in transactions with each other.

The level of formal education may be used as a proxy for the degree of *human asset specificity* (Milagrosa, 2007). The higher the level of formal education of the participant in the transaction, the higher the level of human asset specificity is accepted to be. The average number of years of formal education of the respondents from Eksteenskuil is 9.04 years. Given that a person who has completed Grade 12 has completed 12 years of formal education, the average of 9.04 years means that most respondents have not completed grade 12. The relatively low levels of formal education of the farmers suggest that the level of human asset specificity associated with the production of raisins is not necessarily that high.

The level of *temporal asset specificity* is also relatively low. When assessing the level of temporal asset specificity, one is concerned with the level to which the value of the product is constrained by time (Milagrosa, 2007). The value of raisins is not directly influenced by time. Dried raisins can be stored for a considerable period of time with no influence on the value of the raisins. Similarly, the value of the raisins at the processing company is not constrained by time. The processing company normally receives all the raisins between February and April, and then it processes them upon order throughout the remainder of the year. If the conditions in which the raisins are stored are acceptable, the quality (and hence the value) of the raisins is not negatively affected over a reasonable period of time. The production and processing of raisins thus face relatively low levels of temporal asset specificity.

Transactions between the Eksteenskuil raisin producers and their buyer do exhibit low levels of *site specificity*. The raisin producers invest in the production of grapes on their farms, but they also live on their farms. Similarly, the raisin processing company also owns the processing plant that is located in the major raisin production area along the Orange River. Their investment in this infrastructure represents sunk costs because it is difficult to transfer the plant once it is erected. The investment, however, is not exclusively for the transaction under consideration. The opportunity cost of the infrastructure is high since the farmers

can sell their raisins to other buyers, while SAD uses the same premises to process raisins produced by other farmers.

Based on the aspects considered as proxies for the levels of asset specificity, one may conclude that transactions between the raisin producers from Eksteenskuil and their buyer exhibit only low levels of asset specificity.

3.2 Transaction uncertainty

Transactions between the Eksteenskuil raisin producers and their buyer contain a high level of transaction uncertainty. When considering delayed payments as a source of uncertainty to the farmers, the processing company has a payment system whereby the farmers get paid for their raisins by the first Friday after the raisins were delivered for raisins delivered before Thursday, and by the next Friday for raisins that were delivered on Thursday or Friday (Coetzer, 2009). Despite the payment system, about 19% of the respondents indicated that they had received delayed payments during the past year. In addition to the number of farmers who had received delayed payments, about 31 % of the respondents also feel that the buyers are withholding important transaction specific information from them. The number of farmers who had received delayed payments and who feel that the buyer withholds important information suggest that the farmers do face moderate levels of endogenous uncertainty.

With regard to changes in demand and consumer preferences, the farmers from Eksteenskuil experience a moderate level of primary uncertainty. Since 2009, Traidcraft has stopped buying golden raisins from Eksteenskuil, mainly due to the global financial crisis (Kok, 2009). Moreover, while the farmers from Eksteenskuil were the sole suppliers of fair-trade raisins in the world prior to 2010 (Koch, 2010; Kok, 2010), raisin producers from Chile and India also obtained accreditation in 2010 to export raisins via the fair-trade initiative. Since both Chile and India are able to meet all the demand for fair-trade raisins in the world, the farmers from Eksteenskuil face some serious uncertainty with regard to the demand for their raisins.

In addition to the uncertainty in the demand for their raisins, the farmers from Eksteenskuil also face uncertainty with regard to their ability to produce a large volume of good quality raisins that meet the requirements to be exported via the fair-trade initiative. The harvesting season for the grapes corresponds to the raining season in the Northern Cape. The fact that Thompson's Seedless raisins are sun dried implies that the longer the time they take to dry, the higher the risk of being rained upon. Rain during the time period while the raisins are lying in the sun negatively affects the quality of the raisins. The farmers also indicated that, in recent years, adverse weather conditions (hail and late frost during the blossom stage) are occurring more frequently, which negatively affect their yields and the

quality of the raisins. The uncertainty in the ability of the farmers to deliver good quality raisins also serves as primary uncertainty for the fair-trade buyer.

Another source of primary uncertainty for the fair-trade affiliated buyer is that the farmers will sell their raisins to other processing companies. The processing capacity along the Orange River currently is about double the production capacity (Laubscher, 2009). Consequently there is strong competition for raisins among the different processing companies. Since the processing companies mainly compete in terms of prices, the different companies tend to contact farmers and offer them better prices for the raisins. Since the Eksteenskuil farmers only receive the additional payment (from the fair-trade price) after the raisins are exported (around October each year), the timeliness associated with the marginally higher price when selling the raisins to a different processing company is a strong incentive for the farmers rather to sell to the other companies.

Based on the different types of uncertainty faced by the farmers and their buyer it is evident that the overall level of uncertainty associated with the transaction is high (from both sides).

3.3 Transaction frequency

The farmers from Eksteenskuil indicated that, on average, they deliver about 4.5 loads of raisins to the buyer spread over the harvesting season. Although the transaction frequency thus proves to be relatively low, with each load the farmer has the opportunity to take the raisins to a different processing company.

3.4 Search and information cost

Another type of transaction cost faced by the raisin producers from Eksteenskuil relates to the costs incurred by searching for information and for a transacting partner. Interestingly, the average number of buyers the respondents indicated to have contacted before deciding on which company to sell the raisins to, is 1.54. Keeping in mind that the farmers are contracted to sell their raisins to SAD, it is evident that the farmers are shopping around before complying with the contract. The fact that the farmers are contacting other buyers provides more evidence of the primary uncertainty faced by their buyer in terms of the farmers selling all of their raisins to SAD.

The low levels of formal education highlighted under human asset specificity may contribute to higher information cost for the farmers. According to Van der Merwe *et al.* (2012), higher levels of formal education are expected to contribute to higher levels of economic literacy. The farmers with lower levels of formal education, and hence low levels of economic literacy, thus may not have the

necessary skills to search for, and internalise strategic market information for use in decision-making. Although searching for market information is the responsibility of the farmers themselves, SAD does provide market information to the farmers. Market information on international supply and demand is published in the *Foodnews* magazine. The magazine is subscription based with relatively high subscription fees. Again the limited amount of direct access to international market information (through the *Foodnews* magazine) contributes to the perception of opportunistic behaviour by the buyer.

Considered from the buyer's perspective, it is evident that the search and monitoring costs are high when transacting with a large number of small producers. The median yield for Thompson's Seedless produced by Eksteenskuil raisin producers is only 3.04 tonnes, which suggests that the marginal benefit per farmer is not that high for SAD. Moreover, the monitoring cost to ensure that the farmers are selling all their raisins to SAD is also high when dealing with the large number of small-scale farmers. Again the high levels of search, information, and monitoring cost from the buyer's perspective suggest the need for a more coordinated approach to the transaction.

3.5 Negotiation cost

The low levels of formal education of the farmers from Eksteenskuil may also contribute to higher negotiation cost for them since they only have a limited capacity to negotiate for better terms of trade with a big company such as SAD. The respondents indicated that on average they take about 1.15 hours to negotiate the price. However, when asked the level to which they think they are able to influence the price, the average score for the respondents was two on a five point Likert scale (when they have no influence at all, they scored one, and five, if they have total control over the price). Thus, although the farmers are negotiating for better prices, the level to which they feel they are able to actually influence the price proves to be limited. The respondents from Eksteenskuil thus do face high negotiation cost. The higher the negotiation cost the higher is the transaction cost faced by the farmers who participate in the transaction.

From the above discussions it is evident that the raisin producers from Eksteenskuil do face relatively high transaction costs. Although the levels of physical, human and temporal asset specificity are relatively low, the farmers do face high levels of uncertainty, search, information, and negotiation cost. The high levels of transaction cost suggest that the raisin producers from Eksteenskuil do require a governance structure that may contribute to reducing the transaction cost they face.

4 SELECTING THE APPROPRIATE GOVERNANCE STRUCTURE: IS THERE A NEED FOR CHANGE?

4.1 Selecting the appropriate governance structure

When assessing the transaction between raisin producers from Eksteenskuil and SAD in terms of the three conditions specified in the framework of Mahoney (1992), one may argue that there are two different points of view with respect to the level of *separability* (complementarity). Firstly, one may argue that there is a high degree of seperability. It is possible to distinguish between the contributions of the farmers and the processing company within the value chain, hence both parties can be rewarded accordingly. The farmers produce the raisins, sell it to the processing company and get paid (rewarded) market related prices for the raisins. Similarly, the processing company grades, cleans and packages the raisins before selling it further downstream. Again the processing company is rewarded through the market-related price it earns when selling the raisins downstream.

On the other hand, the nature of the transaction through the fair-trade initiative implies that the benefit of the combination of the activities by the raisin producers and SAD is greater than the sum of the benefits that could have been generated if the two groups of participants worked individually. In order to export raisins via the fair-trade initiative both the farmers and the processing company have to be accredited with the Fair-trade Labelling Organisation (FLO). Neither party can participate in the fair-trade initiative on its own. From this point of view one may argue that the transaction exhibits a high degree of non-separability. Since one of the prerequisites for exporting raisins via the fair-trade initiative is that both parties have to be FLO-accredited, the conclusion is made that the transaction between raisin producers from Eksteenskuil and SAD does exhibit a high degree of non-seperability.

The above discussion of the attributes of the transaction shows that the transaction between the raisin producers from Eksteenskuil and their buyer exhibits a low degree of *task programmability* (or a high degree of uncertainty) and *asset specificity*. When considering the transaction in terms all three conditions from the Mahoney framework, it is evident that the transaction is associated with a low degree of programmability, a low degree of asset specificity, and a higher degree of non-separability. Given the three attributes of the transaction the Mahoney framework suggests a strategic alliance to be the appropriate level of vertical coordination (Mahoney, 1992). A strategic alliance as a governance structure is grouped within the hybrid mode of governance as identified by Williamson (1985). Interestingly, when speaking to the farmers from Eksteenskuil they do view SAD as their strategic partner. However, the relationship is not a formal

strategic alliance. Compared with the current governance structure (specifications contracting) a strategic alliance lies further to the right on the vertical coordination continuum.

Based on the findings when applying the Mahoney framework to the case of Eksteenskuil, there is evidence to support a need for a higher degree of vertical coordination. The decision-making framework of Peterson *et al*. (2001) is used next to qualitatively investigate whether there is a need for more vertical coordination towards a strategic alliance.

4.2 Is there a need for change?

According to the decision-making framework, a firm will only change its current coordination strategy if it answers yes to all the following five questions (Jordaan & Kirsten, 2008; Peterson *et al*., 2001).

Question 1: Is the current marketing system too costly?

In the case of raisin production and marketing at Eksteenskuil, there may be a mismatch that contributes to the costliness of coordination errors. The farmers do feel that SAD withholds important market-related information from them, which allows the buyer to act opportunistically at the expense of the farmers. The farmers consequently are more open to negotiating with other processing companies that are willing to offer higher prices than SAD. From the buyer's side, the costliness of coordination errors may be even higher. Over the past five years, there has been a chronic underproduction versus demand. While the demand for choice grade Thompson's Seedless raisins via the fair-trade initiative is about 900 metric tonnes per annum (Kok, 2008), the total volume of Thompson's Seedless raisins delivered by Eksteenskuil farmers decreased substantially from about 600 tonnes in 2007, to only 220 tonnes in 2011. In none of the years since 2007 the total yield was more than one half of the 900 tonnes demanded. The export price via fair-trade is R2 496 per tonne higher than the ordinary export price for Thompson's Seedless raisins (R26 624/tonne vs R24 128/tonne). The failure to produce the total volume of raisins demanded through fair trade during 2011 implies that a total value of R1 697 280 (680 tonnes multiplied by the difference in export price of R2 469/tonne) is foregone. The coordination errors in the case of Eksteenskuil evidently are more costly than the cost of coordination by means of specifications contracting.

With regard to the contractual relationship between Eksteenskuil raisin producers and SAD, there is a high level of complementarity (non-separability). Neither Eksteenskuil raisin producers, nor SAD can benefit from marketing raisins through the fair-trade initiative without the contribution of the other party.

Eksteenskuil does not have the processing and exporting capacity that is required by the fair-trade initiative, while SAD does not meet the fair-trade requirements to be a fair-trade producer of raisins. The combined benefit from Eksteenskuil and SAD thus outweighs the sum of the individual benefits. The high level of complementarity contributes to the costliness of coordination errors (Wysocki *et al*., 2003) along the raisin value chain and serves as an incentive for more intense control.

The presence of costly coordination errors initiates the change process (Peterson *et al*., 2001) and leads to the consideration of the second question.

Question 2: Would an alternative strategy reduce the "costliness" of the marketing system?

The high level of complementarity (non-separability) and mixed levels of asset specificity that characterise the transaction between raisin producers and SAD imply that the cost of coordination errors may be higher than the cost of organising the contracting relationship between the farmers and SAD. According to Wysocki *et al*. (2003), such a situation requires a greater intensity of control through a higher level of vertical coordination (moving to the right along the vertical coordination continuum (Jordaan & Kirsten, 2008)).

The key characteristics of a relation-based alliance within the vertical coordination continuum are mutuality in identifying objectives, controlling the decision-making process, and also sharing in risks and benefits (Martin *et al*., 1993, as cited by Peterson *et al*., 2001). Mutuality in coordination control is thus the main characteristic of a relation-based alliance (Peterson *et al*., 2001). Given the high level of non-separability and mixed levels of asset specificity, a relation-based strategic alliance built on mutual control may be a better match between the costliness of coordination errors and the intensity of coordination control. The answer to the second question is thus "Yes". Given the positive answer to the second question, one may move to the third question, which is concerned with the level of programmability of the recommended vertical coordination strategy.

Question 3: Is an alternative programmable?

When considering the farmers from Eksteenskuil individually, one may argue that effective, specific management routines do not exist. Prior to exporting raisins via the fair-trade initiative, the farmers from Eksteenskuil sold their raisins through spot market transactions. Although the farmers do use specifications contracting since exporting the raisins via the fair-trade initiative, individual farmers are not involved in creating and evaluating the merit of the specifications contracts. The management committee of EAC is responsible to negotiate the terms of the

contracts on behalf of the farmers. The individual farmers then get a standardised contract based on the terms and conditions as agreed upon during the negotiations. The majority of farmers thus only have experience in spot market transactions. The low levels of human capital (that is, formal education) among the farmers negatively affect the ability of the farmers to manage transactions under higher degrees of intensity of control. On an individual basis, the relation-based strategic alliance thus will be considered not to be programmable.

In the case of Eksteenskuil, however, one has to take cognisance of the important role played by the management of EAC in the operations of raisin producers from Eksteenskuil. A similar service can also be performed by the management of EAC in the case of a relation-based alliance between the farmers and SAD. As a matter of fact, supporting the farmers with the marketing of their raisins is included as a core duty of the management of EAC in its constitution. Within such a scenario, one may argue that the relation-based alliance as vertical coordination strategy may be considered to be programmable, implying a "Yes" in answer to Question 3.

Question 4 – Is an alternative implementable?

The establishment of a relation-based strategic alliance between the farmers from Eksteenskuil and SAD requires only a limited amount of additional capital for the farmers and SAD. The farmers are already organised as a registered agricultural co-operative (EAC), and they have the necessary facilities to produce the raisins. SAD already has a processing plant with state of the art technology that is required to process the raisins to meet the stringent requirements of the fair-trade buyer. Additional capital is mainly required for the legal fees to formalise the relation-based strategic alliance. The legal fees, however, will not be substantial amounts.

With SAD the farmers from Eksteenskuil do have a compatible partner that can enter into the relation-based alliance. The degree to which SAD and the farmers from Eksteenskuil are compatible, however, depends on the strategic direction of their businesses. According to Koch (2009), SAD does view their relationship with the farmers from Eksteenskuil as part of their corporate social responsibility; it benefits from being associated with the fair-trade brand; and SAD also benefits monetarily from exporting the raisins via the fair-trade initiative. Then there is also the potential increase in income that can result from better meeting the demand for fair-trade raisins internationally. The strategic direction of the business of SAD thus does include a relationship with the raisin producers from Eksteenskuil, while the monetary benefits will contribute towards convincing SAD to buy in to the proposed vertical coordination strategy. From the farmers' perspective, they already consider SAD to be their strategic partner (although it is not formalised). The degree of compatibility between the farmers and SAD thus proves to be sufficient for the purpose of establishing a relation-based strategic alliance.

Although the farmers from Eksteenskuil individually do not necessarily exhibit the required competence of control, the management of EAC does have the required competence to control the relation-based alliance with SAD. If the farmers are willing to work collectively and to allow the management of EAC to control the relationship on their behalf (as they are currently doing), one may conclude that they do have the required competence of control to participate in the relation-based alliance as a vertically coordinated strategy. If the board of EAC does not have the necessary competence at a particular point in time, it has the mandate to appoint a person with the required competence. The constitution of EAC allows the board to co-opt a non-member of EAC on the board, or to employ a knowledgeable person with specific skills and knowledge when required.

Lastly, there is no law, nor any other rules and regulations that prohibit the formation of a relation-based strategic alliance between the farmers from Eksteenskuil and SAD. The alternative strategy (relation-based strategic alliance) thus can be considered to be institutionally acceptable. The case of Eksteenskuil thus does meet the four conditions for the strategy to be considered implementable, hence the answer to Question 4 is also "Yes". But before changing from the current strategy to a relation-based strategic alliance, one has to assess whether or not the risk return trade-off is acceptable.

Question 5 – Is the risk/return trade-off acceptable?

Based on the discussions under Question 1 through Question 4, it is evident that the reduction in coordination errors will have a substantial increase in the value that can be extracted by the farmers from Eksteenskuil. The return associated with changing from the current specifications contracting relationship to a relation-based strategic alliance with SAD is substantial. The main risk faced by the farmers from Eksteenskuil when entering into a formal strategic alliance with SAD is that the other buyers may offer higher prices for the raisins than they can get from SAD. The additional payment farmers receive through the fair-trade initiative, however, is such that the farmers from Eksteenskuil will always outperform other alternatives in terms of the price they receive for their raisins. From the perspective of the transacting partner, it is understood that SAD will face increased risk by having to partner with a relatively large number of small-scale farmers. The benefit SAD will receive in terms of a reduction in the current costs of coordination errors, however, will compensate SAD for the increase in the risk they face. The additional benefit thus is sufficient to compensate for the increase in risk they face, so the answer to Question 5 is also "yes".

Since the answers to all five questions are "yes" for the case of Eksteenskuil, one may conclude that the farmers from Eksteenskuil and SAD should change their current coordination strategy to a relation-based alliance. The relation-based

alliance is associated with higher intensity of control that will contribute to reducing the costliness of coordination errors (Peterson *et al*., 2001). The application of the framework of Peterson *et al*. (2001) thus confirms the outcome of the application of the framework by Mahoney (1992) to the case of Eksteenskuil.

5 CONCLUSIONS AND RECOMMENDATIONS

The aim of this paper was to analyse the transaction between raisin producers from Eksteenskuil and their buyer (SAD) to determine whether the farmers have to change their current vertical coordination strategy (specifications contracting) to one with a higher degree of vertical coordination (that is, relation-based or equity-based alliances, or full vertical coordination) to economise transaction costs. The main conclusion is that a higher degree of vertical coordination through a relation-based strategic alliance will be more appropriate to economise the transaction costs, and consequently may help the farmers to compete more effectively for their share in the fair-trade market. It is noted that, given the attributes of the transaction, full vertical integration is not the optimal type of governance structure for the raisin producers from Eksteenskuil. Thus, although there is a temptation to advise emerging farmers to vertically integrate along a value chain in order to increase their share in the value of the final product, the decision of which vertically coordinated strategy to employ should be guided by the attributes of the farmers and of the transaction to prevent the recommendation of a sub-optimal type of governance structure.

The viability of the vertically coordinated relationship is heavily influenced by the high degree of complementarity between the farmers from Eksteenskuil and their buyer that was created by the fair-trade initiative. Through the fair-trade initiative, SAD has a vested interest in the performance of the farmers, and consequently is actively supporting the farmers to produce higher volumes of good quality raisins. The benefits it receives incentivise SAD to be willing to enter into formal relationships with the farmers from Eksteenskuil. A higher degree of coordination control will also reduce the transaction costs for SAD, which has to monitor the farmers' compliance with the strict rules associated with the fair-trade initiative. Thus, in addition to the financial benefit, SAD will also benefit from the recommended vertical coordination strategy in terms of reduced transaction costs. Incentives (such as tax benefits) to buyers based on the volumes of produce procured from emerging farmers may create a similar complementary relationship between private sector buyers and other emerging farmers. Once private sector buyers have a vested interest in the performance of emerging farmers, such firms may contribute actively to the support of emerging farmers to meet the stringent quality requirements of the "new kinds of consumers" (Louw *et al.*, 2005), which currently act as entry barriers that exclude emerging farmers from participating in

commercial agri-food chains. Further research is necessary to explore the different types and magnitudes of incentives required to convince private sector firms to get involved in supporting emerging farmers to sustainably participate in commercial agri-food chains.

ACKNOWLEDGEMENTS

The paper is based on research that was conducted as part of a solicited research project, Assessment of the Contribution of Water Use to Value Chains in Agriculture (K5/1779/12/1), that was initiated, managed and funded by the Water Research Commission (WRC). Financial and other assistance by the WRC are gratefully acknowledged.

ENDNOTES

1 Observed input (effort) is a poor measure for making rewards.
2 Human, physical and/or site firm-specific investments are high.
3 The price system works smoothly.
4 Obligations of principles and agents are specified and enforced by third parties (courts).
5 An equity agreement whereby a separate entity is created.
6 Observing output is a poor measure for making rewards.
7 Obligations of principles and agents are specified and self-enforced.
8 Organisation that is based on a vital sense of human solidarity.
9 A hybrid arrangement between contract and hierarchy that is best described as a "manager as monitor" set-up.
10 A superior-subordinate relationship; financial ownership.

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