

# Relational ties – an empirical test of the role of transaction cost and network determinants in sustainable vertical business relationships in Albania

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## 1. Introduction

Transaction cost analysis (TCA) is one of the most frequent theoretical frameworks in the research of business relationships (Heide, 1994; Joshi and S-tump, 1999). It can be considered a blend of institutional economics, legal and organization analyses. The fundamental tenets of this theory are based on two main behavioral assumptions, bounded rationality and opportunism, that have been refined by Williamson (1975) from Coase's original work.

The central rationale of Transaction Cost Economics (TCT) states that, in a given situation, in order to complete a particular operation, a firm has a range of options available from contracting or outsourcing to internalize the operation. The latter alternative provides firms with more control lowering the transaction costs, but results in higher integration or internalization costs. The governance structure that a firm adopts will depend largely on the costs of a specific transaction (Williamson, 1975, 1985).

The trend in governance has been switching toward the adoption of bilateral tools of governance (Heide, 1994) implying efforts of both exchange partners to limit opportunism. As suggested by Stinchcombe (1990), observation

## Abstract

*We develop a model of relational governance as a hybrid form of inter-firm relationships, conceptualizing it in terms of repeated exchange under low behavior uncertainty level. Furthermore, we derive a model of its determinants based on arguments of transaction cost economics, social network theory and sociological issues. Logistic regression modeling is employed to test the model on data collected from a sample of 170 Albanian farmers engaged in the cultivation and collection of medicinal aromatic plants. The results show that asset specificity and antecedents of trust are the strongest predictors of relational governance, and competition among suppliers has small but significant positive effect. Directions for further research on determinants of this particular governance choice are also developed in the light of the research limitations.*

**Key words:** relational governance, trust, transaction cost economics, network.

## Résumé

Dans ce travail, nous développons un modèle de gouvernance relationnelle comme forme hybride de relations inter-firmes, en le conceptualisant en termes d'échanges répétés à un faible niveau d'incertitude comportementale. En outre, nous proposons un modèle de ses déterminants en nous appuyant sur l'économie des coûts de transaction, la théorie des réseaux sociaux et des arguments sociologiques. La modélisation par régression logistique est utilisée pour tester le modèle sur des données collectées à partir d'un échantillon de 170 exploitants albanais, engagés dans la culture et la récolte de plantes aromatiques et médicinales. Les résultats montrent que la spécificité du bien et les antécédents de la confiance sont les prédicteurs les plus importants de la gouvernance relationnelle et que la concurrence entre fournisseurs exerce un effet positif significatif quoique limité. Compte tenu des limites de la recherche, nous concluons en suggérant des pistes de travail pour approfondir les déterminants de ce choix particulier de gouvernance.

**Mots-clés:** gouvernance relationnelle, confiance, économie des coûts de transaction, réseau.

shows that most transactions cannot be categorized as either "pure market" or "pure hierarchy". This bilateral approach to governance has been described as strategic alliances (Achrol, 1991), hybrids (Williamson, 1991), and relational exchange (Dwyer *et al.*, 1987).

On the other hand, a dyadic relationship between a buyer and a supplier does not exist in isolation from factors influencing the external environment. An important factor influencing the environment of a firm is the network in which it operates, including suppliers, customers, competitors, etc (Powell and Smith-Dorner, 1994). Although, networks contain a multitude

of individual dyads linking suppliers to other suppliers and buyers, TCT views firms as autonomous units. However, this image of autonomous units is inadequate considering that firms are embedded in networks characterized by social, cultural and exchange relationships (Granovetter, 1985).

This paper builds on transaction cost reasoning and evaluates the impact of economic and non-economic factors on relational governance based on transaction cost and network theory. Thus, we draw on different research streams on TCT and sociological perspectives to develop a research model. Our model is empirically tested in Medicinal and Aromatic Plant (MAP) sector, one of the most important sectors in Albania in terms of exports and employment, by using data collected through interviews with farmers.

More generally, our paper responds to Geyskens *et al.* (2006) call for greater research attention on moving transaction cost theory beyond a dyadic focus by

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integrating the network dimensions. Furthermore, the majority of studies based on network or sociological perspective have focused on the buyer side of the dyad (Geyskens *et al.*, 1998). This research focuses on the supplier's side using a multidisciplinary approach in explaining dyadic relationships.

## 2. Research Model and Hypotheses

### *Relational governance – a conceptualization*

Hybrid forms of governance, considered as “specialized” forms of governance (Heide, 1994; Williamson, 1985), are customized to govern a particular supplier relationship overcoming some of the costs and inefficiencies related to both market and hierarchy governance structures.

Contracting is often seen as an instrument to govern some of these intermediate forms of governance. TCT predicts that as exchange hazards rise, so must contractual safeguards (Williamson, 1985), which tend to minimize the costs arising from such hazards (Macneil, 1978). Although standardized contracting is one instrument to overcome the problems of uncertainty (Poole *et al.*, 1998), crafting a complex contract it might be expensive. Hence, parties undertake such a cost only when the consequences are considerable, especially under high level of specific assets. However, empirical studies demonstrate that asset specificity increases the complexity of contracts (Joskow, 1988) making contracting more difficult.

On the other hand, in case of weak institutional enforcement, informal and self-enforcing arrangements are preferred (Bouis and Haddad, 1990). Several studies have explored informal trade arrangements that make exchange more efficient, revealing a pattern of informal agreements highly consistent with TCT (Palay, 1985). Exchange relationship between farmers and their buyers often represent a clear example of such informal arrangements that rely more on reputation than in formal contracting.

Economic models of relational governance (Klein, 1996) highlight the role of repeated exchange in motivating long-term cooperation because opportunistic behavior may undermine the longevity of the relationship. The Macneil's (1978) argument on relational exchange is based on a social component, largely represented by trust. Poppo and Zenger (2002) view relational governance as a composite factor with the following fundamental dimensions: open communication and sharing of information, trust, dependence and cooperation. Repeated exchange and social embeddedness seems to select out inefficient relationships, preserving the more efficient, trust based ones.

Relational governance is considered by many authors to lower opportunism (Macneil, 1978; Anderson and Narus, 1990; Klein, 1996). However, Heide and John (1990) suggest that behavioral uncertainty created by the buyer will have a negative effect on its trust and willingness to stick to the terms of contract affecting the relationship with the buyer. Perceptions of high levels of uncertainty may lead to a

lack of interest in investing in long-term relationships. Suhand Kwon (2006) argue that behavior uncertainty will decrease trust in the partner since it creates a performance evaluation problem. Empirical research confirms that exchange relationships are affected by a level of uncertainty that undermines trust, considered as an important component of relational governance.

Das and Teng (2004) suggested a more psychological approach in examining the relationship between trust and uncertainty. The authors argue that current measures of trust do not focus on the probability aspects of obtaining desirable outcomes. Their approach suggests that there is need to develop trust measures that are explicitly risk-oriented. Perceived risk or uncertainty is considered by the authors a mirror reflection of trust.

Focusing on exchanging process, this paper conceptualizes relational governance as repeated exchange (Klein, 1996) moderated by behavior uncertainty, as the perfect opposite of subjective trust and behavioral trust following Macneil (1978) argument and conceptualization of trust by Das and Teng (2004).

### **Determinants from the transaction cost perspective**

We consider one key determinant of transaction cost in this section – the degree of asset specificity. Environment uncertainty is neglected due to very low level of market and technology uncertainty among suppliers. Interviews confirmed that during the data collection period, the demand for the basket of products produced by farmers was very high and the perceived level of environment uncertainty was very low.

#### *Asset specificity*

Asset specificity refers to durable and specialized investments that are undertaken in support of particular transactions that has limited value in an alternative use (Williamson, 1985). TCT postulates, as a supplier's investments in transaction specific assets increase, the supplier will safeguard the assets from expropriation by pursuing a higher degree of vertical coordination with its buyer (Williamson, 1985). Asset specificity has been extensively employed in empirical research. Site specificity, dedicated assets, the need for tailored products have been shown to increase vertical integration in many sectors (Geyskens *et al.*, 1998). The presence of specific assets, which is considered to be “the big locomotive to which transaction cost economics owes much of its predictive content”, is the main reason to justify the change in governance mode from market to non market forms (Williamson, 1985:56).

Anderson and Weitz (1992) argue that specific assets have a strong effect on the commitment of parties in a dyadic relationship. Joshi and Stump (1999) investigated trust as moderator to supplier-buyer relationship concluding that there is a positive relationship between manufacture asset specificity and joint action (JA) as a specific governance mode. Specific assets seem to strengthen relational

ties between exchanging partners.

Given our focus on farmer's relationship with their buyers as a research context, we focus on physical asset specificity arguing that higher levels of asset specificity increase requirement for a specialized form of governance. Thus, we expect a positive effect of asset specificity on relational governance:

*H1 Investments in specific assets are expected to be positively associated with the likelihood for farmers to establish sustainable relationships with their buyers.*

### **Determinants from the network perspective**

Conceptually, a network consists of large number of actors and the nature of relationships that tie them together (Iacobucci and Hopkins, 1992) including both horizontal and vertical relationships, be they suppliers, customers, competitors, etc. Organizational theorists have defined social networks "a set of nodes (e.g., persons, organizations) linked by a set of social relationships (e.g., friendship, transfer of funds, overlapping membership) of a specified type" (Laumann *et al.*, 1978: 458).

Some authors suggest that the perspective of networks should be carefully considered, because as Granovetter (1985) argues, the social structure has an impact on economic activity and its outcomes. Powell (1990) suggests that, rather than being an intermediate form of governance, networks are neither market nor hierarchy. The embeddedness of network in a social context generates trust affecting economic organization and exchange between partners. Based on such a conceptual outlook of networks and evaluating carefully the research settings we consider four key determinants of networks in this section (a) trust and antecedents of trust, (b) cooperation among suppliers, (c) competition between buyers and (d) competition between suppliers.

#### *Trust and antecedents of trust*

Trust behavior is viewed as an important element for sustainable relationships and a necessary condition for relational governance (Macneil, 1980). Many sociologists and economists argue that transactions are embedded in a social context (Granovetter, 1985; Dwyer *et al.*, 1987) safeguarding exchanging partners from opportunism. Chiles and McMackin (1996) conclude that conditions which generate trust can be found in such social embeddedness and rational economics. In addition, recurring transacting can create certain continuity between business partners leading to trust between them (Heide and John, 1990).

There is extensive empirical evidence suggesting that trust should be considered as a determinant of exchange relationships. JA as a specialized form of governance will be enhanced with increasing levels of trust (Joshi and Stump, 1999). Trust also strengthens the capability of governance, thereby supporting prior conceptual arguments (Chiles and McMackin, 1996).

Trust is also an important determinant of collective action

in Albanian agriculture. Skreliet *et al.* (2011) and Kola *et al.* (2014) argue that social capital is positively associated with collective action in horticultural sector in Albania. They conclude that previous business relationships in a repeated "game" lead to reputation and the last leads to trust and reciprocity.

Many researchers have conceptualized trust as related to the partner's following characteristics: honesty and benevolence (Kumar *et al.*, 1995). Trust in the partner's honesty is a belief that one's partner is reliable and sincere (Anderson and Narus, 1990). Another approach is offered by Williamson (1993) who makes a further distinction between calculative and personal trust suggesting that calculative trust is rational. Personal trust, on the other hand applies only in close personal relations.

We believe that personal trust is based on positive expectations built on previous experiences, underlying the fact that this "calculative" facet of trust may affect personal trust. The concept of trust can be developed on behavioral and cognitive bases as well. It is worthy to note that we have integrated behavior uncertainty as an opposite to personal trust. Nevertheless, we want to explore the role of antecedents of trust on relational governance. The corresponding hypothesis relating governance structure to the levels of trust between exchanging partners is as follows:

*H2 Antecedents of trust are expected to be positively associated with the likelihood for farmers to establish sustainable relationships with their buyers.*

The role of cooperation in reducing transactions costs is a frequent argument in agriculture research. Social and informal networks are considered to be a significant factor in decreasing transaction costs (Fertő and Szabó, 2002). Fertő and Szabó (2002) show how cooperatives of farmers can be a solution to cope with uncertainties related to pricing mechanisms. It seems that agricultural cooperatives can achieve some advantages, solving some "traditional" TCT and agency problems and strengthening commitment of both parties involved in exchange.

We argue that participation in cooperative organizations is expected to make people more aware on benefits of sustainable relationship with buyers and ultimately increasing the level of cooperation with them.

*H3. Cooperative membership is positively associated with likelihood for farmers to establish sustainable relationships with buyers.*

The role of the external environment is usually encapsulated within measures of competitiveness in product or supplier markets. Based on TCT, this means that the lower the competition, the more likely a firm will be exposed to "small numbers bargaining" and other forms of opportunistic behavior (Williamson, 1985).

Competition as determinant of governance has been empirically explored. Investigating 60 "make or buy deci-

sions”made by manufacturers, Walker and Weber (1987) argue that competition moderates the effect of uncertainty in firm’s decision to outsource or internalize production of a component. High uncertainty regarding volume appears to lead to a decision to “make” a component in low-competition markets but not in high-competition markets. Walker and Weber (1987) research closely associates uncertainty and competition as determinants to vertical integration.

We believe that the same approach can be adapted to the supplier side. The stronger the competitions between buyers the more farmers are willing to behave opportunistically. Increased competition between buyers leads to increase in bargaining power of suppliers. We test this assertion through the following hypothesis:

*H4 Increased competition between buyers is negatively associated with likelihood for farmers to establish sustainable relationships with buyers.*

Williamson (1975) argued that uncertainty raises the costs of executing market transactions only when opportunism is present. In a competitive market, where asset specificity is low, buyers can switch easily to other suppliers. High supplier competition decreases the potential for opportunistic bargaining (Williamson, 1975). Under such conditions suppliers are more willing to build sustainable relationships and adapt to buyers request regarding quality

and product specification. The following hypothesis captures this notion:

*H5 Increased competition between suppliers is positively associated with likelihood for farmers to establish sustainable relationships with buyers*

*Size and high asset specificity of supplier as control variables*

Empirical research on governance using the transaction cost approach has often included size as a control variable (e.g., Zaheer and Venkatraman, 1995), since large suppliers are more reluctant to be “locked” in exchange relationships with one buyer. The same reasoning applies to some suppliers that own very specific assets like storage and post-harvesting facilities expected to increase opportunistic behavior. However, we do not hypothesize a direction for these two variables in our model, but include them as control variables.

Figure 1 Provides a schematic of the research model of relational governance with its determinants.

### 3. Methods and Procedures

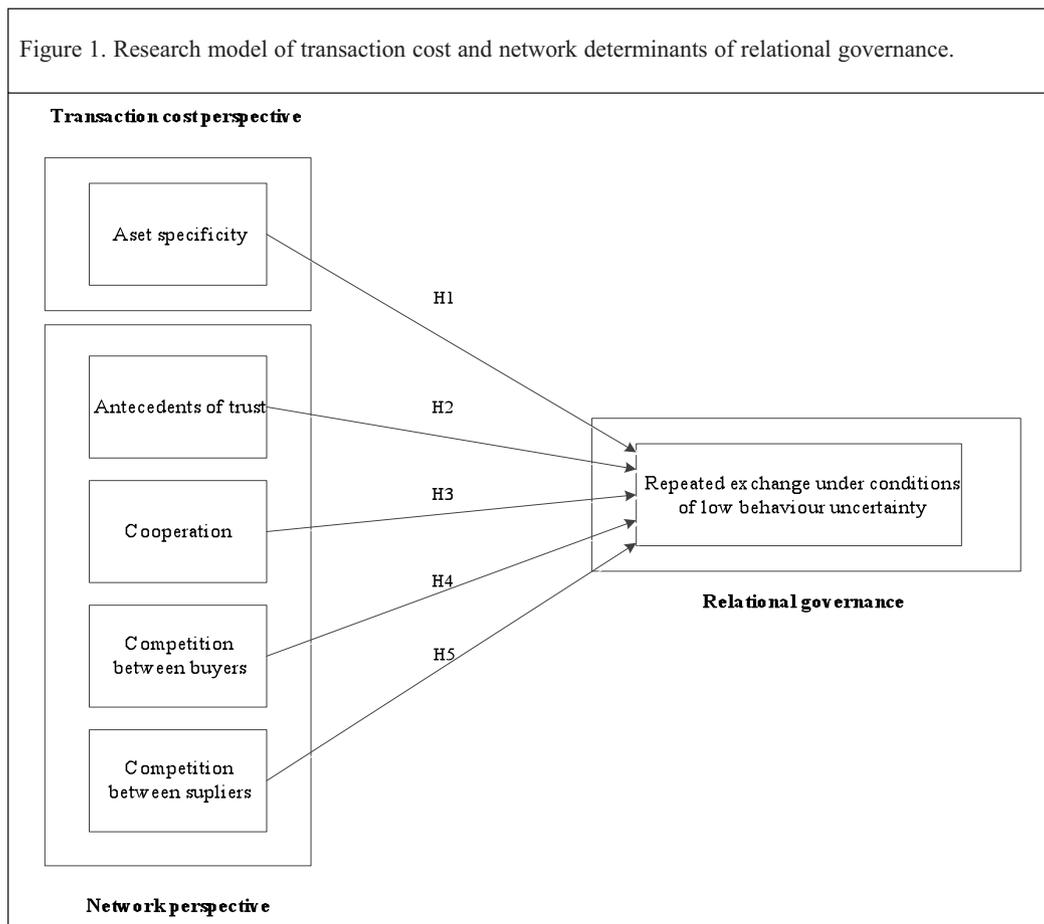
#### Research setting

The MAP sector served as a setting for our research. This is one of the most important sectors in Albanian economy, especially in terms of international trade and employment. MAPs sector is export oriented, as 95% of the product is

exported; with around Euro 20 million of export value in 2013, the sector contributed to 18% of agriculture exports (Skreli and Imami, 2014). The sector also plays an important socio-economic role, contributing to part of household income for many wild-growing MAP harvesters and farmers living in rural areas. Wild-harvesting of MAPs is a common tradition in Albania given the high share of the rural population and high unemployment in these areas. However, many families in some areas of the country generate even higher incomes from MAPs cultivation, which is becoming a significant trend.

The structure of the value chain is relatively simple: wild-grown MAP harvesters and farmers are selling to consolidators and the latter to wholesalers/exporters. Many exporters, especially those located in areas with dense

Figure 1. Research model of transaction cost and network determinants of relational governance.



networks, procure raw materials directly from farmers or cooperative of farmers. Exporters are engaged in processing (e.g., cleaning, cutting, grinding, distillation for the production of essential oils, etc.) and sell most of the produce to a dozen of international buyers. Competition between the Albanian exporting companies seems to be fierce, not only in ensuring sales contracts but also in procuring raw materials.

We restricted our study to those areas in the northern part of Albania where there is evidence of supplier investment in specific assets, growing collaboration between farmers and competition between buyers. We excluded areas where the sector results to be underdeveloped. Furthermore, the areas we studied are specialized in some varieties of MAP characterized by a growing demand.

## Data

We collected our data during the end of spring 2013 by interviewing a random sample of 170 farmers. The interviews were conducted after a piloting process in three regions, namely Shkodër, Kukës and Dibër. A sample size of 170 interviews was considered to be sufficient to provide a precision level of 6.8% and a confidence level of 95% (Israel 2012).

The questionnaire was designed to operationalize the constructs discussed in *Research Model and Hypothesis* section and summarized in Table 1. The following information was collected: relationships between supplier and buyer (sale to the same or different buyer), reasons for selling to the same buyer (secure market, trust, fair prices, closer e-

Table 1 - Details of constructs and measures.			
Construct and Concept	Operationalization	Number of items	Measurement
<b><u>Dependent variable</u></b>			
Relational governance	Repeated exchange under condition of low uncertainty	1 moderated by the construct of uncertainty	<i>Dummy</i> , 1= commitment to selected buyers , 0= spot market exchange
<b><u>Independent variable</u></b>			
Specific assets	The extent farmers are engaged in cultivation	1	<i>Dummy</i> , 1= Engaged in cultivation, 0 = Not engaged in cultivation
Antecedents of trust	Secure market as the main reason for farmers to sell to a particular buyer/s.	1	<i>Dummy</i> , 1= main reason to sell to the buyer, 0 = it is not an important reason to sell to a particular buyer/s
Cooperation between farmers	Engagement in collaboration in processing and selling activities	1	<i>Dummy</i> , 1 = collaborate, 0 = do not collaborate
Competition between suppliers	Perception of competition between suppliers	1	Ordinal scale (low-high, 5-points scale)
Competition between buyers	Perception of competition between buyers	1	Ordinal scale (low-high, 5-points scale)
<b><u>Moderating variable</u></b>			
Uncertainty	a) Uncertainly regarding price b) Uncertainty regarding product specifications	2	Ordinal scale (low-high, 3-points scale)
<b><u>Control variables</u></b>			
Size	Produced quantity as a proxy for size	1	Production that exceeds 10 Mt
Very specific assets	High specific assets	1	<i>Dummy</i> , 1= presence of such assets, 0 = lack of such assets

conomic and financial relationships, inertia, shorter distance, contract, quick and secure payment), price and product characteristics uncertainty, contracting and reasons for the lack of formal contracts, asset specificity (experience in farming with focus on MAPs, profile: harvester, farmer or both, cultivated area, production and income, assets and investments), horizontal cooperation (magnitude and reasons for collective selling), competition among farmers, and competition among buyers, measured in a Likert scale (1 to 5). Other relevant information was also included in the questionnaire such as demographics (age, education, gender, household size, and main employment), marketing channel chosen by farmers, time and form of payment, transport time and costs, information and negotiation costs.

## Measurements

Details of the constructs and the operationalization of variables are provided in Table 1 and are discussed below.

### *Relational governance*

Consistent with the conceptualization of relational governance as the degree of the supplier's dedication to its buyer, we measure this construct in terms of repeated exchange with one or few selected buyers. This is consistent with John and Weitz (1988) research, who view forward integration as "percentage of direct sales to end-users" and Zaheer and Venkatraman (1995) who measured quasi-integration as a percentage of total commercial lines' premiums accounted for by the focal carrier. We use a dummy variable to measure repeated exchange. The variable takes the value 1 for "sell to the same buyer/s" and 0 for "sell to different buyers".

On the other hand, as suggested above, we believe that high levels of behavior uncertainty will prevent the channel member's feeling of commitment towards the relationship. Hence, a construct of behavior uncertainty is integrated as a moderator. Zaheer and Venkatraman (1995) operationalize behavioral uncertainty with two indicators regarding the uncertainty - pricing and new product introduction. Based on this research, we operationalize the construct using two items - uncertainty regarding product specifications and price. The *Cronbach Alpha* for this construct is acceptable, at 0.69.

The level of behavior uncertainty on product specification and price is used as a moderator ensuring that the repeated exchange is associated with low level of uncertainty. Low level of uncertainty on price and product specifications isolates the effects of habitual patterns of selling to one or few selected buyers due to geographical vicinity or other reasons. Relational governance as a composite indi-

cator of repeated exchange and low behavior uncertainty is measured by a dummy variable that takes value of 1. The 0 value stands for spot market exchange.

### *Specific assets*

Although the concept of specific assets is clear, the operationalization of specific assets especially in farming sector might result to be more complicated. Investigating the Hungarian fruit vegetable sector, Fertő and Szabó (2002) examine the effect of specific assets on the type of selling channel chosen by farmers. They operationalized specific assets as investment made, intention to invest and human specific assets by using age and level of education as proxies. Following Fertő and Szabó (2002) conceptualization, we operationalize specific assets as level of investment in cultivation<sup>1</sup>. Investment in cultivation is measured by the variable *cultivation\_dummy* taking the value 1 for "invest in cultivation", and 0 for "not investing in cultivation".

### *Antecedents of trust*

Social norms and embeddedness (Chiles and McMackin, 1996) related to moral and personal obligations and calculative-based trust (Williamson, 1993) associated with a more rational dimension of trust might be considered as two different conceptions of trust. But, when considering one facet of trust, specifically the antecedents of trust, such perspectives seem to converge. Trust is seen often as a belief that partner will fulfill its obligations in an exchange relationship (Schurr and Ozanne, 1985). Reliability of the exchange partner strengthened by positive past exchanges is considered by sociologists to be a crucial factor in determining exchange relationships. But, even this "institutional" and "process" trust that derives from social and organizational embeddedness is calculative trust according to Williamson (1993). In sum, both perspectives regarding antecedents of trust seem to indicate the importance of such determinant in exchange relationships.

Viewing buyer as a "secure market" due to previous successful experiences synthesizes our conceptualization of antecedents of trust. "Secure market" is measured by a dummy variable *Secure\_market* taking the value 1 for "main reason to choose a particular buyer", and 0 for "not an important reason to choose a particular buyer".

### *Competition between buyers*

The perception of competition between buyers is measured by a single scale variable indicator - *Competition\_buyers*, taking values 1 "very low" to 5 "very high".

### *Competition between suppliers*

The perception of competition between suppliers is measured by a single scale variable indicator - *Competition\_suppliers*, taking values 1 "very low" to 5 "very high".

### *Cooperation between farmers*

Cooperation between farmers is measured by the variable *Cooperation\_dummy*, taking 0 value for "no cooperation", and 1 "cooperation". This is single indicator taking

<sup>1</sup> Investing in cultivation can be considered an investment in specific assets because of high dependency of farmers on their buyers (there is no alternative use of MAP) and substantial amount of financial resources needed for seedlings and other specific equipment.

into account former farmers' cooperation during processing and/or selling of products.

## Empirical model

Binary logistic regression model is used to estimate the farmers' likelihood to engage in exchange relationships that are consistent with relational governance. This model was selected considering the dichotomous nature of the dependent variable.

This model has the following form:

$$\ln\left(\frac{P_i}{1-P_i}\right) = a + b_i x_i + \dots + c_i z_i + e \quad (1)$$

Where  $P_i$  the probability that the supplier  $i$  is engaged in exchange relationships that can be considered as relational governance;  $1-P_i$  the probability that the supplier  $i$  engages in spot market exchange;  $a$ , a constant;  $x_i$ ,  $z_i$  the variables standing for dependent variables, specific assets, antecedents of trust, competition between buyers, competition between suppliers and cooperation between suppliers; and  $b_i$ ,  $c_i$  vectors of parameters to be estimated.

The odds ratio will be given by the equation below:

$$\frac{P}{1-P} = e^{a+b_i x_i + c_i z_i} \quad (2)$$

The odds ratio for the case at hand should be interpreted as follows: one unit change – say - in the competition between suppliers increases by  $e^{b_1}$  the ratio of probability that supplier engages in exchange relationships that can be defined as relational governance to probability that farmer does engage in spot market exchange.

## 4. Analyses and Results

Table 2 summarizes the results of the logistic regression. Hosmer and Lemeshow test shows  $p > 0.05$  ensuring the validity of the model. Around 1/3 of the variance can be attributed to the independent variables (*Nagelkerke R Square* is 0,329). Classification tables show that the model predicts 73.2% of cases against 50.3% of the initial classification table.

*Hypothesis 1 is supported.* Asset specificity is positively and significantly associated with relational governance. The parameter  $\text{Exp}(B)$  is 4,685, statistically significant at  $p < 0.01$  (table 2), showing that one additional unit of specific assets leads to an increase of 4,685 times in the ratio between the probability that a farmer “engages” in relational governance versus spot market.

*Hypothesis 2 is supported.* Secured market as the operationalization of antecedents of trust is positively and significantly associated with relational governance. The parameter  $\text{Exp}(B)$  is 4,144 statistically significant at  $p < 0.01$  (table 2) showing that farmers that have positive experiences with their buyers and view them as “secure markets” are 4 time more likely to “engage” in relationships that can be considered as relational governance.

*Hypothesis 3 is rejected.* This hypothesis, positing a positive relationship between cooperation and relational governance, was not supported; it is not statistically significant.

*Hypothesis 4 is rejected.* This hypothesis, positing a negative relationship between competition between buyers and relational governance, was not supported; although  $\text{Exp}(B)$  shows the negative relationship between variables, it is not statistically significant.

*Hypothesis 5 is supported.* As hypothesized, the competition between suppliers is positively and significantly associated with relational governance. The parameter  $\text{Exp}(B)$  is 1,544 statistically significant only at  $p < 0.1$  (table 2), although the effect is small showing farmers are 1,5 times more likely to have relational ties with their buyer rather than engaging in spot market exchange.

## 5. Discussions

Our investigation provides valuable insight into the current debate on the role of trust and behavior uncertainty in shaping exchange relationships. We infer that overtime parties develop and test a relationship lowering behavior uncertainty and increasing personal and behavior trust. Some facets of trust and behavior uncertainty seem to be strongly related. This result is consistent with Das and Teng (2004) who suggested that there is need to develop trust measures that are explicitly risk-oriented. Based on such conceptual-

Table 2 - Results of the logistic regression.

Variables in the equation	B	S.E.	Wald	Df	Sig.	Exp(B)
Cultivation_dummy	1,544	,385	16,096	1	,000**	4,685
Cooperation_dummy	,678	,964	,494	1	,482	1,969
Secured_Market_dummy	1,422	,394	13,044	1	,000**	4,144
Competition_suppliers	,434	,262	2,745	1	,098*	1,544
Competition_buyers	-,178	,203	,772	1	,380	,837
Constant	-1,495	,746	4,017	1	,045	,224

\*\* $p < 0,01$ , \* $p < 0,1$

ization and in order to further investigate the phenomenon of trust and uncertainty, we tested the moderating role of uncertainty in defining relational governance by incorporating it in the construct.

The presence of trust as an explanatory factor for the manifestation of relational governance might be related to the effect that personal and behavior trust has in lowering behavior uncertainty. But, personal trust is just one of the facets of trust (Das and Teng, 2004). Hence we investigated the relationship between antecedents of trust and relational governance. The results confirm the significant positive relationship. Trust, reputation, and long collaboration gives credit to sociologists and network theorists arguing that interactions embedded within close ties will yield economic gains and sustainable relationships (e.g., Granovetter, 1985; Powell, 1990).

Our empirical test confirmed the classic transaction cost relationship between asset specificity and hybrid forms of governance, consistent with many previous empirical researches (Geyskens *et al.*, 2006). Consistent with TCT, asset specificity is positively and significantly related to relational governance. Furthermore, we operationalized asset specificity as investment in cultivation. It seems that, the more farmers are exposed to investments in farming, the more they search for safeguards to their assets. Strengthening ties with their buyers can avoid risks of opportunistic behavior.

Our results indicate that an increase in perceived level of competition between suppliers constitutes a significant determinant of relational governance. This result is inconsistent with TCT (Williamson, 1975) and the findings of Walker and Weber (1987) on the role of competition within networks in shaping exchange relationship. However, in contrast with the finding of Walker and Weber (1987), it appears that suppliers select relational governance in response to increasing levels of competition even under low levels of behavior uncertainty.

Our results are less consistent with theoretical framework on whether suppliers select spot market exchange in response to increased competition between buyers. The results indicate that there is no significant relationship. The present research has been restricted by the way governance is operationalized using low uncertainty as a constant of relationships in relational governance. Different levels of uncertainty as suggested by Walker and Weber (1987) might determine different results.

Cooperation between farmers seems to have no effect on governance choice. Although, some farmers cooperate in selling their products to some “reliable” buyers, the aggregation of production might constitute a motivation for groups of farmers to exercise opportunistic behavior due to increased bargaining power. Different levels of cooperation seem to influence the role of cooperation in shaping exchange relationships. Further research might provide some

insight to the moderating role of uncertainty in the relationship between cooperation and governance choice.

Our research has some practical importance too, related both to its management and policy making implications. Our results might benefit managers and owners of exporting companies. Improving coordination with specialized farmers and group of farmers and engaging in reciprocal trust-worthy relationship will have a significant positive impact in firm’s performance by lowering volume uncertainties and transaction costs, improving quality standards and shortening supply chains. Furthermore, we can argue that the strong relation between asset specificity and relational governance represents a clear suggestion for farmers engaged in cultivation to strengthen the relational ties with their buyers to safeguard their investments by adapting both volumes and variety of MAP cultivated and technology used in compliance with market trends and quality requirements.

In this context, any government or donor agency intervention may consider establishing public private partnerships – key network actors assisted in groups by public extension service – with the objective of strengthening vertical cooperation among network actors while improving information flow, assisting farmers in farming and post-harvesting techniques and technology and providing training related to diversification of cultivated MAP. Such actions might improve governance and increase performance of the sector.

## 6. Limitations and Extensions

This study has some limitations that imply caution in generalizing the findings. First, the level of environment uncertainty, especially market uncertainty was very low at the time interviews were made. Eventual changes in the market demand might change both the number of determinants affecting relational governance and the overall perception level of behavior uncertainty.

Our sample design constrains our capacity to fully examine the nature of the relationship between some of the determinants and relational governance. Although, repeated exchange and antecedents of trust might imply some continuity in supplier’s behavior, specific assets, competition and other determinants might have an evolving nature and change the dynamics of the relationship itself. Thus longitudinal data might be needed to fully test the dynamics of relational governance and its determinants.

In sum, our study empirically explores the relationship of classic determinants of TCT and network determinants such as trust, competition and cooperation with relational governance. Our arguments and empirical results confirm the TCT propositions and important role of trust and competition in shaping exchange relationships embedded in social networks. Furthermore, we argue that behavior uncertainty, considered the opposite of trust has a strong moderating role in defining relational governance. Finally, we underline some practical importance of our research. Further work is clearly needed to explore the relationship among the features of relational governance under different envi-

ronment uncertainty conditions. In particular, we see a need to explore the relationship between relational governance and its determinants over time.

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