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Effects of Relational Norms on Mitigating Transaction Costs: A Case of Smallholder Vegetable Farmers in Sri Lanka

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ABSTRACT: *This paper attempts to study how relational norms between Smallholder Vegetable Farmers (SVFs) and exchange partners effect on the mitigation of Transaction Costs (TC) of SVFs in Sri Lanka? Both quantitative and qualitative data were used to study the research problem. A survey was conducted in Bogahakumbura village in Welimada Agricultural Division located in the Uva Province in Sri Lanka. The study selected 100 SVFs using simple random sampling method from a sample frame of 305 SVFs. A pre-tested structural questionnaire was employed to collect data. Survey data was analyzed using Partial Least Square - Structural Equation Model employing SmartPLS software. In addition, the study used the case study method to collect qualitative data. Data was collected using face-to-face interviews with purposively selected five farmers and analyzed using content analysis.*

Empirical results showed that relational norms between SVFs and their exchange partners have a significant impact on mitigating TC accepting 12 hypothetical relationships out of 15. Path coefficients of information exchange (β = -0.29), solidarity (β = -0.33), and reciprocity (β = -0.12) have negative significant relationship with TC. The results further revealed that relational norms mitigate opportunism of exchange partners. Path coefficients of information exchange (β = -0.32), solidarity (β = -0.34), flexibility (β = -0.10), integrity (β = -0.33) and reciprocity (β = -0.10) have significant negative correlation with opportunism. Similarly, path coefficients of information exchange (β = -0.28), solidarity (β = -0.34), flexibility (β = -0.11) and role of integrity (β = -0.33) and transaction uncertainty demonstrate significant negative relationships. Further, the study understand that TC of SVFs can be minimized by improving relational norms between SVFs and exchange partners which willstrengthen exchange relationships and ensure a favorable transaction environment.

Keywords:*Opportunism, Relational Norms, Smallholder Vegetable Farmers, Transaction Costs, Uncertainty*.

I. INTRODUCTION

Smallholder farmers play an important role in economic development of a county (Macharia et al., 2014[1]). However, development of smallholder farmers is a big challenge since they face various problems such as lack of access to information, resources, and market (Kavoi et al., 2014[2]). The most widely quoted problem facing smallholder farmers is their inability to access markets (Pingali et al., 2005[3]). Smallholder farmers find it difficult to participate in markets because of the limitations mostly reflected in Transaction Costs (TC) (Jagwem, 2011[4]). Transaction Cost Economics (TCE) suggests two alternatives to mitigate TC i. e. market (use open market to purchase inputs and sell outputs) and hierarchy (internalize transactions within the firm hierarchy) (Williamson, 1979[5], 1985[6]; Zhang, 2009[7]).

Smallholder farmers are unable to minimize TC using market governance, because the market mechanism fails to distribute reliable information among transaction parties symmetrically (Pitelis and Pseiridis, 1999[8]: Spraakman, 1997[9]). Therefore, smallholder farmers are unable to minimize TC due to two reasons. First, smallholder farmers have a higher possibility of suffering hazards from opportunism of exchange partners because they do not have capacity to collect and evaluate information due to various barriers including geographical barriers in remote areas with poor infrastructure facilities, lack of knowledge to access information, lack of time and capacity to gather and handle information, and lack of resources to obtain necessary information (Pitelis and Pseiridis, 1999[8]: Spraakman, 1997[9]). Second, smallholder farmers face transaction uncertainty due to asymmetrical information. They have to work with both environment and exchange partners, both of which are unpredictable and tend to change most frequently. Smallholder farmers are unable to predict dynamic changes in the external environment such as the natural environment, product and input markets due to asymmetrical information (Abdi and Aulakh, 2014[10]; Xinyan et al., 2013[11]). Therefore, they need to incur costs to search exchange partners for the sale of their products at a higher price, purchaseinputs at a lower price, costs for negotiating with exchange partners, and monitor the transactions in order to avoid opportunism and uncertainty which lead to increase TC. Hierarchy, the other option of TC governance, is also not feasible to minimize TC of smallholder farmers because they are naturally lacking in resources (land, capital, techniques etc.) to internalize transactions within the farm hierarchy (Li and Qian, 2007[12]; Premaratne, 2002[13]). Therefore, smallholder farmers find it difficult to minimize TC using

hierarchical governance as well. Thus, neither market nor hierarchy is feasible to minimize TC of smallholder farmers.

The problem is how smallholder farmers govern their TC without using either market or hierarchy? Some scholars (for example: Achrol and Gundlach, 1999[14]; Ostrom, 1990[15]; Uzzi, 1997[16]) suggested that mutual understanding and informal agreements generated from strong inter-personal relationships facilitate for the governance of TC. Smallholder farmers use informal relationships to access information (find reliable exchange partners, search for the lowest prices to purchase inputs) and assess information (support obtained to evaluate information in order to make optimaldecisions) which lead to minimize TC (Donnell, 2004[17]; Jones et al., 1997[18]; Lu et al., 2012[19]; Okten and Osili, 2004[20]; Premaratne, 2002[13]). Due to the long-term relationships developed through regular interaction, a mutual understanding develops between exchange parties (Bolino et al., 2002[21]; Dwyer et al., 1987[22]). Such mutual understanding provides guidance for a long-term relationship by developing favorable behavior preventing improper behavior (Dwyer et al., 1987[22]; Gundlach et al., 1995[23]). Such favorable behaviors which govern their relationships are referred to as relational norms (Achrol and Gundlach, 1999[14]; Dahlstrom and Nygaard, 1999[24]; Dwyer et al., 1987[22]). Relational norms refer to informal agreements sustained by the value of future relationships. A few scholars (for example: Achrol and Gundlach et al., 1995[23]; Heide and John, 1992[25]; Rokkan et al, 2003[26]; Paswan and Young, 1999[27]) have empirically tested the effect of relational norms on the governance of TC. However, the lack of empirical evidence regarding the relative efficacy of relational norms on mitigating TC particularly smallholder farmers represents a significant gap in the literature. Therefore, this study attempts to understand how relational norms between smallholder farmers and their exchange partners affect the mitigation of TC of smallholder vegetable farmers in Sri Lanka.

This paper is structured as follows: next section deals with the literature review and the research model. Thereafter, research design is described and then empirical results are presented. Finally the conclusion is drawn.

II. LITERATURE AND RESEARCH MODEL

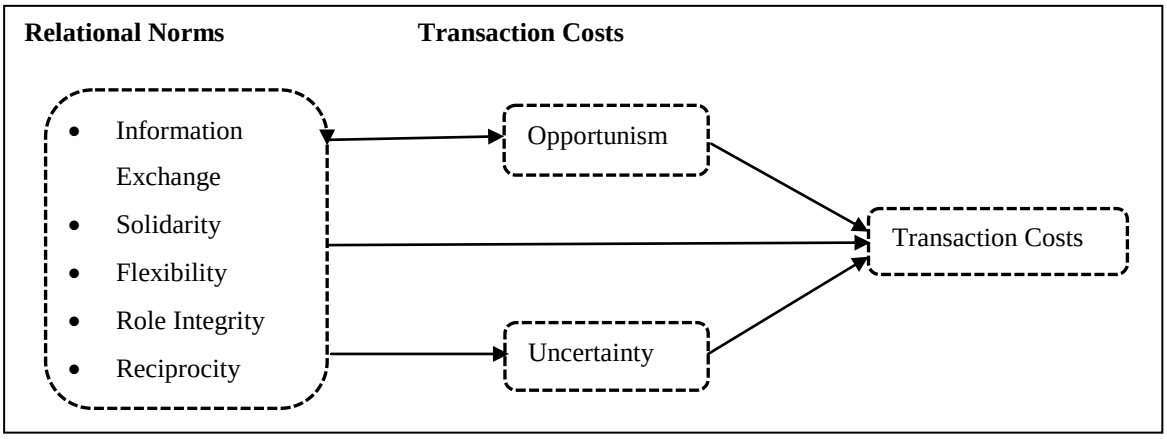
TCE highlighted that transaction parties do not have perfect knowledge about the market since they possess only limited information (Bellalaha and Aboura, 2006[28]). Information is unequal among transaction parties i.e. one party has more information than the other (Bwalya, 2013[29]; Priyanto et al., 2014[30]). If one transaction partner has more information than the other partner, the partner who has more information may tend to behave opportunistically against the partner who has less information (Williamson, 1981[31]). Opportunism is the root cause for generating TC (Williamson, 1981[31]). TCE explains that asymmetrical information generates transaction uncertainty which is a factor that leads to the existence of TC (Williamson, 1979[5]). Williamson (1991[32]) defined that uncertainty as the circumstances surrounding an exchange which cannot be specified ex-ante (i.e. environmental uncertainty) and the performance which cannot be easily verified ex-poste (i.e. behavioural uncertainty). Environmental uncertainty refers to the inability to predict changes in relevant factors surrounding future exchange (Carey and Lawson, 2011[33]). TCE mainly considers the uncertainty coming from economic environment which is defined as the uncertainty from demand and supply factors. Inability to predict opportunistic behavior of transacting parties in advance is defined as behavioral uncertainty (John and Weitz, 1988[34]). The partner who has less information tries to safeguard his transaction from opportunism and uncertainty by incurring costs to search information about reliable exchange partners, lowest prices to purchase inputs, highest prices to sell output, incur costs to negotiate with exchange partners and monitor transactions (Dyer, 1997[35]; Hobbs, 1996[36]; Williamson, 1985[6]). These costs are referred to as TC (Dyer, 1997[36]; Hobbs, 1996[36]; Williamson, 1985[6]). Thus, TCE highlighted that TC can be minimized by reducing opportunism and uncertainty.

Meanwhile, Relational Contact Theory(RCT) suggests that when exchange parties have mutual interests they would develop a relationship with each other and conduct transactions frequently (Dwyer et al., 1987[22]; Heide and John, 1992[25]). When this relationship continues for a long period of time, it would generate relational norms and a relational mindset between exchange partners who would then refrain from opportunistic behavior as they anticipate continuity of the exchange relationship and begin to assign greater value to long-term payoffs (Rokkan et al., 2003[26]). In addition to that, these relational norms would lead exchange partners to exchange information, resources, support, and cooperation (Lu et al., 2012[19]). Scholars such as Achrol and Gundlach (1999[14]), Dahlstrom and Nygaard (1999[24]), Dwyer et al. (1987[22]), Tuusjarvi and Moller (2009[37]) have highlighted the importance of relational norms which can be used as an alternative safeguard mechanism against opportunism and uncertainty.

Although Macneil (2000[38]) introduced five relational norms, scholars have empirically tested only a few. Achrol and Gundlach (1999[15]) tested solidarity, mutuality, flexibility, role integrity, and harmonization of conflict.Doucette (1996[39]) empirically tested role of integrity, solidarity and information exchange.Paswan and Young (1999[40]) empirically tested role of integrity, solidarity and mutuality. Studies conducted by

Noordeweir et al. (1990[41]); Heide and John (1992[25]), used information exchange, flexibility and solidarity for empirical testing. However, the current study selects five norms (information exchange, solidarity, flexibility, role integrity, and reciprocity) which are more relevant to the SVFs and their exchange partners to develop hypothetical relationships with opportunism, uncertainty and TC. The study develops an integrated research model incorporating both TCE and RCT to analyze the effect of relational norms on mitigating TC of SVFs in Sri Lanka. Figure 01 shows the conceptual research model of the study.

Figure 01: Conceptual Research Model



Information exchange and TC: Norm of information exchange is defined as the practice where exchange partners (buyers of outputs and sellers of inputs) willingly provide confidential, useful and important information for trusted exchange partners, which is not usually disclosed to common exchange partners (Anderson and Weitz, 1992[42]; Doucette, 1996[39]; Heide and John, 1992 [25]). Dyer (1997[35]) empirically observed that information exchange between exchange partners reduced information asymmetry which leads to mitigate opportunism. Uncertainty arises due to information asymmetries and imperfect communication all contributes to increase the transaction costs (Zaheer et al., 1998[43]). Information exchange facilitates to mitigate information asymmetry and thereby decrease uncertainty by improving the ability to predict dynamic changes in the environment. Dyer, (1997[36]) explained that exchange parties usually have to incur expenses to obtain information but the search costs can be minimized with information exchange. Moreover, information exchange increases the level of satisfaction between current exchange partners (Doucette, 1996[39]). This prevents the need to find a new exchange partner (Boyle et al., 1992[44]). Dyer (1997[36]) discovered a negative correlation between information exchange and contracting costs. When partners share information adequately without hiding any information, parties do not have to monitor each other thoroughly to see if the other party is hiding anything (Dyer, 1997[36]). This would help reduce monitoring costs. Thus, information exchange leads to mitigate opportunism and uncertainty on one hand and decrease the TC by reducing searching, negotiation and monitoring costs on the other hand. If exchange partners freely exchanged information, it would be possible to mitigate opportunism, uncertainty and transaction costs. Therefore, this study predicts that;

H1: **Norm of information exchange between farmers and their exchange partners negatively relates to opportunism against SVFs.**

H2: **Norm of information exchange between farmers and their exchange partners negatively relates to uncertainty of SVFs.**

H3: **Norm of information exchange between farmers and their exchange partners negatively relates to TC of SVFs.**

Solidarity and TC: Solidarity is conceptualized as treating each otherfairly, solving problems corporately and commitment towards preserving the relationship. Under solidarity, exchange partners would treat each other fairly and meet all the obligations (Dant and Schul, 1992[45]; Macneil, 1980[46]). Solidarity also causes exchange partners to be more supportive and cooperative towards each other (Dant and Schul, 1992[45]; Macneil, 1980[46]; Paswan and Young, 1999[40]). When solidarity exists, exchange parties would refrain from opportunism (Heide and John, 1992[25]). Boyle et al. (1992[44]) highlighted that solidarity prevents the use of threats by exchange partners.Paswan and Young (1999[40]) found that when solidarity exists partners tend to support each other such as by providing business advice which leads to decrease uncertainty. Moreover, solidarity increases partners' long-term commitment intentions (Gundlach et al., 1995[23]; Jap and Ganesan, 2000[47]). Noordewier et al. (1990[41]) found that solidarity results in lower transaction (acquisition costs) and

enhanced performance when conducting the exchange. Jap and Ganesan (2000[47]) found that solidarity leads channel partners to believe that their exchange partner is committed to the relationship. Due to this belief, they would not make much attempt to protect their interests through negotiation. Hence solidarity reduces negotiation costs. Cannon et al. (2000[48]) found evidence that a positive relationship exists between solidarity and channel partners' performance in terms of delivery, product quality, service, sales and value. Hence lower monitoring costs. Enforcement costs include the costs incurred on resolving conflicts. Kaufmann and Stern (1988[49]) observed that solidarity helps to reduce the intensity of disputes between channel partners. When disputes are less intense, exchange parties do not have to adopt legal procedure. That means enforcement costs would be low. Moreover Boyle et al., (1992[44]) found that suppliers tend to employ less threats, requests and legalistic pleas when solidarity exists. Use of less threats and legalistic pleas means there is less tendency for conflicts and thereby low enforcement costs. Therefore, this study assumes that:

H4: **Solidarity between farmers and their exchange partners relates negatively with opportunism against SVFs.**

H5: **Solidarity between farmers and their exchange partners relates negatively with uncertainty of SVFs.**

H6: **Solidarity between farmers and their exchange partners relates negatively with TC of SVFs.**

Flexibility and TC: Flexibility is conceptualized as the flexibility of exchange partners to change the agreements, when smallholder farmer faces an uncertain situation. Flexibility refers to the elastic behavior of exchange partners including two components: flexibility towards behavioral uncertainty and flexibility towards environmental uncertainty (Heide and John, 1992[25]; Ivens and Blois, 2004[50]). In the context of farmers' exchange relationships, flexibility refers to making allowances for one party if they are unable to fulfill an obligation. Under flexibility there is not much need to cover for every possible circumstance in advance since exchange partners adapt to changing circumstances as they occur. Dwyer and Gassenheimer (1992[51]) uncovered that flexibility leads channel partners to make more attempts at satisfying each other. This essentially implies that they would behave without opportunism so as to satisfy the trading partner. According to Boyle et al. (1992[44]), flexibility prevents the use of threats by exchange partners. As observed by Heide and John (1992[25]), under flexibility, exchange parties make necessary modifications in favor of the disadvantaged party if changed circumstances prove damaging to one party. The implication is that the partners are not opportunistic under flexibility. Heide and John (1992[25]) stated that if flexibility exists, exchange partners will make modifications to the original contract when circumstances change. Since changes are faced as they occur, there is no need to write a complete contract in advance. Thus uncertainty decreases when flexibility exists. When parties are flexible, they would face unexpected circumstances as they occur and do not attempt to draw a complete contract before the transaction. This would also lead to reduce ex ante contracting costs. In addition to that when an unexpected circumstance occurs, rather than drafting a new contract, exchange partners would make adjustments to the original contract (Heide& John, 1992[25]). This would reduce ex post contracting costs. Moreover when parties are flexible, it would lower the disputes that occur between them thereby reducing enforcement costs. Therefore, the study proposes;

H7: **Flexibility between farmers and their exchange partners negatively relates to opportunism against SVFs.**

H8: **Flexibility between farmers and their exchange partners negatively relates to uncertainty of SVFs.**

H9: **Flexibility between farmers and their exchange partners negatively relates to TC of SVFs.**

Role integrity and TC: Role integrity is conceptualized as the behavior where exchange partner performs the assigned role honestly, efficiently, and effectively (Kaufmann and Dant, 1992[53]; Macneil, 1980[46]; Paswan and Young, 1999[40]). Paswan and Young (1999[40]) defined role integrity as;

> *"Contrasts the complexity of roles to be enacted in the context of a relational exchange relationship compared to discrete exchange settings which comprise relatively few expectations other than simple price-delivery requirements" (p.446).*

Under role integrity, exchange parties would behave properly and adequately in all circumstances (Misztal, 1996[54]). Paswan and Young (1999[40]) suggested that if role integrity exists in a business relationship, formal rules are not required. From this proposition it is possible to understand that role integrity has an inverse relationship with opportunism. Under role integrity channel partners satisfactorily perform a role which is both complex and unique to that specific relationship (Kaufmann and Dant, 1992[53]; Macneil, 1980[46]; Paswan and Young, 1999[40]). Moreover when exchange partners fulfill all their responsibilities and obligations correctly, are honest and fair, and perform their role properly and adequately, it would lead to decrease uncertainty (Misztal, 1996[54]). When partners are satisfied with each other's performance, there is no need to look for a new partner. This would help to reduce search costs. Under role integrity exchange partners believe

that the other correctly performs all of his responsibilities. This would lower monitoring costs. Finally, this norm leads exchange parties to perform their role satisfactorily,hence preventing any disputes. This would reduce enforcement costs as well. So the study posits:

H10: **Role of integrity between farmers and their exchange partners is negatively related with opportunism against SVFs.**

H11: **Role of integrity between farmers and their exchange partners is negatively related with uncertainty of SVFs.**

H12: **Role of integrity between farmers and their exchange partners is negatively related with TC of SVFs.**

Reciprocity and TC: Reciprocity is operationalized as the behavior where exchange parties consider that long-term payoffs are more important than immediate gains (Kaufmann and Dant, 1992[49]). This belief causes them not to monitor each transaction separately since that would damage the existing friendship (Ivens and Blois, 2006[50]; Kaufmann and Dant, 1992[49]; Macneil, 1980[46]; Paswan and Young, 1999[40]). Boyle et al. (1992[44]) observed an inverse relationship between reciprocity and opportunistic behavior. Moreover, they observed that channel partners used reciprocity as a substitute for more costly opportunism governing mechanisms. Gundlach et al. (1995[23]) found that channel partners became more committed due to reciprocity. That creates a mutual dependence between exchange partners. Because of this mutual dependence, they cannot behave opportunistically towards each other. As noted by Kaufmann and Stern (1988[49]), when reciprocity exists, exchange partners do not monitor each and every transaction to the minute detail to make sure if the other party has performed as expected since it would damage the friendship between them. According to Boyle et al. (1992[44]), reciprocity prevents the use of threats by exchange partners. Since threats are a form of opportunism, this statement by Boyle et al. (1992[44]) means reciprocity lowers opportunism.

When reciprocity exists, channel partners believe close inspection of each and every transaction separately would damage the friendship. Hence they do not monitor each and every transaction to the minute detail to make sure if the other party has performed as expected (Kaufmann &Dant, 1992[53]). As a result monitoring costs would reduce. Moreover, channel partners would also ignore temporary mistakes made by the other party because they value the relationship and its long-term benefits rather than immediate gains (Kaufmann &Dant, 1992[53]). Hence there would be less monitoring as parties do not investigate every minor inconsistency that occurs during the course of the relationship. In this way, as exchange parties do not pursue every little mistake of their exchange partner, enforcement costs would also reduce. Enforcement costs include the costs incurred on resolving conflicts. Dant and Schul (1992[45]) said reciprocity has a considerable effect on the choice of conflict resolution strategies. This means exchange partners will adopt a simpler, less expensive strategy if reciprocity is present, but would resort to legal action if reciprocity is low. The implication is that reciprocity can reduce enforcement costs. Thus reciprocity lowers enforcement costs. Hence, the study proposes:

H13: Reciprocity between farmers and their exchange partners negatively relates with opportunism againstSVFs.

H14: Reciprocity between farmers and their exchange partners negatively relates with uncertainty of SVFs.

H15: Reciprocity between farmers and their exchange partners negatively relates with TC of SVFs.

III. METHODOLOGY

3.1 Sample and Data Collection

The study was deductive and used both qualitative and qualitative approaches. A survey was conducted in *Bogahakumbura* village in *Welimada* Agrarian Development Division, the most popular vegetable growing area located in the *Uva* Province in Sri Lanka. The study selected 100 smallholder vegetable farmers using simple random sampling method from a sample frame of 305 smallholder vegetable farmers. A pre-tested structural questionnaire was employed for the collection of data. The questionnaire was administered using face-to-face interviews with farmers. In addition, the study used case study method to collect qualitative data. Case study protocol was used to assure validity,. Data were collected through face-to-face in-depth interviews from purposively selected five farmers who have more than ten years' experiences in farming. Data collection was carried out from September, 2015 to February, 2016.

In the sample, 95% are male. Mean age of the farmers is 43 years (SD = 10.3). Majority of the farmers (57%) have completed their secondary level education. 78% of the farmers earn less than US$ 750 per farming season (Mean = US$ 640). This means monthly income of majority of the farmers does not exceed US$ 120. Cultivated land area of all the farmers does not exceed 1 acre. 85% of farmers cultivated less than half an acre. (Mean land area = 0.44 acres and SD = 0.1). Furthermore the farmers have several years of farming experience. 57% of the farmers have been engaged with farming for more than 16 years (Mean = 15.8 years, SD = 10.8). This gives more credibility to their responses regarding the presence of relational norms and opportunism. The sample

further showed that farmers conduct majority of their transactions with long-term exchange partners. On average, farmers conducted 88.6% of transactions with exchange partners with whom they have a close connection over a long period. Moreover, farmers have a high level of friendship with their exchange partners (Mean = 6.4), indicating a strong exchange relationship.

3.2 Measurement of Variables

Variables were measured using multiple items which were developed based on work of prior researches. Five independent variables (information exchange, solidarity, flexibility, role integrity, and reciprocity) and three dependent variables i.e. opportunism of exchange partners, uncertainty and TC were adopted to conduct this research.

Norm of information exchange was measured using four items; confidential information, information needed for efficient coordination of transactions, useful information for transactions, and feedback information. These items were developed based on previous studies of Anderson and Weitz (1992[42]), Doucette (1996[39]), Dyer and Chu (2003[55]), Heide and John (1992[25]).Solidarity is measured by employing three items; treat each other fairly, joint problem solving, and commitment towards improving the relationship which are all developed based on the studies of Dant and Schul (1992[45]), Doucette (1996[39]), Heide and John (1992[25]). Flexibility was measured using one item of flexible behavior in dealing with the exchange partner.This was developed based on Ivens and Blois (2004[50]).Role integrity was measured using four reflective items; the extent to which channel partners fulfill their assigned role correctly and honestly, the extent to which channel partners possess a clear knowledge of the other's needs, the extent to which channel partners maintain a role which is both complex and unique to that specific relationship, and the extent to which channel partners are satisfied with each other. These items were formulated with the support of the studies by Kaufmann and Dant (1992[53]), Misztal (1996[54]), Paulin et al. (1998[), Paswan and Young (1999[40]). Two items: whether the exchange partners monitor each and every transaction separately in order to certify that the other has performed as expected and whether the exchange partners ignore temporary mistakes made by the other party because they value the relationship and its long-term benefits rather than short-term payoffs, were used to measure reciprocity. These items were developed based on the research work of Kaufmann and Dant (1992[53]).

Opportunism of exchange partners was measured using five reflective items; exaggeration of needs, sincerity of partner, truthfulness in dealings, good faith bargaining, and breach of agreement. These items were adopted from the studies of Dahlstrom and Nygaard (1999[24]), Dwyer et al. (1987[22]), Gundlach et al. (1995[23]), Mysen et al. (2011[57]), Rokkan et al. (2003[26]).Environmental uncertainty is measured using two dimensions; demand uncertainty and supply uncertainty. Each dimension was measured by employing three items: extent of predictability of market share, stability of the market share and prices which are employed for empirical studies by scholars Artz et al. (2000[58]); John and Weitz (1988[34]); Noordeweir et al. (1990[41]); Yenidogan (2013[59]). Behavioral uncertainty is measured using two items developed by Chen (2003[60]); Wu,and Choi (2005[61]). TC is measured using four dimensions: search cost, negotiation cost, monitoring cost and enforcement cost. Each dimension was measured using three items; labor time costs, travelling costs and communication costs. Items were developed by Dyer and Chu (2003[55]); Bardy (2006[62]); Nguyen (2011[63]).

All the items of each variable were measured by a 7-point Likert scale (1 – Strongly disagree; 2 – Disagree; 3 – Somewhat disagree; 4 – Neither agree nor disagree; 5 – Somewhat agree; 6 – Agree; 7 – Strongly agree). Each farmer was asked to state their agreement to the statements using these rankings.

3.3 Data Analysis

Quantitative data was analyzed by applying Partial Least Square - Structural Equation Modeling (PLS-SEM) using SmartPLS software. Models in this research are assessed separately in a two-step process. In the first step, reliability and validity of the item measures are examined and in the second step, the assessment involves the examination of structural relationships. Reliability of variables was measured using indicator reliability and composite reliability while validity incorporated convergent validity and discriminant validity.

Results showed that indicator reliability of each variable is much larger than the preferred level of 0.7 and all the indicators are significant at 05%. Values of internal consistency reliability of variables are shown to be larger than 0.7, representing high levels of internal consistency reliability among variables. The research adopts consistency coefficient (Cronbach's alpha) to examine reliability of constructs. The Cronbach's α coefficients of all variables in the study are over 0.8 and therefore have reached the acceptable level. The study checked convergent validity of each variable. All of the Average Variance Extracted (AVE) values are greater than the acceptable threshold of 0.5, confirming the convergent validity. The study measured discriminant validity by comparing the square root of AVE values with the construct correlations. Most of the square roots of AVE are greater than correlations of the variables hence confirming discriminant validity. In addition, two-tailed t-test was carried out for both inner and outer models to check statistical significance. In order to analyze qualitative

data, the study employed qualitative content analysis (directed approach) and presented the results in the following section to support survey results.

IV. RESULTS AND DISCUSSION

Hypothetical relationships described in the conceptual research model were tested using PLS -SEM to identify the direct path coefficients between relational norms and opportunism, uncertainty and TC. Table 1 shows that relational norms have a negative relationship with opportunism, uncertainty and TC. In order to test the statistical significance of the model, two-tailed t-test was conducted using bootstrapping algorithm. The study estimated fifteen hypothetical relationships and out of them fourteen relationships has been significant.

Table 1 shows that information exchange has a significant negative effect on opportunism (β1= -0.32), uncertainty (β1= -0.28) and TC (β1= -0.29) supporting hypotheses H1, H2 and H3. Results reveal that information exchange is the most important and powerful norm which affects the mitigation of TC. Case study results also showed a similar relationship. Farmers believed that their exchange partners provide correct, useful and confidential information without cheating them. Farmers stated that;

> *"They would definitely give us all the useful information we need such as daily prices. If prices increase they give us a higher price. If prices decrease they give us a lower price".*
>
> *"They give us useful and secret information without hiding anything".*

Table 1: Estimation of Structural Model

Hypothesis	**Relationship**	**Path Coefficients (□)**	**T Value**
H1	Information Exchange → Opportunism	-0.32***	5.13
H2	Information Exchange → Uncertainty	-0.28***	4.03
H3	Information Exchange → Transaction Costs	-0.29***	3.29
H4	Solidarity → Opportunism	-0.34***	5.10
H5	Solidarity → Uncertainty	-0.34***	4.58
H6	Solidarity → Transaction Costs	-0.33***	3.75
H7	Flexibility → Opportunism	-0.10**	2.10
H8	Flexibility → Uncertainty	-0.11*	1.92
H9	Flexibility → Transaction Costs	-0.10*	1.67
H10	Role of Integrity → Opportunism	-0.33***	6.23
H11	Role of Integrity → Uncertainty	-0.33***	4.98
H12	Role of Integrity → Transaction Costs	-0.01	0.10
H13	Reciprocity → Opportunism	-0.10*	1.89
H14	Reciprocity → Uncertainty	-0.06	1.19
H15	Reciprocity → Transaction Costs	-0.12**	2.04

*(n=100), *p<0.1, **p<0.05, ***p<0.01.*

Farmers believed that such information facilitates to lower down opportunism and uncertainty. For example, if exchange partner got to know about the future price increment of inputs, they pass the information to the farmers and advise them to carry supplies from the old stock before the price increment. The exchange partner does not make use of information asymmetries to his own advantage. Farmers believed that information exchange helps to identify better exchange partners by assessing their previous performances. Farmers can also predict the behavior of the market and prices more accurately due to information exchange. Therefore, information exchange facilitates farmers to safeguard their transaction from opportunism and uncertainty.

Table 2: Relationship betweenRelational Norms and TC Dimensions

	SearchingCost		**Negotiation Cost**		**Monitoring Cost**		**Enforcement Cost**	
	□	**T**	□	**T**	□	**T**	□	**T**
Info. Exchange	-0.30***	3.09	-0.22**	2.08	-0.30***	3.42	-0.28	1.41
Solidarity	-0.24***	2.66	-0.43***	3.04	-0.33***	3.16	-0.20	0.98
Flexibility	-0.18***	2.59	-0.13*	1.72	-0.10	1.29	-0.24*	1.81
Role of Integrity	-0.16***	2.61	-0.20***	2.65	-0.22***	3.80	-0.05	0.43
Reciprocity	-0.13**	2.23	-0.03	0.50	-0.04	0.66	-0.14	0.93

*(n=100), *p<0.1, **p<0.05, ***p<0.01.*

Table 2 shows that information exchange have an effect on mitigating searching costs (β1= -0.30), negotiation costs (β1= -0.22) and monitoring costs (β1= -0.30). Case studies provide sufficient evidence to justify these

survey results. Farmers do not need to incur any cost to search information about prices and new markets since exchange partners exchange sufficient and accurate information without any costs. Therefore, information exchange directly decreases the searching costs. Farmers have sufficient knowledge about prices before the transaction due to information exchange, therefore they do not need to spend time and money to negotiate with exchange partners because they have confidence that their exchange partners provide accurate information without hiding and cheating.

"They don't cheat us because they know without us they can't continue their business".

"We are hundred percent sure that the buyers (vegetable buyers) would never ever cheat us".

Similar findings were obtained by Dyer (1997[35]) who empirically observed that information exchange between exchange partners reduced information asymmetry and opportunism. He further highlighted that information exchange reduces searching, negotiation and monitoring costs. Heide and John (1992[25]) also highlighted that information exchange act as a safeguard against opportunism. Empirical results of this study justify these observations.

Survey results in table 1 further shows that solidarity has a significant negative effect on opportunism (β1= -0.34), uncertainty (β1= -0.34) and TC (β1= -0.33) supporting hypotheses H4, H5 and H6. Case results show that exchange partners have always attempted to prove their reliability, predictability, and fairness to each other. The following statements of farmers provide the nature of solidarity they have;

"If I face an urgent money matter they will help me without any hesitation".

"If my crops have got destroyed in the previous season, they (exchange partners) would give credit to grow crops in this season. Even if I have borrowed money from them, they would not reduce that amount".

Case results reveal that exchange partners refrained from engaging in any activity that might lead to the destruction of inter-personal trust developed between them from long-term transaction relationships. Exchange partners have refrained from opportunism by acting fairly, which leads to decrease uncertainty as well.

Survey results further show that solidarity leads to mitigating searching costs (β1= -0.24), negotiation costs (β1= -0.43) and monitoring costs (β1= -0.33) (see table 2). Farmers believed that they do not need to spend any costs to find new exchange partners because they are satisfied with existing exchange partners. If a problem occurs in relation to the transaction, they can negotiate with their exchange partners and settle it in a friendly manner, because both parties have a very good understanding between themselves. Therefore, searching costs and negotiation costs minimize due to solidarity. Farmers do not incur any costson monitoring and enforcement because they have confidence that exchange partners treat them in a fair manner without damaging inter-personal trust developed between them. Heide and John (1992[25]) observed a negative relationship between solidarity and opportunism. Boyle et al. (1992[44]) found that suppliers tend to employ fewer threats when solidarity exists. Similar findings were perceived in this study as well.

It was also perceived that the norm of flexibility plays an important role in mitigating TC. Flexibility has a significant negative effect on opportunism (β1= -0.10), uncertainty (β1= -0.11) and (β1= -0.10) supporting hypotheses H7, H8 and H9. Flexibility refers to the degree of adaptability in the case of uncertainty. The survey results were reinforced by case study results which show that under the presence of flexibility, farmers have confidence to adjust agreements when they face unavoidable circumstances. Farmers know that exchange partners do not attempt to take advantage from such circumstances because they have a long-term mutual understanding embedded in inter-personal trust. Thus opportunism and uncertainty do not emerged when flexibility exists.

Several other scholars have empirically observed that when flexibility is present, exchange partners refrain from opportunism. Boyle et al. (1992) found that flexibility protects firms against threats and unfair requests of trading partners implying a negative relationship between flexibility and opportunism. Results of this study also establish a similar relationship between flexibility and opportunism, uncertainty and TC.

Results confirm that role of integrity has a significant negative effect on opportunism (β1= -0.33), uncertainty (β1= -0.33) and TC (β1= -0.18) supporting hypotheses H10, H11 and H12. Farmers believed that their exchange partners fulfill their assigned role correctly and honestly. This desire to perform the assigned role well makes it impossible for exchange partners to use underhand methods to deceive the farmers, which portrays an absence of cheating and dishonesty. Hence, opportunism and uncertainty mitigate. Table 2 shows that role of integrity leads to mitigate search costs (β1= -0.16), negotiation costs (β1= -0.20) and monitoring costs (β1= -0.22). When the role of integrity is present farmers do not incur moneyon searching, negotiation, monitoring and enforcement since farmers have confidence that their exchange partners perform their part honestly.

Results do not support the relationship between reciprocity and uncertainty rejecting hypothesis H14. However reciprocity has a significant negative effect on opportunism (β1= -0.12) and TC (β1= -0.36) supporting hypotheses H13 and H15. Under reciprocity, exchange partners value the relationship and its long-term benefits rather than short-term gains. Because of this mutual dependence, they cannot behave opportunistically towards each other. When exchange partners are satisfied with each other, they will have more confidence and a

sensitive expectation that their future dealings with each other will be positive which will minimize the temptation to take advantage of each other.

Dahlstrom and Nygaard (1999[24]) justify empirically that opportunistic behavior consistently increases transaction costs and cooperative interaction and formalization reduces opportunism. Kaufmann and Dant (1992[53]) stated that when reciprocity exists, channel partners do not monitor each and every transaction to the minute detail to make sure that the other party has performed as expected since it would damage the friendship between them. The study has a similar finding to the observations made by Boyle et al. (1992[44]), who witnessed an inverse relationship between reciprocity and TC.

V. CONCLUSION

This study examined how relational norms affect the TC of SVFs in Sri Lanka. Empirical results confirmed that relational norms between SVFs and their exchange partners have a significant impact on mitigating TC of SVFs accepting all hypothetical relationships except three. Based on the results, the study concludes that relational norms mitigate TC of SVFs discouraging opportunism of exchange partners and reducing transaction uncertainty. The results further confirmed that relational norms contribute to encourage mutual interest-seeking behaviour and discourage self-seeking behavior of exchange partners and thereby lead to mitigate TC of SVFs in Sri Lanka.

The study argues that smallholder farmers in developing countries fail to minimize TC and safeguard their transactions from opportunism using either market or hierarchical governance as suggested by TCE. The study provides evidence that relational norms have a higher ability to mitigate TC by governing opportunism of exchange partners and by reducing transaction uncertainty viapositively changing exchange partners' general behavior in the long-term exchange relationship. The study contributes to the existing literature providing empirical evidence that relational norms play an important role in mitigating TC.

The results have significant practical implications to improve SVFs in Sri Lanka. First, smallholder farmers find it difficult to join in markets because of the limitations and barriers reflected in the transaction costs which mainly generate due to opportunism and uncertainty. Relational norms act as a governance tool to mitigate TC which leads to improve the performance of farmers. Thus the study provides valuable insights for SVFs to develop relational norms strengthening their relationship with exchange partners in order to minimize TC. The study suggests that farmers should develop relational norms by exercising long-term oriented relationships with their exchange partners to reduce uncertainty and opportunism so that they are able to minimize TC. Secondly, the results suggest that developing a social environment that encourages mutual interest-seeking would enable exchange parties to mitigate TC. Facilitating to develop a favorable transaction environment by developing market links and providing necessary facilities, lead to strengthen relationships that encourage mutual interest-seeking between farmers and exchange partners.

VI. REFERENCES

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