

Power of Social Capital on Mitigating Transaction Cost of Small Enterprises in Sri Lanka: An Empirical Investigation

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Abstract

The study explored how different dimensions of Social Capital (SC) affect the mitigation of Transaction Cost (TC) of Small Enterprises (SEs) in Sri Lanka. The study used the survey method to gather data which were collected from 376 SEs located in nine Districts representing all Provinces in Sri Lanka, conducting face to face personal interviews with the respondents. The data were analyzed using Partial Least Squares-Structural Equation Modelling. Results revealed that different dimensions of SC (structural, relational and cognitive) have negatively affected on the firm's TC, providing sufficient evidences to conclude that SC has a significant impact on mitigating TC of SEs. The empirical results extend the SC theory and TC economics in the context of SEs in less developed countries. The study provides important insights for policy makers to focus their strategies to new direction rather than conventional supporting approaches to develop SEs.

Key words: Small enterprises, Social capital, Transaction Costs.

1. Introduction

Small Enterprises (SEs) have relatively higher mortality rate due to the limitations mostly reflected in Transaction Costs (TC)(Carmel and Nicholson, 2005; Jagwem, 2011; Nooteboom, 1993). They have higher possibility of suffering the hazards of opportunism from exchange partners due to asymmetrical information. They do not have capacity to collect and evaluate information due to various barriers including lack of knowledge to access and assess information, lack of time and capacity to gather and handle information, lack of resources to access and evaluate information (Carmel and Nicholson, 2005; Nooteboom, 1993). Therefore, the TC of SEs are very high. SEs use their informal and personal connections in order to get required information and resources (Lu et al., 2007; Premaratne, 2002). These informal and personal connections do not have formal and written agreement but these connections are based on network relationships with family members, relatives, friends, supportive institutions and the others (Bhagavatula, 2009; Lu et al., 2007; Premaratne, 2002). Literature describes that the network relationship lead to generate Social Capital (SC) (Granovetter, 1983; Bhagavatula, 2009; Lu et al., 2007; Nahapiet and Ghoshal, 1998).

SC consists of the pattern (network size and the density) of the relationships (structural dimension of SC), strength and qualities of the relationships (relational dimension of SC) and common understand and practices among network members (cognitive dimension of SC) (Nahapiet and Ghoshal, 1998). Such different dimensions of SC facilitate SEs to access necessary information and resources (finance, advices etc.) (Adler and Kwon, 2002; Burt, 1992; Premaratne, 2002). Using such information and resources, SEs are able to avoid the opportunism which helps to minimize the TC on the one hand and to mitigate bounded rationality on the other hand (Henningsen et al., 2013). Thus, SC has an influence on minimizing TC. Therefore, aim of this paper is to explore the effect of different dimensions of SC on TC particularly SEs in Sri Lanka.

2. Theoretical Background

Social Capital Theory: SC implies the value and resources that generated from social relationships. Coleman (1988) claimed that unlike other types of capital, SC is the structure of relations between actors and among actors. According to Putnam (1995), key features of SC are; a) moral obligations and norms, b) social values (especially trust) and c) social networks (especially voluntary associations) all facilitates coordination and cooperation for the mutual benefit. SC consists of features of relationship among individuals such as networks, high levels of interpersonal trust and norms of mutual supports which act as resources for individuals and facilitate for collective action (Adler and Kwon, 2002; Burt, 1997; Nahapiet, and Ghoshal, 1998).

SC has three dimensions; structural, relational and cognitive (Nahapiet, and Ghoshal, 1998). Resources that generate due the pattern of relationships among individuals are called as Structural Social Capital (SSC). The SSC discusses the pattern of connections among the members of the network. Important aspects of the SSC are the pattern of ties between the members of a social network; network structure based on density of ties and frequency of

connectivity and interaction (Nahapiet and Ghoshal, 1998). Thus, scholars (Babaei, Ahmad and Gill, 2012; Bhagavatula, 2009; Premaratne, 2002) highlighted that network size (total number of actors that the focal firm is connected to) and the density of network (existing connections out of potential ties) are as the two reflective dimensions of SSC.

The Relational Social Capital (RSC) refers as resources that generate from the value of relationships among individuals. The value of relationship is reflected by the strength of relationships and qualities of the relationships (Bhagavatula, 2009). The RSC has two broad dimensions: a) strength of relationships and b) qualities of relationships which are reflected by inter-personal trust (the willingness to be vulnerable to another person) (Fukuyama, 1995), norms (generalized expectations of behavior, such as norms of reciprocity, flexibility, solidarity, reciprocity and role of integrity) (Chowdhury, 2012; Dyer and Chu, 2003; Rokkan, Heide and Wathne, 2003; Wu and Choi, 2005).

Cognitive Social Capital (CSC) refers to the resources that provide shared vision or common understanding among network members (Nahapiet and Ghoshal, 1998). In business perspective, CSC implies the value of common understanding among exchange partners (Chow and Chang, 2008). This aspect of social capital consists of the value such as common vision that support a common understanding of shared goals, norms of action and social trust in a social setting (Tsai and Ghoshal, 1998). The way that the network members show their norms, trust and commitment in reality is the CSC (Kitapci, 2016).

Transaction Cost Economics: A business firm needs to incur costs for searching new buyers and suppliers, negotiating with exchange partners, long-term contracting and monitoring the transaction agreements due to the asymmetrical information generated by imperfect market mechanism (Dyer, 1997; Hobbs, 1996; Williamson, 1985). Those costs are termed as TC (Dyer, 1997; Williamson, 1979, 1985; Zhang, 2009). Classical economic theory assumes that transactions can be made without spending any costs if they have perfect knowledge about the market (Hobbs, 1996; Priyanto, Mazkie and Khusaini, 2014). They build this argument assuming that all exchange parties have same level of information (Priyanto et al., 2014). In reality, information is unequal among transaction parties due to imperfect market (Bellalaha and Aboura, 2006). Asymmetrical information blocks business firm to make rational decisions which is called as bounded rationality on the one hand and encourage exchange partners to behave opportunistically (opportunism) against the focal firm (Williamson, 1981). Therefore transactions tend to become costly (Williamson 1979, 1981).

TC differ in the degree to which transaction specific assets (assets specificity) are involved, the amount of uncertainty about the future (environmental uncertainty), the amount of uncertainty about other parties' actions (behavior uncertainty), and the transaction frequency (repetition of similar transactions) (Everaert, Sarens and Rommel, 2010). Business firms attempt to govern the said reasons and attributes employing two alternative strategies i.e. 'market' or 'hierarchy' (Zhang, 2006). If a transaction is performed outside the firm through market coordination, the governance structure being utilized is the market where the price

mechanism governs the transactions. If a firm governs transaction within its boundaries through its own control and coordination, the governance structure being utilized is a hierarchy (Bello, Dant, and Lohtia, 1997; Judge and Dooley, 2006; Williamson, 1991). The selection of TC governance is based on the comparison of TC between 'market' and 'hierarchy' (Priyanto et al., 2014).

3. Research Model and Hypotheses

This conceptual research model is developed synthesizing both the transaction cost economics and the SC theory and shows how different dimensions of SC affect the TC.

The SSC and TC: SSC supply SEs with low cost, quick and reliable information which affect the decrease of TC in two ways. First, SSC facilitates SEs in providing cheap access to reliable information (Henningsen and Henning, 2013). Second, SSC is important source of recommendations that the SE can identify potential exchange partners (Henningsen and Henning, 2013). Yenidogan (2013) explained that information access through network structure helps to reduce searching costs. Network members introduce and recommend reliable customers and suppliers to the other members that affect the increase of market share without making advertising costs. This prevents the searching costs (Boyle et al., 1992; Henningsen and Henning, 2013; Yenidogan, 2013).

SSC leads to minimize negotiation costs which include the costs of deciding the details of transaction (Jones, Hesterly and Borgatti, 1997). SSC discourages to make costs for legal agreement because members of the network encourage verbal agreement (relational contact) which does not need to incur any costs. SSC improves coordination that the firms with prior connections are likely to have a greater awareness of the rules, routines, and procedures that each needs to follow (Gulati and Singh, 1999). Such a social structure can enable to work closely without the need for costly formal contact (Gulati and Singh, 1999). The higher the ex-ante trust level between exchange partners, the lower is the need to negotiate every detail of the transaction (Uzzi, 1996). Hence, the ex-ante trust considerably reduce negotiation costs (Nee, 1998).

SSC causes to minimize monitoring costs which are the costs the partners make to observe the transaction as it unfolds, and to verify the compliance with the agreed terms. Exchange partners with dense connection do not behave breaking the previous agreement and such partners do not make any mistake in transaction because friendship is powerful than the transaction (Greif, 1994). If one partner behaves opportunistically, informal punishment systems, such as the loss of a good reputation or exclusion from future trade possibilities, can be enforced (Greif, 1994; Kandori, 1992). The better these informal mechanisms work, the lower the incentive to defect in a transaction and, hence, the lower the monitoring costs (Richman, 2006). Therefore, SEs do not spend more time and money to monitoring transaction. If they have any disputes in transaction, network relationships encourage them to solve such dispute in flexible and friendly manner. Thus, SSC leads to minimize control costs. Hence, the study hypothesizes that;

H1 SSC of the owner of small enterprise relates negatively to the firm's TC.

The RSC and TC: Zaheer, McEvily and Perrone(1998) stressed that relational ties mitigate the searching costs by allowing more open and honest sharing of information. With the strong relationships, negotiations are less costly under conditions of high inter-personal trust because transaction agreements are reached more quickly and easily (Zaheer et al., 1998). When unforeseen contingencies arise from external environment, strong trust facilitate the development of a common understanding about the contingencies and solve such in a cooperative manner (Zaheer et al., 1998). Under conditions of high trust, exchange partners will spend less time and resources on monitoring to see if the other exchange party is fulfilling the conditions of the agreement. If each exchange partner is confident that the other party will not be opportunistic, then both parties can devote fewer resources to monitoring. If trust is high then each party will assume that the other party is acting in good faith (Uzzi, 1997).

Relationship qualities lead to mitigate opportunism on the one hand and avoid the breaking of previous agreement (Gulati, 1995).Dyer (1997) underlined that more trusted exchange partners do not make mistake in transaction because trusting relationship averts such behavior. Therefore, time and money for monitoring transaction should not be incurred (Gulati, 1995). The norm of information exchange helps exchange parties to organize their transaction activities efficiently in advance (Dyer, 1997). For example, if the buyer informs his production schedule and design requirements in advance, supplier can arrange deliveries smoothly (Heide and John, 1992). Moreover, information exchange increases the level of satisfaction between current exchange partners (Doucette, 1996). This prevents the need to find a new exchange partner (Boyle et al., 1992). 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). This would help reduce monitoring costs. Under role integrity exchange partners believe the other correctly performs all of his responsibilities (Kaufmann and Dant, 1992). This would lower monitoring costs. Under role integrity, exchange parties perform their role satisfactorily (Kaufmann and Dant, 1992). When reciprocity exists, channel partners believe close inspection of each and every transaction separately damages the friendship. Hence, they do not monitor each and every transaction to make sure if the other party has performed as expected (Kaufmann and Dant, 1992). As a result, monitoring costs decreases. Moreover, channel partners also ignores temporary mistakes made by the other party because they value the relationship and its long-term benefits rather than immediate gains (Kaufmann and Dant, 1992). Hence, monitoring costs decreases 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 decreases. Kaufmann and Stern (1988) observed that solidarity helps reduce the disputes between channel partners. When disputes are less intense, exchange parties do not have to adopt legal procedure. That means enforcement costs

become low. Thus, RSC (strength and quality of relationship) lead to minimize firm's TC. Therefore, the study hypothesizes that;

H2 RSC of the owner of small enterprise negatively associates to the firm's TC.

CSC and TC: The presence of mutual understanding among network members facilitates to exchange of ideas and information. Common vision among network members are considered as the force that holds people together and lets them share what they know (Chow and Chan, 2008). Thus, common vision among network members facilitates to mitigate contact costs of SEs enabling them to share information. Mutual understanding among network members leads to avoid the opportunistic behavior of exchange partners, business uncertainty and encourage sharing resources and opportunities with minimum negotiation cost (Chiu, Hsu and Wang, 2006). Common vision leads to develop trust among network members as they do not fear pursuit of self-interest by any member of the network (Tsai and Ghoshal, 1998). Therefore, focal member discourages to monitor the activities in transaction and it will lead to decrease control cost. Thus, common vision among network members affects the decrease of transaction costs of SEs. Hence, the study hypothesizes that;

H3 CSC of the owner of small enterprise negatively associates to the firm's TC.

4. Methodology

Quantitative approach is employed to study the research problem and the survey method was selected to gather data. Only manufacturing SEs, which are classified according to 2 digit levels of ISIC-Revision, 4 (UNDP) were selected to gather data. Department of Census and Statistics (DCS) in Sri Lanka defines SEs as 'establishment with 5 - 24 persons engaged' and the same definition was used to select SEs for the survey. According to the DCS, there were 71,126 SEs dispersed in Sri Lanka and the study employed those SEs as the study population. Multi-stage sampling method was adopted to determine the sample. First, the study selected only the enterprises classified under manufacturing category as the sample frame. According to the Economic Census in 2013/2014, there were 14,185 industries belonging to the category of manufacturing establishments. Second, using the sample frame (14,185 of SEs), 376 of SEs were selected employing the sample size determination formula developed by Krejcie and Morgan (1970) with 95 percent confidence level and 5 percent margin of error. Third, the sample is distributed according to the percentage share of the SEs located in each district and determine the number of firms to represent all the district in Sri Lanka. Then, SEs of each districts were listed out according to ISIC category and the sample were selected using stratified sampling method to represent all the manufacturing industrial divisions.

The study used two step procedure to develop questionnaire. The study initially generated a pool of items of each dimensions reviewing empirical literature and carefully selected items, which are more relevant to measure the particular dimension of the constructs. Thus, the questionnaire items were designed systematically based on literature published in cited journals. Then, a pilot survey was conducted prior to the main questionnaire survey in order to verify whether the questions are understood; whether instructions are clear; whether the

order of the questions is appropriate and the questions are uninspiring etc. This helped to increase the validity and the reliability of the study. Data were collected for the questionnaire conducting face to face interviews. The unit of analysis is each owner of SEs because the owner is the 'entrepreneur' in many SEs who starts and manages the business.

Partial Least Square - Structural Equation Modeling (PLS-SEM) was used to test the hypothetical relationships. Measurement model is evaluated employing reliability and validity tests and the efficiency of the structural model was evaluated by multi-collinearity issues, R^2 , effect size (f^2) and predictive relevance (Q^2). The smart PLS (version2) software was used to analyze data.

Measures

All the constructs were measured using structural questions. Each items were measured at an ordinal level with 7-point Likert scales (1 – Strongly disagree; 2 – Disagree; 3 – Somewhat disagree; 4 – Neither agree nor disagree; 5 – Somewhat agree; 6 – Agree; 7 – Strongly agree). Each respondent was asked to state their agreement to the statements using these rankings.

Transaction cost: The study measured TC at unit level (in SEs), adopting Williamson's (1985) classification i.e. searching costs, negotiation costs, monitoring costs and enforcement costs. Six items (adopted by Dyer and Chu, 2003; Gerdoci et al., 2016; Nguyen and Crase, 2011) were used to measure searching cost. Five items adopted by Dyer and Chu (2003); Bardy (2006); Nguyen and Crase (2011) were employed to measure negotiation cost. Four items (adopted by Dyer and Chu, 2003; Bardy, 2006; Gerdoci et al., 2016; Nguyen and Crase, 2011) were used to measure monitoring cost. Four items (adopted by Dyer and Chu, 2003; Bardy, 2006; Gerdoci et al., 2016; Nguyen and Crase, 2011) were used to measure enforcement cost.

SSC: The study assessed SSC using network size and network density. The network size of the owner is simply defined as the number of persons that SEs is directly connected to. This measurement was adopted by Batjargal (2005); Bhagavatula (2009); Greve (2003); Premaratne (2002). The network density of the owner is simply defined as the total number of persons that the owner deals business activities with and obtains support such as information, resources and moral support. The network density is measured as the percentage of close relationships within the total number of possible relationships of the owner. This is adopted by Bhagavatula (2009); Burt (2000); Premaratne (2002).

RSC: The study considers the RSC as assets embedded with strength and qualities of relationships. The strength of relationship is measured using Network Strength Index. It refers to what extent owner maintains close ties with regular interaction in a long period. The study uses an index to measure the network strength. Lu, Feng, Trienekens and Omta (2012) adopted the same index. The study asked respondents to select the most important 12 members of different categories of network and provide answers to the following questions. How well do you know the person (very well, somehow, or very little)? How often do you contact this person (daily, weekly, or monthly)? How many years do you know this person? For the first two questions, a weight of 1, for answers of "very well" and "daily", 0.5, for "somehow" and "weekly", and 0.1, for "very little" and "monthly" are assigned. The network

strength index was created by multiplying the three answers. The higher this value is, the stronger the ties are.

Ganesan (1994) represented trust as a two-dimensional construct of credibility and benevolence (behavioral dimension). Accordingly, creditability is evaluated employing three components i.e. reliability, predictability, and fairness and three items are used to measure benevolence all of which have been adopted by Lu et al. (2012); Manolova et al. (2007); Zaheer et al. (1998). Relational norms between owner and network members are measured using five variables; information exchange, flexibility, solidarity, role of integrity and reciprocity. These variables have been adopted by Anderson and Weitz (1992); Doucette (1996); Dyer and Chu (2003); Heide and John (1992); Rokken et al. (2003).

CSC: The CSC includes attributes common understanding, common perspectives and shared congruence, or generally agreed upon meanings (Nahapiet and Ghoshal, 1998). CSC is embodied in attribute like a shared code or a shared paradigm that facilitates a common understanding of collective goals. A shared goal embodies the collective goals and aspirations among the network members (Miller, Besser and Weber, 2007).

5. Results

The study tested the normality of the data using Skewness and Kurtosis test, Kolmogorov-Smirnov Test, the Shapiro-Wilk Test and the nominal Q-Q plot test. The results revealed that all the variables were significant representing that all the variables are normally distributed. With regard to the personal characteristics of the sample, the majority (90.2 percent) of the OSEs were males while female owners contribute 9.8 percent to the sample. Mean age of the owners is 51 years. The owners' age varies from minimum age of 27 to the maximum age of 71. The majority of the owners (80.6 percent) belong to the age category between 40 years to 59 years, while only 5.4 percent fall into the under 39 years group, and 13.3 percent belong to the over 60 year group. In view of the academic background of the OSEs, they have a good formal educational background. Mean education of the owners is 3.6, which implies the average education of the owners varies between O/L and A/L. Less than 40 percent of the owners have obtained below G.C.E. Ordinary Level qualification while 6.5 percent of the owners have a degree. Nearly 60 per cent (53.3 percent: up to A/L + 6.5 percent: Degree or above = 59.8 percent) have academic qualifications beyond the G.C.E. Advance Level. In addition to formal education, business experience is more important in particular for the OSEs. Mean business experience of the owners is 15 years. 27 percent of the owners have less than 10 year experience in the business field while 7.9 percent of the owners have more than 30 year experiences. 43.4 percent have business experience between 10 year and 19 year while 21.6 percent have business experience between 20 year and 29.

The study developed different constructs related to the SC and TC before testing hypothetical relationship. First, the study developed 15 of first order endogenous latent variables. The first four constructs given in the table 1, relate to the FTC. Constructs five and six represent the SSC, constructs 7 show the ties strength, constructs 8 and 9 display the inter personal trust, construct 10 to 14 reflect relational norms and finally, the CSC is demonstrated by the construct number 15. The total of 15 constructs is developed and assessed using the

standardized factor loadings and t-statistics. Although, the variables were measured using many items, many constructs compose with a few items which were above the minimum threshold criterion 0.7. The table 1 shows standardized factor loadings which were above than the minimum threshold criterion 0.7 confirming the indicator reliability of first order reflective constructs.

Table 1: Analysis of the First Order Constructs

Construct		Loading	t-statistics	CR	AVE	α^*
1.	Searching Costs (SEC)			0.939	0.839	0.903
	SECa	0.829	39.93			
	SECb	0.964	176.25			
	SECc	0.949	133.13			
2.	Negotiation Costs (NGC)			0.915	0.785	0.861
	NGCa	0.933	86.05			
	NGCb	0.948	145.58			
	NGCc	0.767	28.24			
3.	Monitoring Costs (MOC)			0.892	0.678	0.843
	MOCa	0.709	18.11			
	MOCb	0.914	77.41			
	MOCc	0.911	84.69			
	MOCd	0.744	25.25			
4.	Enforcement Costs (EFC)			0.908	0.713	0.865
	EFCa	0.723	21.73			
	EFCa	0.909	66.86			
	EFCa	0.915	104.42			
	EFCa	0.816	37.80			
5.	Network Density (DENSE)			0.892	0.735	0.820
	DENSE of social network	0.872	77.26			
	DENSE of business network	0.847	48.79			
	DENSE of supportive network	0,855	53.19			
6.	Network Size (SIZE)			0.881	0.849	0.798
	SIZE of social network	0.853	59.44			
	SIZEof business network	0.871	70.26			
	SIZE of supportive network	0.855	60.13			
7.	Ties Strength			1.000	1.000	1.000
	Strength Index	1.000	1.000			
8.	CreditableTrust (CTRUST)			0.940	0.735	0.923
	CTRUSTa	0.882	51.00			
	CTRUSTb	0.869	59.86			
	CTRUSTc	0.865	55.03			
	CTRUSTd	0.868	52.10			

	CTRUSTe	0.758	28.76			
	CTRUSTf	0.859	49.67			
9.	Benevolence Trust (BTRUST)			0.941	0.842	0.906
	BTRUSTa	0.925	90.64			
	BTRUSTb	0.901	68.41			
	BTRUSTc	0.928	100.28			
10.	Norms of Information Exchange (NIE)			0.926	0.760	0.894
	NIEa	0.895	47.38			
	NIEb	0.897	38.12			
	NIEc	0.865	39.65			
	NIEd	0.828	26.53			
11.	Norms of Flexibility (NOF)			0.941	0.888	0.874
	NOFa	0.941	102.18			
	NOFb	0.943	110.24			
12.	Norms of Solidarity (NOS)			0.929	0.814	0.886
	NOSa	0.896	51.45			
	NOSb	0.928	54.21			
	NOSc	0.882	32.58			
13.	Role of Integrity (ROI)			0.886	0.795	0.743
	ROIa	0.896	29.83			
	ROIb	0.887	27.63			
14.	Norms of Reciprocity (NOR)			0.858	0.751	0.669
	NORa	0.873	21.27			
	NORb	0.860	17.27			
15.	Shared Vision (SV)			0.947	0.901	0.889
	SVa	0.946	140.46			
	SVb	0.951	172.01			

(n=376).

Source: Survey data, 2016.

In addition, the table I further shows that all the factor loadings were statistically significant at 0.05 significance level. Hence, the results show a strong evidence for indicator reliability of the first order measurement items. The table 1 further exhibits that the Cronbach's α was higher than the required value of 0.7 and composite reliability was higher than the recommended 0.7 value. Higher value of the Cronbach's α and the composite reliability confirm the convergent validity of the first order constructs. AVE for each construct was higher than the required value 0.5 and indicates that each construct has the capability to explain more than half of the variance to its measuring items on average (see the table 1). Regarding the discriminant validity, none of the inter-construct correlation value was above the square-root of the AVE and satisfied the criterion of the discriminant validity of first order constructs.

The second-order constructs were developed using latent variable scores of the first-order constructs. Indicator reliability of four endogenous latent variables at the second order level in the hierarchical model were evaluated. All path coefficients (standardized factor loadings) were well above the threshold value 0.7 (see table 2). The bootstrapping procedure was conducted to estimate the significance of each path coefficient by examining the t-statistics. All the t-statistics were significant at 0.05 significance level (see table 2). Hence, the results show the strong evidence for indicator reliability of the second order constructs.

Table 2: Analysis of the Second Order Constructs

Construct		Loading	t-statistics	CR	AVE	Cronbach's α
1.	Norms			0.949	0.799	0.933
	Flexibility	0.933	125.91			
	Information Exchange	0.882	78.56			
	Reciprocity	0.815	33.50			
	Role of Integrity	0.877	55.79			
	Solidarity	0.936	148.11			
2.	Trust			0.969	0.942	0.937
	Benevolence Trust	0.970	270.63			
	Creditable Trust	0.969	256.31			

(n=376).

Source: Survey data, 2016.

Table 2 further displays that the Cronbach's α was higher than the required value of 0.7 and composite reliability was higher than the recommended 0.7 value. With a higher level of the Cronbach's α and composite reliability, the second order constructs were developed in reliable manner. AVE for the each construct was higher than the required value 0.5. The results confirm the convergent validity of the second order construct (see table 2). Discriminate validity of the second order constructs showed that none of the inter-construct correlation value was above the square-root of the AVE and satisfied the criterion of the discriminant validity of the second order constructs.

The efficiency of the structural model were assessed using five step approach suggested by Hair et al. (2014). First, Multi-collinearity issues were assessed. The study calculates VIF and tolerance level with the support of linear regression option in SPSS (version 21.0). Considering the collinearity between independent constructs and dependent constructs in the structural model, results indicated that there are no multi-collinearity issues among variables. VIF values for all the path show minimal collinearity, ranging from 1.419 to 4.406. These values are significantly less than the recommended threshold value of 5.00. The tolerance levels range from 0.285 to 0.705 exceeding 0.20. These results provide a strong evidence for the absent of multi-collinearity issues between the independent constructs and the dependent constructs in the structural model. Second, the study assessed the significance of the path coefficients using β value and t-statistics. In view of both paths coefficients and t-statistics, table 3 shows that all the hypothetical relationships were significant. Third, the explanatory

power of dependent variable was substantial ($R^2 = 0.732$). Fourth, SSC (f^2 is 0.3) and RSC (f^2 is 0.3) represent medium effect size of predictive variables while CSC has a large effect size of predictive variables (f^2 is 0.52). Fifth, predictive relevance (Q^2) of FTC is 0.51 which displays a substantial higher explanatory power.

Table 3: Path Coefficients and Significance among Constructs

Hypothesis	Relationship	β	T Statistics	Result
H1	SSC -> FTC	-0.429	10.17***	Supported
H2	RSC -> FTC	-0.299	4.72***	Supported
H3	CSC -> FTC	-0.188	3.52***	Supported

*** $p < 0.01$. (n=376).

Source: Survey data, 2016.

6. Discussion

As expected, the study found that the SSC has a negative impact on FTC of SEs. Table 3 shows that the SSC of the owner has a significant impact on mitigating firm's TC ($\beta = -0.428$ or 42.8 percent and t -value = 10.17) supporting hypothesis H1. Although there is no similar previous study in the literature, some studies have provided similar findings. Scholars (Gulati, 1995; Henningsen et al., 2013; Yenidogan, 2013) highlighted that the network structure facilitates to access reliable information with low costs and to identify reliable exchange partners. In this way, network relationships help to reduce their TC of business firms. Scholars (i.e. Jones et al., 1997; Nee, 1998; Uzzi, 1996; Zaheer et al., 1998) have explained that the network relationships minimize the searching costs and the negotiation costs discouraging legal contacts. Richman (2006) explained that the network relationships encourage relational governance which lead to decrease the monitoring and the enforcement costs. Uzzi (1999) explained that the network ties create values for firms by enhancing their ability to reduce the costs of negotiations and to reduce the costs of writing contracts. Doucette (1996) found that network relationship increases information sharing between current exchange partners. This prevents the need to find a new partner and reduces the searching costs incurred on looking for a new reliable partner. However, the empirical results of this study further justify that the network size and the dense of SEs have a direct impact on mitigating firm's TC of SEs in Sri Lanka.

PLS results provided a sufficient evidence that there is a significant impact of the RSC (as reflected from strength of ties, trust and norms) on mitigating TC of SEs in Sri Lanka. RSC of the owners has a significant negative effect on firm's TC of SEs ($\beta = -0.299$ or 22.9 percent and t -value = 4.72). Thus, the hypothetical relationships of H2 is supported by the empirical results. Similar results have been provided by many scholars (Barney and Hansen, 1994; Gerdoci et al., 2016; Gulati, 1995; Barney and Hansen, 1994; Dyer, 1997). Elfring and Hulsink (2003) explained that the strong ties reduce the time spent on monitoring and bargaining over agreements and thereby lower the TC. Standifird and Marshall (2000) provided evidences that the strong ties provide value by reducing TC related to search, monitoring and contracting costs. Further, the results of this study support to strengthen the

existing literature providing the empirical evidence relating to SEs in Sri Lanka. Zaheer et al. (1998) empirically found that the inter-personal trust associated negatively with the negotiation costs. Dyer and Chu (2002) empirically justified that the trust correlates inversely with the monitoring and the enforcement costs. Dyer and Sing (1998) explained that under the conditions of high trust among exchange partners will spend less time on ex-ante contracting because they are confident that the payoffs will be fairly divided. Kaufmann and Dant (1992) empirically proved that the relational norms (role of integrity and reciprocity) help reduce TC. Kaufmann and Stern (1988) found that solidarity helps to reduce the intensity of disputes between the channel partners and when the disputes are less, the enforcement costs become low. Boyle et al., (1992) found that there is a less tendency for conflicts when the solidarity exists and thereby the enforcement costs become low. Chiles and McMackin (1996) explained that a high level of trust between the two parties decreases the contract costs and the control costs. Noordewier et al. (1990) found that the norm of solidarity has negative impact on the mitigation of TC. Meanwhile, the results of this study contribute to enhance the knowledge providing empirical evidence that the RSC has a powerful effect on mitigating firm's TC of SEs.

In literature, scholars have not paid adequate attention to study the relationship between the CSC and the governance of economic activities. A few studies (Chiu, et al., 2006; Miller et al., 2007; Tsai and Ghoshal, 1998) discusses the different issues related to organizational behavior. Therefore, the results of this section are isolated due to the dearth of sufficient empirical studies in the literature. However, as expected, the CSC has a significant negative effect on firm's TC of SEs ($\beta = -0.188$ or 18.8 percent and $t\text{-value}=3.52$) confirming the hypothetical relationships of H3. The results show that a common understanding between owners of SEs and the members of the network to share the same vision has a negative effect on TC of SEs since the mutual understand among network members leads to decrease TC due to the share of knowledge, resources and opportunities with minimum costs (Chiu, et al., 2006).

7. Conclusion

The study attempted to study the effect of social capital on the mitigation of TC of SEs. To achieve this aim, a conceptual model has been developed synthesizing the SC theory with the TCE and working hypotheses have been developed to test how each dimension of SC affects the firm's TC of SE in Sri Lanka. The results reveal that all the dimension of SC have significant negative impact on mitigating TC of SEs. SSC has the highest impact on mitigating TC than the other dimension of SC. Thus, the study makes important contributions to the literature by providing empirical evidences related to TC and SC of SEs in Sri Lanka. In this way, the study extends the knowledge about the relative efficacy of theories (TC and SC) into a different economic and social context. Higher mortality rate of SEs is the critical issue faced by SE. The study extends the application of the SCT and TCE to understand an alternative solution for this critical issue. The empirical result provide sufficient evidences to understand the strength of social capital to govern economic activities rather than the market mechanism, conforming the complementary effect of SC in governing economic activities. Thus, the study provides new insight revealing that business firm can consume the benefits of

the economies of scale suggested by the theory of production, by enlarging the SC as well because TC of SEs become decrease with the increase of SC.

Policy Implications

The study recommends policymakers to develop approaches to provide necessary supports to develop social relationships with different stakeholders that helps to mitigate TC. SEs have developed close relationship with a few reliable buyers and suppliers (most of them are in surrounding areas or in the same region) for regular transactions expecting to minimize TC. Therefore, the most SEs limit themselves only the survival stage in their business. They do not have enough capacity to establish direct relationship with large scale and foreign exchange partners (producers/suppliers/buyers). Therefore, the study strongly recommends that policy makers should develop mechanism to create better relationship between SEs and new exchange partners (organizing network formation activities such as seminars, trade fairs etc., providing information about reliable or guaranteed exchange partners through a webpage of responsible agency) in order to increase the owners' ability to establish more reliable connections with different exchange partners in quick and easy ways.

Research Direction

Measuring SC dimensions and transaction costs are not easy because both variables are broad and multi-dimensional concepts. For most concepts, there is no standard methodology to measure empirically (i.e. transaction costs, SC). Developing systematic methodology to measure TC and SC in the context of developing counties need to be addressed in future researchers. Scholars have argued that building SC is an investment, but it takes time, money and effort. The costs of maintenance of SC vary according to various factors such as the nature of relationships, network size and density. Therefore, it is interesting to measure the opportunity costs of building and maintenance of SC and to evaluate its benefits. Since it is beyond the scope of this thesis, the study leaves this question for future researchers.

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