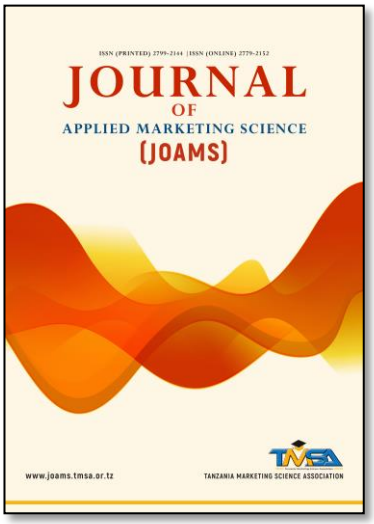

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Assessing Drivers Of Firm Pro-Active Safeguard Mechanisms

Emmanuel Chao

Abstract: Proactive safeguard mechanism is essential especially when specific assets are involved in the inter-firm relationships. The paper intends to investigate key drivers behind the proactive safeguard mechanism.

The empirical context for the study is Tanzanian producer and distributor firms, representing suppliers and buyers respectively. The sampling frame was based on Tanzania revenue authority records for registered business of 2008. Data were collected from distributor (buyer) firms. A random sample of n=150 buyers were contacted by phone call, of which n=130 were interested to participate.

Findings suggest that Buyer specific assets, and volume uncertainty and relational confidence have a positive impact on pro-active safeguard mechanism. The interaction between buyer and supplier specific assets as well as that of between buyer and technological uncertainty were found to have a negative impact on proactive safeguard mechanism. Further, technological uncertainty was not found to have any significant impact on proactive safeguard mechanism.

Key words: proactive safeguard mechanism, transaction cost analysis, institutional theory

1. Introduction

Research on how governance processes are carried out between firms, are receiving considerable attention in marketing and strategy literature. In buyer-seller relationships, the parties may use formal governance mechanism such as a contract, which specifies the responsibilities and roles which parties have to play in the relationship (Vandaele *et al*, 2007). Both contracts and contingency adaptability form large part of what we define as proactive safeguard mechamism. Proactive safeguard

mechanism represents the extent to which unanticipated and anticipated circumstances are accounted for and relevant guidelines for handling these unforeseen circumstances and foreseen are included in the contract (Luo, 2002; Schepker et al., 2013). Transaction cost analysis (TCA) suggests that the design of a contract in a buyer-seller relationship will be reflected by the key characteristics (mainly, asset specificity and uncertainty) of the transaction. This paper examines the impact of TCA characteristics on proactive safeguard mechanisms, focusing on the buyer side.

2. Research Hypotheses

Asset specificity. Safeguarding specific investment s a major concern especially if it is made by one side. One such mechanism is to establish an proactive safeguard plan to deal with unforeseen contingencies (Poppo and Zenger, 2002; Williamson, 2003). We expect:

H1a: Buyer asset specificity has a positive effect on proactive safeguard mechanism

Environmental uncertainty. Technological and volume uncertainty are the common ways of categorizing environmental uncertainty (Geyskens et al., 2006). Such uncertainties create an adaptation problem (Williamson, 1985; Rindfleisch and Heide, 1997), which requires higher contingency coverage in the contract (Luo, 2005). Accordingly, we expect:

H2a: Technological uncertainty has a positive effect on proactive safeguard mechanism

H2b: Volume uncertainty has a positive effect on proactive safeguard mechanism

Relational confidence. Most empirical TCA studies conceptualize behavioral uncertainty as an issue of performance ambiguity, that is, an *ex post* phenomenon. For our purpose the concept of relational confidence (Das and Teng, 1996; Nooteboom et al., 1997) is more appropriate to use since it includes *ex ante* considerations.

Relational confidence can be viewed as ”the feeling of assurance that firms will work toward the mutual interest of the partners, and that they will co-operate in a manner specified in agreements (Das and Teng, 1996). Delineating procedures for handling various contingencies imply efforts and costs, and cannot preclude opportunism. If relational confidence is perceived to be high, this could lead to a sense of disclosure of information and better cooperation among partners and it will in turn increase proactive-safeguard mechanism.
Accordingly, we expect:

H3: Relational confidence has a positive effect on proactive safeguard mechanism

Buyer and supplier asset specificity: When both buyer and supplier make specific investments, which Williamson (1985) denotes as “mutual hostage taking”, this acts as a credible sign of each party’s commitment and prevents both parties to behave opportunistically. The need for elaborating contingencies and negotiating procedures and rules to be followed may be reduced, because both parties expect willingness to solve the adaptation problems when they occur. Accordingly, we expect bilateral specific investments to reduce proactive safeguard coverage in the contract, compared to unilateral specific investments. Bilateral specific investments may lead to expectations of relationship continuity (Heide and John, 1990) and commitment (Jap and Ganesan, 2000). Demonstration of expected continuity and commitment to the relationship can represent more important safeguarding mechanisms in countries with less developed formal legal and regulatory framework. Thus:

H4: The effect of specific assets on proactive safeguard mechanisms will decrease with increased supplier asset specificity.

Asset specificity and technological uncertainty: High level of technological uncertainty may undermine the adjustment process needed when specialized assets are present, due to fear of obsolescence of the investments. Empirical studies indicate a diminished ability of partners to resolve contractual issues when specialized assets and uncertainty are present (Poppo and Zenger, 2002). Accordingly:

> *H5: The effect of asset specificity on proactive safeguard mechanisms will decrease with technological uncertainty*.

Asset specificity and volume uncertainty: When extensive specific investments are coupled with high volume uncertainty, this will increase the need for coordination and adaptation between the exchange partners. The more integrated a value chain is, the higher will the costs of communication and renegotiation be, which in turn increases the need for including proactive safeguard mechanism in the contract.

> *H6: The effect of asset specificity on proactive-safeguard mechanism will increase with volume uncertainty*

Controls. Large firms may follow different procedures in outlining contracts; therefore we included *firm size* as a control. Great power imbalance between the exchange partners may impact the contractual relationship (Casciaro and Piskorsky, 2005), we therefore included *buyer dependence* as a control. The *foreignness of supply firm* (FC) may also have an impact on degree of proactive safeguard mechanism. This variable was measured by a dummy taking a value of 1 when there is a foreign supply partner and 0 for domestic supply partner. Finally, the *length of relationship* may have an impact on the adaption process between the partners (Luo, 2002).

3. Research Method

Study context

The empirical context for our study is Tanzanian producer and distributor firms, representing suppliers and buyers respectively. The sampling frame was based on Tanzania revenue authority records for registered business of 2008. Data were collected from distributor (buyer) firms. A random sample of n=150 buyers were contacted by phone call, of which n=130 were interested to participate.

The questionnaires were delivered personally to the distributors, which gave the opportunity to explain the questions, to ascertain that the respondents were knowledgeable about the phenomena under study, and to tell them that they should choose a supplier of which they had a frequent relationship with (cf. Rokkan et al., 2003). The final sample consists of 97 buyers.

3.1 Sample

We used direct personal contact based on our belief of high preference for physical communication in this country. Firms were first contacted by phones and follow-ups were made in person to collect the questionnaires, in order to ensure a higher response rate. The number of companies targeted was 750 (from companies listed in the Tanzania Revenue Authority, 2011). The final number of completed questionnaires received was 240 making a response rate of around 31%. To test the problem of response bias, we used Armstrong & Overton's (1977) procedure, where ANOVA test for subsamples of early

and late responses in both countries had no significant difference ($p>0.05$).

3.2 *Measurements*

Questionnaire items were measured using a seven-point Likert scale, except the controls *firm size* which was measured by number of employees, and *length of relationship* measured by number of years (see Appendix). Most of the measures used were adapted from previous studies with some minor adjustments to fit the context. Our measurement of relational confidence is based on Gellings and Wüllenwebe (2007). This concept was measured by five items reflecting the level of confidence that the buyer had with the supplier. A list of the multi-item measures employed in this study is presented in the appendix, which also provides information on loadings, Cronbach's alpha, composite reliability and average variance extracted for both countries. To ensure reliability, an exploratory followed by a confirmatory factor analysis were conducted. For all reflective constructs, Cronbach's alpha satisfied the minimum 0.6. Composite reliability exceeded the threshold value of .6. All factor loadings and construct reliability fulfilled the rule of thumb which requires construct validity and reliability to be greater than 0.50 and 0.70 respectively, indicating convergent validity. We also applied Fornell and Larcker's (1991) rigorous criterion to test for discriminant validity. The average variance extracted were higher than the correlations among the constructs, which indicate discriminant validity.

4. Results

Three regression models were elaborated for each of the two countries. Model 1 consists of the main effects, Model 2 adds the interaction effect, while Model 3 includes the control variables as well. The incremental R^2Adj of M2-M1 (ΔR^2Adj=.01, $p<0.001$) was significant, but not by adding controls. VIF values were in the range of 1.37-2.4, suggesting no severe multicollinearity problems.

H1a suggested that buyer asset specificity has a positive effect on proactive-safeguard mechanism. This hypothesis was supported ($\beta=0.14$, $t=2.23$, $p<0.05$). H1b suggested that supplier asset specificity has a positive effect on contingency adaptability in both emerging markets. This hypothesis was supported ($\beta=0.05$, $t=1.52$, $p<0.10$).

INDEPENDENT VARIABLES	MODEL1 B	T	MODEL2 β	T	MODEL3 β	t
Main effects						
BUASP (H1a)	0.21	3.02***	0.18	2.62***	0.17	2.37***
SUASP (H1b)	0.89	0.374	0.11	1.80**	0.10	1.51*
TECHUNC (H2a)	-0.01	-0.20	0.05	0.74	0.05	0.61
VOLUNC (H2b)	0.14	1.90**	0.08	1.05	0.14	1.84**
RELCONF (H3)	0.21	2.73***	0.20	2.64***	0.18	2.38***
Interactive effects						
BUASPXSUASP (H4)			-0.32	-5.47***	-0.31	-5.21***
BUASPXTECHUNC (H5)			-0.05	-0.87	-0.06	-1.05
BUASPXVOLUNC (H6)			0.02	0.28	0.04	-0.68
Controls						
SIZE					-0.06	-1.00
LENGH					-0.05	-0.82
BUDEP					0.06	0.92
FC					0.16	2.56***
R^2	.022		0.32		0.35	
Adj.R^2	0.21		0.29		0.31	
F-value	13.5***		13.4***		9.97***	
Incremental R^2	-		0.08***		0.02**	
F1	-		9.00***		0.92	
Maximum VIF	2.0		2.4		2.4	

Note: One.tail t-test: * p<0.10 ** p<0.05 *** p<0.01

In H2a we proposed that technological uncertainty has a positive effect on proactive-safeguard mechanism. This hypothesis was also supported (β=0.03, t=.81, p>.05). H2b suggested that volume uncertainty has a positive effect on proactive-safeguard mechanism. This hypothesis was supported (β=0.07, t=1.64, p<. 05).

A positive relationship between relational confidence and proactive-safeguard mechanism was anticipated in H3. This hypothesis was but supported.

H4a suggested that the effect of buyer specific assets on proactive-safeguard mechanism will decrease with supplier asset specificity. This hypothesis was supported (β= -.19, t=-5.13, p<0.001).

In H5 we proposed that the effect of asset specificity on proactive safeguard-mechanism will decrease with technological uncertainty. This hypothesis was supported (β=-.05, t=-1.09, p>0.10).

H6 suggested that the effect of asset specificity on proactive safeguard-mechanism will decrease with volume uncertainty. This hypothesis was not supported (β=.02, t=-.69, p>0.05).

5. Discussion

The findings indicated that buyer and supplier specific assets, technological uncertainty, volume uncertainty and relational confidence had positive impact on proactive safeguard mechanism. The findings are consistency with the transaction theory prepositions. Due to a hostage situation, the partner who has invested specific assets in relationship is by default forced to respond to adjustment due to risk of assets loss in case of failure to do so. The relational confidence could play a substitution role, but this study confirms that the relational confidence strengthens the proactive safeguard mechanism

The study also examines the interaction effects of buyer specific assets and supplier assets. The findings suggested the bilateral specific assets investments in a relationship will decrease the degree of proactive safeguard mechanism, meaning that both sides will loose if they will not uphold the relationship. The same results were found when buyer specific assets operate in a situation with high technological uncertainty. Technological variations will increase the challenges of specifying the terms ex-ante, thus the impact of asset specificity on proactive safeguard mechanism will decrease with technological uncertainty. The interaction between specific assets and volume uncertainty however did not show a significant impact on proactive safeguard mechanism. This can partly be explained by the fact that the variations on volume does is by defaults expected in any relation and thus it does not pose any significant threat on relationship continuity. Rather than preparing to adjust with changes in volume, most of firms establishes a system in place that deal with such contingencies.

There were other control variables, which were used in the analysis. Only foreigness of the supplier (FC) was found to have as significant impact on proactive safeguard mechanism. The reason can be explained by the cultural and institutional differences, which may increase the degree of the safeguard. Other control variables (size, length, buyer dependence) were not significant.

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APPENDIX

Constructs	Items	Sources	Loadings
ADAPTABILITY (ADAPT)	Arbitration procedures are well specified in our contract	Luo (2002), Aubert al. (2006) Hendrikse & Windsperger (2010)	.791
α=0.67, CR=0.79, AVE=0.55,	Renegotiation periods were planned before the relationship began		.705
	The contract specifies major principles or guidelines for handling unanticipated contingencies as they arise		.830
BUYER ASSET SPECIFICITY	We have made significant investments in equipment dedicated to our relationship with this supplier	Stumpf & Heide (1996)	.793
α= 0.68, CR=0.82, CR=0.90	We have made adjustments in order to deal with this supplier		.787
AVE=0.61,	Training our people to deal with this supplier has involved substantial commitments of time and money		.764
SUPPLIER ASSET SPECIFICITY	Supplier production system has been tailored to produce for our firm		.944
α=0.88, CR=0.94,	Supplier has customized the product we purchase from him to meet our specific needs.		.944
AVE=0.89,			
TECHNOLOGICAL UNCERTAINTY (TECHUNC)	The technology used in this product changes fast	Buvik & John (2000), Anderson (1985)	.802
α= .82, CR=0.91,	The technology used in manufacturing this product is complex		.902
AVE=0.71,	There is much R&D involved in the development of this product		.868
VOLUME UNCERTAINTY (VOLUNC)	Demand for this product varies continually	Buvik & John (2000), Anderson (1985)	.866
	The demand conditions for our supplier's product(s) are irregular		.814
α= .60, α=.82, CR=0.79, AVE=0.66,			
RELATIONAL RISK	We are confident that the supplier will deliver according to the agreements	Gellings & Wullenweber (2007)	.729
α=0.80, CR=0.86, AVE=0.55,	We are confident that the relationship will not break down		.766
	We are confident that we will not lose our assets in this relationship		.706
	We are confident that the supplier will adapt if circumstances change		.732
	We have confidence that the supplier will meet the standards of our customers		.785
BUYER DEPENDENCE	It is relatively easy for this supplier to find another buyer for his products		.867
α=0.75, CR=0.75, AVE=0.56,	Finding another buyer would not affect the price this supplier charge		.904
	If the relationship is terminated, it will not hurt this supplier		.680