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FORMAL CONTRACTUAL AGREEMENTS: AN EXPLORATORY ASSESSMENT OF TRANSACTION COST THEORY FROM EMERGING MARKETS PERSPECTIVE

Emmanuel Chao (*Corresponding author***)**
Mzumbe University, School of Business,
Department of Marketing and Entrepreneurship,
P. O. Box 6, Mzumbe – Morogoro, Tanzania
ejchao@mzumbe.ac.tz

Mushumbusi Paul Kato
Mzumbe University, School of Business,
Department of Marketing and Entrepreneurship,
P. O. Box 6, Mzumbe – Morogoro, Tanzania
mpkato@mzumbe.ac.tz

ABSTRACT

This study aimed at exploring how formal contractual agreements are predicted by Transaction Cost Analysis (TCA) theory using firms from emerging markets. The setting of this study was Tanzania. Dependent variable was formal contractual agreement, while performance ambiguity and buyer asset specificity were used as key predictor variables. The study was conducted through surveying, which included small, large and medium enterprises. N = 150 firms involved and all of them were engaging in to business-business relations (buyer-seller relations). The response rate was about 65%. Data analysis used ordinary least square regression analysis. This study found out that asset specificity still had strong determination on formal contractual agreement. Performance ambiguity itself found not to have significant positive effect on formal contractual agreement but its effect was dependent on asset specificity i.e. the interaction between asset specificity and performance ambiguity influence positively on formal contractual agreement. These findings do not contradict with other empirical studies from developed economies. This suggests the possibility for extending TCA theoretical predictions to firms in emerging markets, especially at this time when there is growing need for outsourcing in these markets. Again this has to take into account other variables like nature of firm, institutional and cultural differences. Such variables have not been used in this exploratory study.

Keywords: *Formal contractual agreement, buyer asset specificity, and performance ambiguity and environmental uncertainty*

INTRODUCTION

Large part of TCA literature emerged from developed economies and most empirical studies have been done in large manufacturing firms (Sriram, Krapfel and Spekman, 1992; Heide and John, 1992; Levy, 1985, Parkhe, 1993). Emerging economies have little literature with respect to performance of TCA especially within business to business relations. We should expect to find some differences when take this framework because of differences in terms of nature of firms as well as institutional differences. For example Sjøquist (1996) noted that 'institutions shape the way firms respond'. The argument is supported with findings from Luis et al (2009) study in China where they found a negative relationship between opportunism and partnership performance to be significant contrary to what most of developed economy literatures suggested (a positive relationship). This study has the same motives in trying to see the extent to which TCA predictions hold within firms in emerging markets.

A basic premise of TCA is that the risk of opportunism creates a need for formalized governance mechanisms such as formal contracts or direct control (Rindfleisch and Heide, 1997). Literature suggests the existence of asset specificity will motivate a need toward contractual agreements (Poppo and Zenger, 2002; Lui et al, 2009). Specific assets involve assets that cannot be redeployed without sacrifice of productive value (Williamson, 1985). Uncertainty can also influence the formation of contractual agreements. Anderson (1985) when he studied sales people as outside agents, coined this scenario as follows; 'uncertainty exists for the manager of a' sales force when performance is ambiguous. Rindfleisch & Heide (1997:45) noted that the antecedents of the performance evaluation problem are 'bounded rationality and behavioral uncertainty'. This study is prelimenarily testing the predictions from the current literature on TCA starting with asset specificity and performance ambiguity as predictors of formal contractual agreement using a new setting. The new setting here is through supplier-buyer relationship in an emerging economy (Tanzania) involving mostly small and medium sized firms.

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THEORETICAL BACKGROUND AND HYPOTHESIS

Formal contractual agreements

Macneil (1978) has viewed formal contracts as 'legally binding agreements that explicitly stipulate promises or obligations, and the course of actions to be taken in the event of unforeseeable situations'. The emphasis behind formal contracting is to resolve or mitigate the moral hazard challenge and ensuring the incentive patterns are consistent and secured.For practical sense, a formal contract is mostly customized to a specific transaction, and provides a detaileld description on the responsibilities of partners. This is done written downed, signed by parties and on that respect enforceable by law. Sometimes frequency or repeated interactions between partners could act as an alternative contract (Ryall and Sampson, 2009). Buvik and Haugland (2005: 43); however noted that most inter-firm relationships between two independent actors are based on contracts, and the use of a hierarchical structure can only be used to a modest extent, since there is no common ownership or cross equity holdings.

Complexity dimension as well as specific asset may increase the use of formal contracts, (Joskow, 1988). Performance ambiguity has been observed to be related possitively to opportunism, (Enderson 1988). This suggests that performance ambiguity could have the positive effect on formal contractual agreement. This study will observe maily the influence of asset specificity and performance ambiguity on formal contractual agreement, but further environmental uncertainty will be introduced as a control.

Effects of asset specificity

Asset specificity can be defined as the "durable investments that are undertaken in support of particular transactions (Williamson 1985:5). Such specific assets may involve both "physical and human" assets that are dedicated to a particular relationship and cannot be redeployed easily, (Heide 1994:73). TCA predicts that exchange relationships with high asset specificity tend to use more formal contracts for governance when the transaction cannot be internalized, (Poppo and Zenger, 2002; Lui et al, 2009). Buyer specific investment in the relationship with supplier will likely be associated with safeguarding through establishment of formal contractual agreement because of anticipation of opportunism problem. Accordingly, it is suggested that:

> *H_1: Commitment of specific assets by the buyer will have a positive impact on formal contractual agreement.*

Effects of Performance ambiguity

Performance ambiguity has been viewed in most part of TCA literature as problems associated with evaluation of supplier or monitoring difficulties. Williamson, (1979), argued behavioral uncertainty to be associated closely with monitoring performance. Transaction cost analysis claims that "high levels of behavioral uncertainty increase the costs of evaluating the performance of exchange partner", (Rindfleisch and Heide, 1997:46). Bounded relationality also has been one of the key assumptions related to performance ambiguity.

With respect to this assumption Rindfleisch and Heide (1997:45) noted, "the antecedents of the performance evaluation problem are bounded rationality and behavioral uncertainty". Performance ambiguity has also been linked with other dimensions such as opportunism and asset specificity together with environmental uncertainty. In most relations that involve behavioral uncertainty, the concept of performance ambiguity has been linked hand in hand. Based on Enderson (1988) findings that performance ambiguity has been observed to related possitively to opportunism, and the fact that opportunism has been a key motive toward contracting (Stump and Heide, 1996; Williamson, 1975; Demsetz, 1991), we also propose the interaction effect between asset specificity and performance ambiguity on formal contractual agreement.

> *H2: There is a positive impact of performance ambiguity on formal contractual agreement*.
> *H3: There is a stronger positive interaction effect of performance ambiguity and asset specificity on formal contractual agreement.*

Control Variable

Environmental uncertainty has also been observed in connection to contractual agreement (Williamson, 1985; Manolis et al, 1997; Leiblein and Miller 2003; Ivens, 2005). Findings from Poppo and Zenger (2002), Geyskens et al (2006) have shown technological uncertainty to be negatively related to formal contractual agreements. It is important to include this variable so as to ensure the effects observed from the main variables are not missleading. This study predicts a strong negative impact of environmental on formal contractual agreement.

RESEARCH METHODOLOGY

Research Background

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

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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. The final sample consists of 97 buyers, of which 87 were early respondents while 10 were late respondents. The response rate was about 65%.

Sample Characteristics

25.8% of firms involved from the study were established 1990 - 2000 period, 73.2% were from established after year 2000, and the rest were established before 1990. With respect to business turnover 30.9% of firms had an annual turnover of up to 5 million Tanzanian Shillings, 55.7% with annual turnover of between 5 to 200 million Tanzanian shillings (exclusive), 12.4 had annual turnover of between 200 to 800 million Tanzanian shillings (exclusive), and the rest with above 800 million Tanzanian shillings

Measurements

Formal contractual agreements (FCA)

Buvik and Reve (2002), used five items (α =0.73) in measuring the formal contract with seven-likert scale of completely disagree/completely agree. This study after carried several adjustment using factor loading analysis due to cross relation of items between components, the final result used three items in measuring this concept. All three items by using factor loading analysis loaded in a single component Reliability analysis indicated a measure of α = 81.5% which is quite above the cutting point. This was well confirmed by Kaiser-Meyer-Olkin (KMO) and Bartlett's test which measured at .648 and λ^2= 117.283 (significant at $p < .001$) respectively, implying a very high correlation among the measure items.

Buyer asset specificity (BUASP)

Stump and Heide (1996) used five item, seven-point scale, anchored by "strongly disagree" and" strongly agree" statements in measuring buyer's specific investment. On the other hand Anderson (1985) used 7 items but we need to note that this was within the context of sales people and their employer. When the relationship moves from one setting to the other some elements we use to measure the specificity might vary but the context remains the same. Rokklan et al (2003) on their study on specific investments in marketing relations used 7-points likert scale of "completely inaccurate description/completely accurate description". In this study buyer asset specificity was measured using four items, which all loaded into one component using principal component factor analysis method. The reliability of this component measured α = 93.35% which is very significant. KMO was 0.796 also indicates a satisfactory correlation level of the items which justified for factor analysis. Again Bartlett's test indicated λ^2= 501.174 which was significant at $p < .001$, rejecting the null hypothesis that the correlation matrix was identity matrix. The buyer asset specificity was abbreviated by term BUASP in the analysis.

Performance ambiguity (PA)

In measuring performance ambiguity Stump and Heide (1996) used four-item, seven-point scale, anchored by "strongly disagree/ strongly agree", where Gosh and John (2005) used 6 items. Anderson (1985) on the other hand included items that measure behavioral uncertainty and environmental uncertainty. This study adopted these measures but used four items in measuring this concept and all loaded into one component with reliability coefficient α = 70%. On the other side KMO and Bartlett's test measured at .771 and λ^2 = 65.647 (significant at $p < .001$) respectively implying a very significant correlation of these iterms in measuring the concept. This concept was abbreviated by PA in the analysis.

Environmental Uncertainty

This construct was measured using five items consistent with Noordiwier et al (1990). After using factor analysis (Varimax rotation), three items loaded into one factor. Reliability measures indicated α = 82.78%, KMO and Bartltett's test was at 0.859 and λ^2 = 417.069 (significant at $p < .001$). The construct was abbriviated as ENVU in the analysis. More details of this measure are found in appendix 1.

See Appendix 1 for detail summary of the items used for each construct

RESULTS

In order to test the hypotheses (H1-H3), Ordinary Least Squares (OLS) regression model was estimated. The regression results are shown in Table 1.

The overall fit of the both models were quite good; for model 1 (R^2_{Adj} = .115 F (3, 94) = 5.110; $p < .01$) and for model 2 (R^2_{Adj} = .117 F (4, 93) = 4.136; $p < .01$)

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Following equation has been used for prediction of Formal contractual agreement
$FCA= b_0 + b_1BUASP+b_2PA+b_3BUASPXPA+b_4ENVU+\varepsilon$

Where,

FCA	=	Formal contractual agreement
BUASP	=	Buyer asset specificity
PA	=	Performance ambiguity
BUASPXPA	=	Interaction of buyer asset specificity and performance ambiguity
ENVU	=	Environmental uncertainty
b0	=	Interception
ε	=	error term

Table 1: Regression Analysis. Dependent Variable: Formal Contractual Agreement

	MODEL 1		MODEL2	
Independent variables	b	t	b	t
CONST	4.541	23.709**	5.594	5.675**
BUASP	.750	2.455**	.762	2.496**
PA	.233	.873	.272	1.008
BUASPXPA	1.006	2.388**	.903	2.095*
ENVU	-	-	-.195	-1.089
	R^2 Adj = .115 F (3, 94) = 5.110 P < .01		R^2 Adj = .117 F (4, 93) = 4.136 P < .01	

*Indicates P < 0.05 (one-tailed) **Indicates p < 0.01 (2-tailed)

Hypothesis 1 suggested a positive relationship between buyer specific assets and formal contractual agreement. Model 1 and 2 from Table 1 show that buyer specific assets has a positive impact even when environmental uncertainty was introduced as a control in model 2 [(t=2.455; p < 0.01) for model 1 and (t=2.496; p < 0.01) for model 2], thus supporting the hypothesis. Hypothesis 2 predicted a positive relationship between performance ambiguity and formal contractual agreement. This hypothesis was not supported though the direction was consistent with prediction. Hypothesis 3 on positive interaction effect of buyer asset specificity and performance ambiguity on formal contractual agreement was supported in both models.

From table 1 above Model 1 (t=2.388; p < 0.01) and Model 2 (t=2.095; p < 0.05) were all significant implying a support for this hypothesis. The table 2 below provides correlation matrix indicates the formal contractual agreement to be significantly and positively correlated with buyer asset specificity and interaction between buyer asset specificity and performance ambiguity. Both correlations do not indicate a serious problem of multicollinearity. This confirms the findings from model 1 and 2 in table 2 which indicates performance ambiguity influence over contractual agreement is contingent upon asset specificity.

Table 2: Correlation Matrix

	1	2	3	4	5
FCA	1	.293**	-.081	.275**	-.172
BUASP		1	-.042	.183	.019
PA			1	-.602**	.311**
BUASPXPA				1	-.350**
ENVU					1
Mean	4.247	.3895	.000	.0150	5.3780
SD	1.567	.50345	.7111	.4589	.90476

*Indicates P < 0.05 (one-tailed) **Indicates p < 0.01 (2-tailed)

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DISCUSSION

The results indicate that H1 and H3 were supported, while H2 was not supported. Again the significant findings remained the same after introducing a control (environmental uncertainty) in model 2. Important indication from this is that performance ambiguity alone does not influence contractual agreement but its significance depends on the interaction with asset specificity. The finding of strong role of asset specificity in determining contractual agreement is consistent with Buvik and Reve (2002); Poppo and Zenger (2002); Lui et al (2009). One way of interpreting this is to state that there are no strong contradictive findings in this exploratory study that suggest theoretical differences between transaction cost response for firms in developed versus emerging economies. Most of firms used were small to medium on which by nature are different from large manufacturing firm in western where most of TCA literature took place. Assumption of inadequate institutions and high uncertainty in transactions especially ambiguity in evaluating supplier performance in emerging markets could trigger the higher need for contractual agreement, was not supported.

This study was done in emerging economy where the institutional framework, business culture and practices may differ significantly from western countries. The major findings from the Tanzanian business-to business relationships do not however suggest significance difference with previous studies on TCA to formal contractual agreements in developed economies. This has implications towards transforming the findings from current literature but other variables (nature of firms and institutions) have to be taken into account. Although this study has not detected serious theoretical effects of these variables, some studies suggest differences could occur (Sjøquist, 1996; Luis et al, 2009; Standifird and Mashall, 2000).

CONCLUSION AND IMPLICATIONS

These prelimenary exploratory findings suggest more work in examining how firms and institutional difference shape transaction cost in emerging markets. This study has indicated the consistency (between developed and emerging markets) with respect to TCA standing literature but this is too soon to conclude that there are no serious differences. Performance ambiguity role in shaping contractual agreement is still dependent on asset specificity. The study pave a way for managers from western firms who are looking for outsourcing possibilities in emerging economies to extend the current TCA assumptions in those markets. This again has to take into account other factors (cultural, institutional and nature of firms). This study is limited partly by being an exploratory, but also it has not included other variables like firm size effects and institutional variables. This should be considered as door for further studies on this area.

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APPENDIX I

CONSTRUCT	**ITEMS (Measured in 7-points likert Scale)**
Formal Contractual Agreements (FCA) $\lambda 2 = 117.283$ $p < .01$ $\alpha = 81.5\%$ KMO = .648	Firm agreements stipulate all aspects concerning exchange of information about price and market conditions between our firms; Written contracts stipulate all aspects regarding the tasks and influence of two parties in the quality control of the product we purchase from this supplier; Written contracts stipulate all aspect regarding the order selection of sub-suppliers for the product we order from this supplier. *Adopted from Buvik & Reve (2002)*
Buyer Asset specificity (BUASP) $\lambda^2 = 501.174$ $p < .01$ $\alpha = 93.35\%$ KMO = .796,	We have made significant investment in equipment dedicated to our relationship with this supplier; We have made extensive internal adjustments in order to deal effectively with this supplier; Training our people to deal with this supplier has involved substantial commitments of time and money: Our logistics system have been tailored to meet the requirements of dealing with this supplier *Adopted from Anderson (1985) and Stump and Heide (1996)*
Environmental Uncertainty (ENU) $\lambda 2 = 417.069$ $p < .01$ $\alpha = 82.78\%$ KMO = .859	Demand for this product varies continually; Our most important competitors are regularly carrying out product adjustment; Product we are purchasing from this supplier have high innovation rate and varies continually. Sourced from; Rindfleisch & Heide (1997:42) Buvik and John (2000) Noordiwier et al (1990) and Anderson (1985)
Performance ambiguity (PA) (4 Items) $\lambda 2 = 65.647$ $p < .01$ $\alpha = 70\%$ KMO = .711	1 It is inadequate to evaluate this supplier base on item(s) price. 2. Evaluating the supplier's performance is highly complex process 3. There would be significant costs associated with one-site monitoring of this supplier. 4. Precise standards to assess this supplier's performance are not readily available. *Adopted from Gosh & John (2005)*