Master thesis in Business Administration

Faculty of Economics and Social Sciences

University of Agder, 2010

BUYER PERCEIVED OPPORUNISM, VERTICAL COORDINATION AND FORMAL CONTRACTUAL AGREEMENTS: ARE TCA PREDICTIONS STILL RELEVANT?

Survey of business to business relations for small, medium and large enterprises in Tanzania.

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June, 2010

Acknowledgements:

I would first like to thank Almighty God for giving me strength and energy throughout the entire time I was doing this work,

Secondly I do want to express my sincere appreciation to my supervisior Prof. Otto Andersen, for his tireless efforts in advising me from the beginning of this task till the end. I specifically appreciate him also for his efforts on connecting me to Prof. Arnt Buvik in updating this work.

I will also express my sincere thanks to Prof. Arnt Buvik for his efforts and inputs to this work together with his tireless recommendations.

Thirdly, I would like to give thanks to the Norwegian Government Loan Fund (Statens Laanekasse for Utdanning) for financial support during my study period as well as in data collection.

Lastly, I do want to appreciate my Wife Upendo, and my Son Brian for providing me with facilitative environment for accomplishing this work.

ABBREVIATIONS

ERP	Economic Recovery program
GDP	Gross Domestic Product
IMF	International Monetary Fund
RCT	Relational Contracting Theory
RDT	Relational Dependency Theory
SMEs	Small and Medium Enterprises
TCA	Transaction Cost analysis
TCE	Transaction Cost Economics
TRA	Tanzania Revenue Authority
UN	United Nations
URT	United Republic of Tanzania.

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Abstract

This study was based on survey that involved small, medium as well as large enterprises which were engaging in buyer-supplier business to business relations in Tanzania. The aim was to use some key dimensions from TCA as well as RCT, and RDT, and test some existing relations from developed economies literature and compare it with the outcomes in developing economies and Tanzania in particular. Key concepts which were analyzed in this study are buyer perceived opportunism, vertical coordination and formal contractual agreements.

Data collection mainly used primary sources and very small part used secondary sources. Primary data collection used structured and closed questionnaires, which were distributed to buying firms as the respondents.

Quantitative data analysis was a major form of analysis used. It involved descriptive statistics such as percentage, means and standard deviation. In evaluating the essence of variables used for the analysis, the study used factor analysis together with KMO and Bartlett's test. On the other hand the analysis for testing the predicted relations involved the use of correlation matrix as well as bivariate and multivariate data analysis methods.

In this study buyer asset specificity was found to increase level of buyer perceived as was predicted, while the moderating effect of behavioral uncertainty and performance ambiguity were as well significant and consistent with predictions. On the other hand contractual flexibility was found to have a significant positive impact on vertical coordination in accordance to hypothesis. The negative impact of environmental uncertainty and the positive impact of buyer asset specificity on formal contractual agreement were found to be significant as predicted but a huge negative effect of buyer dependence on this relationship was also supported and it turns out that this variable is a strong predictor of formal contractual agreement far more than buyer asset specificity. Most of the tested relations did not reveal significant differences between developed economies TCA empirical findings and those from developing economies, except for insignificant impact of environmental uncertainty on vertical coordination, suggesting the relevance of TCA in predicting these concept in developing economies as well and Tanzania in particular.

CHAPTER 1

1.0 Background of the study

Transaction cost dimensions have been observed to have some external or firm specific influential factors in determining relations. Biggs & Shah (2006) noted that limited information about business and consumers, poor communications, and the fact that many small business firms do not have fixed business sites, may impact negatively their relations with supplier especially in credit offerings. The author noted also that at early stages of industrialization because of few firms, and inadequate market information, together with high transport costs, persuades firms to make efforts to maintain their existing relationships because they recognize that they are locked in to some extent with existing business partner because of high search and screening costs.

Sjøquist (1996) noted that institutions shape the way firms responds. This can lead to higher or lower transaction costs to firms. The implication here is that the institutional structures in a given country might influence some findings on the relationships observed in TCA dimension or other related theories. 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 western literatures suggested of a positive relationship. In the authors' conclusive remarks they pointed out that contrary to TCA arguments formal contracts play less role in China, and hence research in emerging markets should therefore consider important institutional factors that may draw a theoretical boundary to TCA framework.

Other studies in china like that of Standifird & Mashall (2000), have established that quaxi (cultivation of personal relations) is important element of business dealings, than in western and it has found to be a key determinant in business transactions in china. Tanzania is considered to be a developing economy or in other words an emerging economy and hence the findings here might have significant implications there. The institutional and cultural settings are different from western countries and might be different from China or Tanzania as well. The Focus of this study is not to find out issues related to institutional settings and their effects on TCA, but is to establish whether the existing finding in the TCA literature do still

hold in a different business to business relations setting in a different institutions. Off course not all relations but some. There are rare or no existing studies related to business to business relations on TCA dimension in Tanzania, but there are very few studies that have looked on business to customer relations, or individual to business. It is hard to replicate the findings of these studies in comparison to western studies on the same area because the objectivity and the study setting were heavily on more agricultural versus cooperative relations, a setting which is not feasible in most of developed economies. Example studies by Nelson & Temu (2002) observed TCA dimensions in Tanzania but this was in coffee industry, a relation observed was between the cooperative or business buyer versus an individual seller who is a farmer.

The argument for having less studies on this area of business to business relations in Tanzania might be due to country's history from independent in 1961. The focus on ownership of means of production was shifted from private to government ownership in the beginning of 1967 after a declaration which was signed in Arusha. The declaration established a policy so called Africa Socialism system (ujamaa) and self reliance. The policy emphasized on country inward looking for self sufficiency instead of relying on external countries. After critical failure of the policy, evidenced with a huge decline of economy followed by IMF and World Bank pressure, the country decided to launch Economic Recovery Program (ERP) in 1986.

This was followed by Economic and Social Action program between 1990 and 1992, focusing on empowering social sectors in the country which were neglected. After a transfer of power in 1995, the country took a completely new turn by emphasizing on private sector ownership, improvement of investment climate to investors, investment in economic infrastructures as well as empowering and motivating small and medium enterprises through loosening the tight policies. It is from this time where most of private ownership enterprises were established and the literature was mostly focusing on these enterprises more than the relations between them and other large ones.

The concepts which this study is focusing include buyer perceived opportunism, vertical coordination and formal contractual agreement.

Perceived opportunism has been having mixed result when there is asset specificity. This was noted by Demsetz Harold (1991). Rokklan et al (2003) also observed inherent dilemma on the impact of asset specificity on perceived opportunism. On his findings he revealed that asset specificity have a potential for promoting or reducing opportunism. I found it being important

to take this as my first part of focus in this study. The impact of buyer asset specificity and supplier asset specificity in relation to buyer perceived opportunism have rarely being examined at least in developing economies like Tanzania in particular.

On the other hand vertical coordination as one of non-integrative governance mode have being studied using environmental uncertainty, and other dimensions like asset specificity.

Nakhla (2003), linked the vertical coordination, flexibility and contracts in the following statement '' In situations of interdependence of activities and of uncertainty, a conflict can be shown between coordination based on a "strict" contractual approach and "flexible" modes of commitment that take advantage of the increase in information but may involve high coordination costs.".

Ivens (2005), made his study on service industry but he found a positive relation between flexibility and supplier vertical coordination (long-term orientation)
Frequent changing environment are known to affect widely the contractual relations especially in developing economies. It was noted by Noordewier et al (1990) that it is not the degree to which agreements have been tightly worded *ex ante* that is of concern rather, it is the reaction toward change requests that matters.

The study will also be interested in examining whether environmental uncertainty has any link to formal contractual relations, but asset specificity and buyer dependence will be introduced as well in this model

Testing of above relations are also relevant for at least by taking into account that such studies have not been performed in my country, apart from adding to an existing literature related to this subject. Ivens (2005) found a negative impact of environmental uncertainty on formal contractual agreement, but with respect to asset specificity Buvik and Reve (2002) found a positive relationship between asset specificity and formal contractual agreement. Further the impact of dependence has a strong negative effect on contractual agreement than asset specificity. This was also observed in the study buy Buvik and Reve (2002).

The Tanzania SME policy of 2003 which is currently operating now, noted that the SME contributes about 1/3 of the total country GDP. Triodos facet report (2007) noted SMEs in Tanzania contributes about 30% of country GDP. These findings were also supported by Tanzania revenue regulatory authority. By 2008 Tanzania revenue regulatory noted that there were about 300,503 registered SMEs which were about 69.3% of the taxpayers' population in

the country. Large part of Tanzania business sector is dominated by a huge number of formal and informal SMEs together with few large enterprises. The distribution sector in Tanzania is highly dominated by SMEs which work together with these few large enterprises. In any study setting in Tanzania which deals with producer-distributor relations will not be able to avoid this sector. Most studies that have examined TCA concept have not included at least small and medium business which is normally a huge dominance part of the supply chain in developing countries, and Tanzania in particular. This study though will not entirely look on small business; it has included them as a part of respondent so as to observe if they have any significant differences with other large sized manufacturing businesses firms when it comes to TCA empirical findings.

1.1 Research objective

1.1.1 General objective

To examine the concepts of buyer perceived opportunism, vertical coordination and formal contractual agreements.

1.1.2 Specific objectives

To define and measure the concepts of perceived buyer opportunism, vertical coordination and formal contractual agreements

To define and measure asset specificity, behavioral uncertainty, performance ambiguity, contractual flexibility, environmental uncertainty and buyer dependence

To examine and analyze a direct link between buyer and supplier asset specificity and buyer perceived opportunism

To analyze moderating effect of behavioral uncertainty and performance ambiguity in the relationship above

To examine and analyze a direct influence of contractual flexibility on vertical coordination

To examine and analyze the influence of environmental uncertainty and asset specificity on vertical coordination

To analyze the impact of asset specificity and environmental uncertainty on formal contractual agreements

To analyze the influence of buyer dependence on formal contractual agreement

1.2 Research questions:

How do the concepts of supplier and buyer asset specificity, buyer perceived opportunism, behavioral uncertainty, performance ambiguity, contractual flexibility, formal contractual relations, supplier and buyer dependence, environmental uncertainty defined and measured.

What is the relationship between buyer and supplier asset specificity and buyer perceived opportunism?

Does the moderating effect of behavioral uncertainty and performance ambiguity in the relationship above exist?

What is the impact of contractual flexibility on vertical coordination?

What is the influence of environmental uncertainty and asset specificity on vertical coordination?

What is the impact of asset specificity and environmental uncertainty on formal contractual agreements?

What is the influence of buyer dependence on formal contractual agreement?

1.3 Significance of the study

The study will add value in the existing literature of the TCA dimensions as well as RCT and RDT through bringing a new perspective and a new setting with respect to developing economies.

1.4 About Tanzania

Location

Tanzania is a country in the eastern part of Africa with a latitude and longitude reading of 6° 00' South and 35° 00' east. Tanzania's capital (Dar es Salaam) sits in between 6° 48' South latitude and 39° 17' East longitude.

The map below indicates some of the neighboring countries with Tanzania. On the North east it is bordering with Kenya, while North West it borders with Uganda. Rwanda and Burundi together with Democratic Republic of Congo are on the western side of Tanzania, while on the East there is Indian Ocean. Countries on the south includes Zambia, Malawi and Mozambique.

Figure 1

Source: (Facts book, 2009)

Area

Tanzania has a total area of 947,300 sq km, where 885,800sq km is land and 61,500sq km is water

GDP per Capita

Tanzania has a GDP per Capital of $1,400 (this is by 2009 country estimates)

GDP Composition by Sector

Agriculture covers 26.6%, where Industry covers 22.6% and Service sector covers 50.8%. Again this data is by 2009 country estimates.

Population

Tanzania population according to 2009 UN estimates reaches about 43.7 million

Capital

Dodoma is official capital city, but Dar es salaam is commercial city.

Business sector performance

Small business contributes by estimates about 30% of GDP

1.5 SMEs in Tanzania and Related Aspects.

Table below is obtained from Tanzania SME policy of 2002, which categorized small and medium enterprises from micro, small, medium and large enterprises. Those with 1-4 employees and annual turnover of up to 5 million (Tshs) are categorized into micro enterprises, where those with 5-49 employees and annual turnover of up to 200 million are in the group of small enterprises. For those firms with 50-99 employees and annual turnover of more than 200 million up to 800 million are on the category of medium enterprises, while those of more than 100 employees and annual turnover of more than 800 million (Tshs) are categorized as large enterprises.

TABLE 1

Category	**Employees**	**Capital Investment in Machinery (Tshs)**
Micro enterprise	1 – 4	Up to 5 mil.
Small enterprise	5 – 49	Above 5 mil. To 200 mil.
Medium enterprise	50 – 99	Above 200mil.to 800 mil.
Large enterprise	100 +	Above 800 mil.

Source: (Tanzania Ministry of Industry and Trade, 2002)

Though data base related to new registered business in Tanzania is not updated frequently, there are agencies which can be used to obtain such information depending on type and objective of the study. For example, if you only concentrate with small enterprises, then there is agency dealing with small industries development abbreviated by SIDO (Small industry development organization). This agency deals with enabling startup and ongoing small firms in reaching their manufacturing objectives in all areas of production, packing, sales,

marketing and consultancy. Tanzania Revenue Authority updates monthly the profiles on amount of tax collected and from which sector, though these reports do not provide updated information on new registered businesses and on which category. Such information can be accessed through direct contact with this institution. Statistical reports related to broad areas in the country can also be accessed in a national statistical agency known as Tanzania Bureau of statistics. There are also many business networks centred on small business in Tanzania because the banking sector does not normally trust small business, so they prefer them to be organized in groups. The low reliability of small businesses to financial institutions in the country is due to their less proper financial record keeping and other risks associated with poor managerial capabilities. The larger the business, and the more the formality in terms of managerial structure, the higher it enjoys support from both government and financial institutions.

Government of Tanzania since 1995 carried out huge restructuring of business sector, by focusing on abolishing barriers for establishment of business such as government bureaucracies and easing the licensing policy. It was from such reforms that there was a huge number of newly estblished enterprises in the country. The pick of these reforms was on 2006 when government decided to borrow small and medium business agencies directly because of obstacles they were facing from government sector. Though this was a first time move where government decided to put out billions of shillings to small business, the experience has not been quite a happy one at least to the government because it has not been able to secure this money back.

Most of these small and medium enterprises are not in the manufacturing sector, and if they are in this sector it is always in a small scale and less international focused. The large enterprises are the ones which are heavily centred in this sector because they have enough capital. In such type of business setting, the small and medium enterprises cooperated with large enterprises in distribution terms or supplying them with materials. In the event of supplying to large enterprises the small firms do not have such capability of ensure continuity, and in this regard there are always more than one firm supplying to large enterprise. Also small and medium businesses have their own business to business relations depending on the needs of each one.

Studies related to business to business relations in the context of TCA dimensions, are quite rare if they don’t exist in Tanzania literature. Most TCA studies are between businesses to

private individuals particularly the farmers. Example Nelson and Temu (2002) conducted a study on Institutional adjustment and Transaction cost in the context of coffe farming system by comparing TCA before and after liberalization. This finding suggested that TCA was almost the same in both periods. Staal S, et al (1997) also had a study related to TCA on small diary holders in east Africa. The findings from the study revealed that the transaction cost for small diary holders were quite higher than those in developed nations. Author argued this to be so because of transport and communication difficulties together with demand uncertainties. The study also revealed a difference in transaction cost between small and larger firms when it comes to TCA, implying that large firms have a power in lowering the transaction costs. On other side this study also noted the role of collective organizations (cooperative, self helping groups etc) in reducing transaction costs. These findings I suggest will be quite different from western settings. Also the implication drawn here can be supported by work of Bigss & Shah (2006), where they said ''In the presence of economic instability, market imperfections, and weak government provided legal institutions, the power of the African business network rests partly on the exchange of information through it and on group enforcement, and partly on the ready ability of the group to support transactions that benefit from relation-based governance, such as financing, sales, and distribution to customers outside the immediate neighborhood''. Same authors found out some differences between Zimbabwe and Tanzania small industrial firms. With western oriented small industrial firms in Zimbabwe (owned by western by then before crisis), were found to be different from those in Tanzania (which were more indigenous) by having less transaction cost in terms of receiving more credit from suppliers.

The literature above has more to do with individual farmers versus firms or cooperatives, with less on industrial firms or business to business relations. Also the results from most of the studies mentioned above have some differences with western literature due to some institutional and objective differences. Businesses to business relations studies with respect to TCA are quite scarce if they do not exist in Tanzania as I have mentioned before. The reasons might be due to country history, which I highlighted more clearly on the background section.

1.6 Statement of the problem.

TCA has a rich of findings with respect to buyer opportunism, vertical coordination as well as formal contractual agreements, but most of the analysis and predictions in the current literature have used firms in developed economies and more specific in industrial business to business relations. This study intends to take a complete new setting and new environment, but with the assumption that the predictions from the literature regarding the variables to be examined are relevant in this setting though many factors beyond this study horizon will likely influence the findings.

1.7 Organization of the study

This study will be divided into six parts or items. The division is as follows;

Theoretical review of TCA, RCT and RDT will be covered in chapter two and three. Chapter two will concentrate on TCA and chapter three will be focusing on reviewing theories of RCT and RDT. On the other hand a conceptual framework and hypothesis will be covered in chapter four, while methodology of the study will be covered in chapter five. Chapter six will be dedicated on showing findings and the results from the analysis and chapter seven will discuss these findings, drawing theoretical and policy implications together with making conclusions.

CHAPTER 2

TRANSACTION COST THEORY

2.0 INTRODUCTION

Transaction cost adopts a comparative contractual approach to the study of economic organization in which the transaction is made the basic unit of analysis and the details of governance structures and human actors are brought under review (Williamson & Winter, 1993). Transaction costs have been broken down into two main categories by willimson, (1985), where he distinguished ex ante and ex-post categories. With respect to ex ante, there are costs of drafting, negotiating, and safeguarding the agreement.

In addition ex ante inter-firm safeguards can sometimes be fashioned to signal credible commitments and restore integrity to transactions. On the other side ex post costs of contracting take several forms. These include (1) the mal-adaption cost incurred when transactions drift out of alignment , (2) the haggling costs incurred if bilateral efforts are made to correct ex post misalignments, (3) the setup and running costs associated with the governance structures, and lastly the bonding costs of affecting secure commitment.

Also one of the key remark that Williamson (1985) made in relation to these transaction costs is that, in addressing them we need to do it simultaneously not sequentially, meaning that at the time of establishing contractual relations the parties to the agreement should not forget ex post costs while only focusing on ex ante, thinking they will address the other later. Internalizing a transaction substitutes market forces with an organizational control and coordination system, which both serves to safeguard specific assets as well as facilitate adaptation to uncertainty (Heide 1995).

Transaction cost analysis is relevant in determining the mode of governance. Most of studies have tried to examine the extent in which transaction cost elements guides a firm toward choosing market, hierarchy or an intermediate form. With market mode it means all exchange takes place in the market, while hierarchy or intermediate form relates to certain amount of contractual agreement between supplier and buyer. In a general sense, transaction cost theory views governance in terms of designing particular mechanisms for supporting economic transactions (Heide 1994).

2.1 ASSUMPTIONS OF TCA

Key assumptions under Transaction cost theory has been bounded rationality (parties in the contract has limited abilities and rationality in foreseeing future), and opportunism (actor intentionally hide some information relevant in the transaction for sake of serving their own interests at the expense of the partner in the relationship/agreement). Box below highlights more on the literature description on the concept of opportunism

Box 1: Opportunism

Opportunism extends the conventional assumption that the economic agents are guided by considerations of self-interest to make allowance strategic behavior (Williamson 1975). Opportunism poses a transactional hazard to the extent that a relationship is supported by idiosyncratic investments dedicated to the exchange partner (Stump & Heide 1996: 432). Williamson (1975: 27) commented that opportunism is to be distinguished from both stewardship behavior and instrumental behavior. Whereas stewardship behavior involves trust relation in which the word of a party can be taken as his bond, instrumental behavior is more neutral mode in which there is no necessary self-awareness that the interests of a party can be furthered by stratagems of any sort (Williamson; 1975). When there are dedicated assets in the investment, the level of opportunism will likely shift at least the perceived opportunism. This idea has been supported by Demsetz Harold (1991) and Rokklan et a (2003).These studies connected asset specificity with opportunism but the predictions regarding the direction of effect has in most cases showed mixed results.

Consequences resulted of bounded rationality is linked to uncertainty which in turn can either be external environmental uncertainty that cannot be foreseeing before the contract or behavioral uncertainty that linked with problems in measuring performance of partner. Again the two concepts can be viewed in terms of external uncertainty or internal uncertainty, where the later related to problems in measuring partner performance, and the former is related to adaptation problems. Most studies determining mode of governance have mainly used these two components.

On the other hand opportunism can lead to adverse selection in an event where one part to the contract has hidden important information. Information Asymmetry is a term that is coined in explaining opportunism and it implies that each part to the contract has specific information which is not known to the other part. Again this can leads to moral hazard in an event when this opportunism has occurred ex post i.e. after the contract, and this can be more active form.

For complete overview of Transaction cost analysis, one has to add the third dimension of it, which is asset specificity. Asset specificity refers to scenario where the supplier has made some specific investments in the relationship and at that moment the safeguarding problem arises on these assets. The event where the assets cannot be valuable outside the relationship, creates a hold up problem where the supplier in the relationship need to agree with these demands from the buyer. The frequency of transaction is the fourth dimension of TCA and it is mostly linked in analyzing where market or hierarchy is relevant form of governance given the level of frequency in the transaction.

2.2 DIMENSIONS OF TRANSACTIONS

Rindfleisch and Heide (1997) made a category of Transaction cost with respect to their origin. The categories highlighted based on direct and opportunity cost as well. These included Specific investment, environmental uncertainty and behavioral uncertainty. In this reflection behavioral uncertainty is linked to performance evaluation problems. Agency theory has been closely associated with TCA. For instance classification of transaction costs was broken down into coordination and motivation costs as proposed by Milgrom & Roberts (1992). Opportunism is highly reflected in association to motivation cost. Opportunism in turn is associated with information asymmetry.

For the sake of analysis, I will combine the two classifications, highlighting on specific issues in each. Where there are other concepts linked to a dimension, I will highlight them in a box. For example behavioral uncertainty has been linked to performance measurement problem as well as information asymmetry. When these concepts appear in the text of behavioral uncertainty, they will be shown in a box that follows the text on the subject.

2.2.1 Asset Specificity

Asset specificity can be defined as the "durable investments that are undertaken in support of particular transactions, the opportunity cost of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated" (Williamson 1985:5). Author continued to argue that Cooperating partners invest in specific assets for a partnership out of task needs and goodwill.

Without purporting to be exhaustive, asset specificity distinctions of five kinds have been made: (1) site specificity, as where successive stations are located in a cheek-by-jowl relation to each other so as to economize on inventory and transportation expenses; (2) physical asset specificity, such as specialized dies that are required to produce a component; (3) human asset specificity that arises in a learning-by doing fashion; (4) dedicated assets, which are discrete investments in general purpose plan that are made at the behest of a particular customer; and (5) brand name capital (Williamson; 1989:144).
From a transaction cost perspective the more specific the inputs required in the firm's production process, the less likely these products or services will be satisfactorily available from the market (Chandler et al, 2009).

TCA predicts that exchange relationships with high asset specificity tend to use more formal contracts for governance when the transaction cannot be internalized (Lui et al 2009)
Specific assets involve human assets that cannot be redeployed without sacrifice of productive value should contracts be prematurely terminated (Williamson 1985). It is also important to note that asset specificity does not entail only human assets but could range from various types depending on the nature of the relationship and business. For example an accounting firm might use human asset specificity, but manufacturing firm might commit new production unit etc. Transaction-specific investments involve physical or human assets that are dedicated to a particular relationship and cannot be redeployed easily (Heide 1994:73).

Asset specificity has reference to the degree to which an asset can be deployed to alternative uses and by alternative users without sacrifice of productive value (Williamson 1989). Author also noted this relates to sunk cost.

Transactions involving high levels of specific assets create the opportunity for quasi-rents to be appropriated or 'held up' by opportunistic buyers or suppliers (Leiblein & Miller 2003).
Perhaps more important, asset specificity may reduce the non-opportunistic costs of maintaining vertically separated organizations (Demsetz 1991). There is less need to manage (through vertical integration) the coordination of assets when they are ''dedicated'' to specific uses, as they are likely to be under conditions of asset specificity.
Special-purpose assets are important because they eliminate competitive pressure, the major basis of the market superiority argument (Anderson 1985). Knowing they are difficult to replace, suppliers may become opportunistic or inflexible.

The other alternative approach noted by (Stump and Heide 1996) on how to manage the problem caused by specific investments is to design an incentive structure that discourages opportunistic behavior by the other party.
Transaction-specific assets can be argued to constitute dependence, because their presence makes exchange partners irreplaceable or replaceable only at a cost (Heide 1994)

2.2.2 Behavioural uncertainty

Behavioral assumption is that human agents are given to opportunism, which is a seep condition of self-interest seeking that contemplates guile (Williamson 1991). Self interest and contemplation of guile has been closely associated with problems related to monitoring or performance measurements. This was noted by Williamson (1979) when he argued 'Behavioral uncertainty arises from the difficulties associated with the monitoring of the contractual performance of an exchange partner when bounded rationality is present ''.

He also pointed out that behavioral uncertainty is expected to increase the problem of performance evaluation and induce measurement costs, performance evaluation and adjustment costs. Same line of argument was supported by Rindfleisch & Heide (1997), but he also added that to the extent that a party's true level of performance is not readily apparent, direct measurement costs may need to be incurred. Text box below describe more on the concept of performance ambiguity.

Box 2: Performance ambiguity

Performance ambiguity represents a *disincentive* to invest in a comprehensive evaluation of supplier ability. Performance measurement problem by its definition is well associated with behavioral uncertainty. 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 & Heide, 1997:46). Bounded relationality also has been one of the key assumptions related to performance ambiguity.

With respect to this assumption Rindfleisch & Heide (1997:45) noted that 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.

With relation to information asymmetry, Rindfleisch & Heide (1997) argued that behavioral uncertainty causes difficulty because of ex-post information asymmetry regarding task performance. Text below gives more description on information asymmetry.

Box 3: Information asymetry

Wathne & Heide (2004), noted that to the extent that information asymmetry exists in a relationship, it is possible for a party to act opportunistically without being detected.
''Asymmetric information represents an uneven distribution of information during a transaction. This difference in information can put one party at an advantage while placing the other at disadvantage'' (Waseem et al, 2008:3).

Information asymmetry may exist ex ante, because of an inability to ascertain a party's true characteristics prior to exchange (Reindfleisch & Heide; 1997). According to Akerlof (1970), ''Information asymmetry develops when the seller has more information than the buyer''. Author noted as well that this imbalance in the information makes it difficult for the buyer to observe the actions of the seller and consequently to know whether the seller is going to act truthfully in a transaction.
The main purpose of monitoring is to reduce vulnerability of the form of information asymmetry (Wathne & Heide; 2000). Authors added that indirectly lower levels of information asymmetry may discourage opportunism in the first place, however monitoring may be ill suited to managing opportunism if the source of the vulnerability is not information related.
Information asymmetry is a problem primarily for "experience" products (and services) that is, products whose quality is unobservable prior to purchase but is observable after purchase and use but not for "search" products, whose quality is observable prior to purchase (e.g., low-cost goods such as produce, poultry) (Mascharenhas, et al, 2008:70). Authors added that in tangible products, the problem of asymmetry occurs in relation to experience products whose quality is unobservable.

Only when buyer, seller and arbiter all have identical information regarding the state of the world, and this information is adequate, can one say with confidence that the transaction will go through without difficulty (Williamson; 1975:31).

Sources of behavioral uncertainty mighty differ or vary with respect to the form of relations and the nature of partners themselves but Sollner (1999), argued that Opportunistic behavior and a governance mechanism can be sources with negative impact. Rindfleisch and Heide (2007) mentioned three sources which can be summarized in a following setting:

TABLE 2: Sources of Behavioral uncertainty

	Behavioral uncertainty
A. Source of transaction costs	
Nature of Governance problem	Performance Evaluation
B. Type of transaction costs	
Direct costs	Screening and selection costs (ex ante) Measurement costs (ex post)
Opportunity Costs	Failure to identify appropriate partners (ex ante) Productivity losses through effort adjustments (ex post).

Source: (Adapted from Rindfleisch & Heide, 2007)

Behavioral uncertainty is often related or is explained by concepts of difficulties in measuring performance (performance ambiguity) as well as information asymmetry. I will add an explanation of these concepts in explaining this phenomena.

2.2.3 Environmental uncertainty:

Noordewier (1990), coined the concept of environmental uncertainty as ‘’unanticipated changes in circumstances surrounding an exchange’’. Also referring the same concept the authors added on the Williamson (1979) remarks that ‘’high environmental uncertainty enforces the problems of writing a prior comprehensive contracts, which in turn create adaptation problem.

Bensaou (1999) coined this concept as external uncertainty and he defined it as unanticipated changes in circumstances surrounding an exchange relationship. The author continued to argue that the increase of uncertainty and unanticipated changes, the limited cognitive capabilities of human agents, limits their ability to spell out all possible contingencies beforehand or anticipate future events and plan for the unforeseeable.

While Bensaou (1999) noted technological uncertainty as a key external uncertainty, Monalis, et al. (1997) noted market uncertainty and regulatory environmental uncertainty were key external environmental uncertainty, while shirking and motivation together with compensation uncertainty were forms of internal uncertainty. In his argument the author argued that market uncertainty drives companies to adapt constantly to changing demand and price conditions within markets and to facilitate information. The regulatory environment on the other hand is related to political constraints and it mostly makes it difficult to rely on independent agents abroad. The internal uncertainty is mostly important for firms that have subsidiaries or distributing agents.

Rindfleisch and Heide (2007) mentioned three sources of environmental uncertainty which can be summarized in a following setting:

TABLE 3: Sources of environmental uncertainty

	Environmental uncertainty
C. Source of transaction costs Nature of Governance problem	 Adaptation
D. Type of transaction costs Direct costs Opportunity Costs	 Communication, negotiation, and coordination costs Mal-adaptations; Failure to adapt.

Source: (Adapted from Rindfleisch & Heide, 2007)

Uncertainty poses a transactional problem of a somewhat different nature. For example in industrial purchasing context, one particular source of uncertainty is volume unpredictability (Heide et al, 1995:58)

Environmental uncertainty creates an adaptation problem (Rindfleisch & Heide 1997). In relation to transaction cost, authors argued that the associated transaction costs include the direct costs of communicating new information, renegotiating agreements, or coordinating activities to reflect new circumstances. As environmental uncertainty increases, different expectations and goals about future supply requirements develop (Artz & Brush 2000).

Uncertainty characterizes a decision environment that is unpredictable for the decision maker (Sollner 1999). Author added that, under conditions of uncertainty, it will be impossible for the parties to a transaction to specify all contingencies in a contract.
In its typical application, uncertainty refers to the degree to which unanticipated environmental changes alter the conditions underlying an exchange (Leiblein & Miller 2003:844). Author added that uncertainty influences the cost of governance in a number of ways. To the extent that uncertainty hinders the coordination of linked activities, greater uncertainty may result in mal-adaptation costs ((Leiblein & Miller 2003:844). Uncertainty also inhibits a firm's ability to measure the contribution of any individual activity it increases the likelihood that shirking may occur undetected (Demsetz 1988)

2.2.4 Frequency and duration

Generally, according to Milgrom & Roberts (1992), when similar transactions occur frequently over a long period of time involving some of the same parties, the one who interacts repeatedly may find it valuable to design and introduce low-cost routines to manage the transaction. Frequency and duration also have another effect. Parties involved in along, close relationship with frequent interactions have many opportunities to grant or withhold favors to one another. The parties can sometimes eliminate the need for formal, detailed agreements, both because the parties understand what is expected of them and because they have no need to document those understandings for outsiders to enforce. The cost savings that result can be considerable. Frequency has been argued by Williamson (1979), to pull the relation from market into hierarchy.

2.3 FORMS OF GOVERNANCE

Key forms of governance that have highly been discussed in relations to TCA are market, hierarchical governance and hybrid or relational governance. We also need to note vertical coordination is well embedded within the concept of hybrid or relational governance. Buvik and John (2000:52) noted a close relationship between hybrid and market but they noted two crucial differences first being the interaction pattern within hybrid modes extend well beyond contractually mandated action, and the second is that hybrid modes maintain these desired interaction patterns through private rather than legal ordering. Market governance mode involves less buyer-seller relations, and the earliest (and most common) applications of TCA focus on the vertical integration decision (Rindfleisch & Heide 1997). Authors continued to argue that these studies typically focus on a manufacturing firms' decision to backward integrate into the supply of materials or components or forward integrate into distribution and sales. Heide & John (1992) noted that establishment of vertical control is viewed as a design of a specialized governance structure, which is required only under particular conditions such as presence of transaction-specific assets. The authors also pointed out clearly that the presence of specific assets only creates an incentive to establish vertical control, and does not in itself endow the firm with the ability to actually structure a relationship in the desired fashion. Heide and John (1992) also noted that when buyer transacts specific investments to the supplier, he/she literally transfer the control to the supplier and limits his ability to structure the relationship in accordance with the prescriptions from transaction cost theory. As a consequence, one party's ability to exercise decision control derives from the other party's decision to relinquish it (Heide & John 1992:35). Authors argument on the implication of this situation is that, control relinquishment may necessitate some form of protection against ``reverse opportunism`` by the control holder.

Vertical Coordination is viewed as a form of nonintegrated governance mode which involves a close coordination of two independent firms. Complementing on the foundation that was laid by Stern and Reve (1980), John and Reve (1982) and Reve and Stern (1986), Buvik and John (2002) defined vertical coordination as the purposive organization of activities and information flows between independent firms. Authors added that these activities' pattern and information flows possess two related features. First, they are not enforced through legal ordering. Second, profits from these patterns and flows are split up through ongoing adjustments and bargaining rather than contractually specified ex ante. With specific

reference to relevance of vertical coordination, Buvik and John (2002) pointed out that if vertical coordination is to be beneficial, they should observe that ex post transaction costs decline with greater vertical coordination, and vice versa.

> *Hybrid governance modes fall into two general categories. One maintains a discrete separation between the exchange parties and enforces agreements through contractual authority. The other fosters closer ties between exchange partners and enforces agreements through appeals to common interests (Rindfleisch & Heide 1997:44).*

Bucklin and Sengupta (1993), found that under conditions of high levels of specific investments, co-marketing alliance partners reduce power imbalances through formal contracts that build exit barriers, exclusive dealing, and financial incentives into the relationship. In contrast to the unilateral mechanisms, Rindefeisch & Heide (1997) argued that bilateral hybrid governance structures appear to provide a firm with a way to safeguard its specific assets by developing closer ties with its exchange partners. Although TCA scholars have traditionally focused on vertical relationships, a growing later after vertical integration between firms at the same point in the value chain (Rindfleisch& Heide 1997).

2.3 HOW THE MAIN DIMENSIONS PREDICTS THE GOVERNANCE MODE.

2.3.1 Hierarchical Governance versus Market governance

On the study conducted by Geyskens et al (2006), following observations were made on regard to impact of dimensions on governance mode;

Asset specificity, Volume uncertainty and behavioral uncertainty dimensions were observed to increases the likelihood of hierarchical governance over market governance. On the other side technical uncertainty increases the likelihood of choosing market governance over hierarchical governance.

In most studies, asset specificity has been observed to have a positive relationship with vertical integration. According to Williamson (1985), environmental uncertainty will increase

more chances of a vertical integration as a governance form. Viewing the two sides of environmental uncertainty i.e. technological and volume uncertainty, Heide & John (1990) established that the increased level of technological uncertainty will foster a choice of marketing governance. On the other side, volume uncertainty increases more chances for having hierarchical over market governance. High degree of behavioral uncertainty has been observed to increase a high degree of vertical integration (hierarchy).

2.3.2 Relational Governance (Hybrid) Versus Market Governance

Based on the findings from study carried by Geyskens et al (2006), asset specificity increase the likelihood of choosing relational governance over market, but environmental uncertainty (volume and technical) increases the likelihood of choosing market governance over relational governance.

With respect to the question of relational governance key additional aspects from Williamson (1996) and Geyskens et al (2005) should be taken into account. For instance Williamson (1996) observed that the relational governance in a less extent addresses uncertainty than market governance. On the other side the analytical results from a study conducted by Geyskens et al (2005), observed a positive impact of volume uncertainty on hierarchical governance (versus market governance), while there was no impact on relational governance (versus market governance). Technological uncertainty had no impact on either case from this study. Depending on the nature and/or the objective of study and setting of variables, the results highlighted above might change. When asset specificity is taken into account, the interaction effect with environmental uncertainty will likely tend to be positive.

We also have to be aware of the fact that the relationship is also influenced by the way which other dimensions of TCA and governance relations in particularly are measured. Behavioral uncertainty has been observed to cause a positive effect on Hybrid governance in other study settings.

2.4 RELATIONS WITH OTHER CONCEPTS

Rokklan et al (2003) observed inherent dilemma on the impact of asset specificity on perceived opportunism. On his findings he revealed that asset specificity has a potential for promoting or reducing opportunism. Hawkin et al (2009) had same feelings when they made an observation that the safeguards that are put into place to reduce opportunism may sometimes produce unfavorable results. This means that asset specificity has close impact on perceived opportunism, but the direction of the impact might be positive or negative. Coase (1987) on the other hand confirmed the dilemma above by arguing impliedly that when asset becomes more specific, the possible gains from opportunistic behavior increase. Campell and Harris (1993) noted that contractual relations have a relation with cooperation. As noted by Campbell and Harris (1993), the long-term relationship (co-operation) does not depend on the sanctions provided by the law nor on direct market pressures but rather on a package of incentives and disincentives established through a continuing co-operative relationship.

With respect to TCA in relation to other theories like RCT, Ivens (2005), noted a negative impact of environmental uncertainty on contractual agreements.

CHAPTER 3

RELATIONAL CONTRACTING AND DEPENDECNE THEORY

3.0 INTRODUCTION

TCA has not been the only theory dealing with transaction between and within firms. In business to business relations there are differences in power between firms, and also there are differences in type of relations (contractual or relational). To get a better account when it comes to business to business relations it is of importance to link these other theories so as to have a broad view of the analysis.

Relational contracting theory

RCT was developed by Macneil (1980), though it has been updated by several authors. It was integrated in TCA by Heide & John (1992), also Blois (2000), made an additional input in relation to norms. Macneil (1980) viewed contract as no more or less than relation among parties. Unlike TCA which deals with Transaction as units of analysis, RCT deals with relations as units of analysis. A close observation on this difference leads us to understand that when we deal with issues related to business to business relations, RCT is quickly implied in such a setting in addition to TCA. The cost of formulating complete contracts and the implied costs of enforcing such agreements persuades firms to form vertical or hybrid relations which on the other hand have a direct impact on aspects related to opportunism, vertical coordination, formal contractual agreements and related TCA concepts. In this study since the context is on business to business relation, it is of a great important to include RCT theory so as to have a better understandings on the observations that are to be analyzed by taking into account a broad view.

Relational dependence theory

According to Pfeffer (1982), since the organizations are not self-sufficient, their dependence or interdependence is the ultimate choice for their survival. The implication here is that the firm's behavior is externally influenced by those organizations who fulfill their demands.RDT premise lies on two sides of arguments, one being to respond to the demands of the organization which control critical resources, and the other being findings the means to reduce

the dependence by searching for autonomy or freedom from external environment. When studying TCA in business to business relations, it is important to include this theory because power differences or similarities and dependence or interdependence has implication when it comes to analyzing the relations between firms. For example issues related to opportunism, or vertical coordination in TCA can be influenced by other RDT theories and not necessarily the prediction elements from TCA dimensions. The argument for incorporating this concept on this study is trying to make sure that the findings presented or analyzed do not exist due to other issues related to firm resource dependencies among firms, and in some cases it will be rational to control for RDT dimensions for some of relations that have to be tested.

3.1 RELATIONAL CONTRACTING THEORY:

Contract implies an arrangement or agreement between two or more actors[1]. Macneil (1980) has tried to provide a well grounded perspective on this aspect of contract. On a more traditional definition Macneil (1980) defined contract as a promise or a set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty. Every existence of ongoing contractual relations creates expectations that future exchange will occur and in partially predictable patterns, simply through the dynamics of the existing relations whether or not hierarchical (Macneil; 1980:8).

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 (Buvik & Haugland 2005: 43). Williamson (1985) noted that parties to an asset-specific exchange have a mutual interest in perfecting the contracting relation.

3.1.1 Classification of contracts

Contracts can be viewed in terms of content where we specifically refer to complete versus incomplete contract, or can be viewed in terms of context where we refers to classical versus relationship contractual perspective. Which classification is important or is more relevant is not the basic question of concern because the two perspectives offer us a very well grounded base for understanding contracts.

[1] This definition was extracted from Notes given by Prof. Otto Andersen in strategic marketing, fall semester 2008.

3.1.1.1 Complete versus Incomplete contracts

Completeness of contract is more of an ideal situation because with completeness it implies that all the aspects of relations together with future contingencies and changes are all included in the contract. This is more said than done in practice because it is not possible to include all aspects that deal with a relation in a single contract.

Incomplete contract is always a characteristic of real contracts. This is always so because in defining elements of the contracts the human nature is not always rational and apart from this, the foreseen contingencies are always not seen in the beginning of the contract. This leaves future expectations in defining the roles of contracts and it is where the element of game theory comes in to practice. Game theory predicts the choices of individual players in a given scenario to be of profit maximization. With this we can immediately predict that whenever there is expectation of future gains and dealings, parties will try to avoid unwanted behaviors, but whenever there are no future perceived gains of which is nature of discrete transactions, parties will end up maximize their own benefits. A contract is incomplete if and only if it does not incorporate some information about the state of nature that it would have been optimal for the contracting parties to include (Anderlini & Felli 2000).

3.1.1.2 Classical contract perspective

Classical contractual perspective tries to view contract as a more discrete oriented relations, where there are no relations built and mostly court is the mechanism for enforcement. Parties' identities are always not a key issue in this perspective because each transaction is treated as an independent one. Under discrete exchange the individual parties to a transaction remain autonomous, pursue their interests vigorously, and rely to a large extent on economic and legal sanctions for the purpose of enforcing contractual obligations (Heide 1994).
The idea of a discrete transaction is the foundation on which concepts of relationship are built (Dwyer 1987). The archetype of discrete transactions is manifested by money on one side and an easily measured commodity on the other (Macneil 1980).

Dwyer (1987:12) explicitly noted that "The concept of discrete transaction specifically excludes relational elements. He continued to argue that discrete transaction is characterized by very limited communication and narrow content. Related to the aspect of parties in the

transaction he also commented that parties to transaction must be ignored or relations creep in.

As noted by Goldberg (1976), discrete exchange is consistent with the underlying assumptions of neoclassical economic theory, in which individual transactions are assumed to be independent of past and future relations between the contracting parties and constitute nothing more than the transfer of ownership to a product or service.
Discrete contract is one in which no relation exist between the parties apart from the simple exchange of goods (Macneil 1980: 10).

> *Discrete transactions are non-primary relations. They involve only a small part of personality, are very limited in scope, are non-unique in personal terms, and hence can be transferred readily (Macneil 1980: 13).*

3.1.1.3 Relational contractual perspective

This tries to view contract as not only discrete transactions, but also relationships exchange where parties have mutual benefits from one another and these relationships are self enforced. Any side in the relational contract perspective will try not to engage in the unwanted behavior because doing so; he will destroy his reputation in the relationship which is quite a huge blow especially when there are expectations of future dealings.

> *Relational exchange transpires over time; each transaction must be viewed in terms of its history and its anticipated future. The basis for future collaboration may be supported by implicit and explicit as assumptions, trust, and planning (Dwyer; 1987).*

While Geyskens et al (2006) noted that relational governance modes incorporate a large informal component and are therefore not easily legally enforceable, Bradach & Eccles (1989) commented that no juridical mechanisms such as mutual dependence, trust, parallel expectations, joint action, and procedural fairness sustain these relational governance modes.

3.1.2 Contractual Norms

Key contractual norms identified by Macneil (1980), includes role integrity, mutuality, implementation of planning, effectuation of consent, flexibility, contractual solidarity, the linking norms:(restitution, reliance and expectation interests), creation and restraint of power

and harmonization with the social matrix. Of more emphasis in this study will be flexibility since it will be used to connect other transaction cost dimensions.

> *The need for flexibility arises partly because of bounded rationality-the limits of a human mind to focus on available information-partly because of limited availability of information, and partly because the socioeconomic that any given contract has a capacity for change or that it breaks apart under pressures of change (Macneil 1980:50).*

This term will synonymously be used as contractual flexibility. The limit of this term is in accordance with Macneil (1980) argument that ‘’the norms of flexibility will govern everything outside the winds of change themselves being the ultimate in flexibility’’

3.2 RESOURCE DEPENDENCY THEORY:

Resource dependence theory views inter-firm governance as a strategic response to conditions of uncertainty and dependence (Pfeffer and Salancik, 1978). Given the underlying assumption that few organizations are internally self-sufficient with respect to their critical resources, two potential problems are created. First, a lack of self-sufficiency creates potential dependence on the parties from whom the focal resources are obtained Emerson (1962).

> *Social relations commonly entail ties of mutual dependence between the parties. A depends upon B if he aspires to goals or gratifications whose achievement is facilitated by appropriate actions on B's part (Emerson 1962: 32).*

Second, it introduced uncertainty into a firm decision making, to the extent that the resource flow are not subject to the firm’s control, and may not be predicted accurately.

> *If the dependence of one party provides the basis for the power of the other, that power must be defined as a potential influence: Power (Pab). The power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A (Emerson 1962:32)*

Virtually organizational outcomes are based on interdependent causes or agents. Interdependence characterizes the relationship between the agents creating an outcome, not the outcome itself. A seller is interdependent with a buyer because the outcome of concluding a sale depends on the activities contributed by each. A seller is also interdependent with another seller if each is negotiating with the same buyer for a sale (Pfeffer & Salancik 1978:40).

3.2.1 Dependence and Transaction specific investment:

Pfeffer & Salancik (1978), distinguished between two forms of Interdependence i.e. outcome interdependence and behavior interdependence.

Interdependencies are not necessarily symmetric or balanced. They can be asymmetric (Pfeffer & Salancik 1978:41). Authors continued to argue that the interdependent existing between two social actors need not be either competitive or symbiotic-frequently, relationships contain both forms of interdependence simultaneously. Viewing aspect of the interdependence relevance authors added that interdependence is important to an organization because of the impact it has on the ability of the organization to achieve its desired outcome.

> *Dependence involves circumstances where the buyer's or supplier's effectiveness is contingent on the performance of the other partner, and where few or no alternatives exist, placing the more needy party at the mercy of the less needy party (Hawkin et al 2009: 49).*

Dependence and power are conceptually inseparable (Gaski 1984; Hawkin et al 2009).

Pfeffer & Salancik (1978) argued that there are three critical factors for determining the dependence of an organization on another. These factors are; the importance of resource (the extent to which the organization requires it for continued operation and survival), the extent to which the interest group has discretion over the resource allocation and use and the extent to which there are few alternatives, or the extent of control over the resource by the interest group.

Heide and John (1988) noted that the dependency arising from specific asset is unique from other aspects of dependence. The author noted also that even on the case where a firm is dealing with one partner a high level of specific assets need to be present

3.2.2 Resource importance

Certain types of resource are very critical for organization survival and operations. If such resources are in the hands of many or few suppliers, it has a very strong impact on the relations which the firm will have with these suppliers.

An organization's vulnerability to extra organizational influence is partly determined by the extent to which the organization has come to depend on certain types of exchange for its operation *(Pfeffer & Salancik 1978:46).* Author as well added the dimensions of the importance of the resource exchange (are the relative magnitude of the exchange and the criticality of the resource), where he argued that the two are not independent.

In measuring the relative magnitude of an exchange as a determinant of the importance of the resource, *Pfeffer & Salancik (1978:46),* put it in the following;

> *'The relative magnitude of an exchange as a determinant of the importance of the resource is measurable by assessing the proportion of total inputs or the proportion of total outputs accounted for by the exchange'*

3.2.3 Discretion over Resource Allocation and Use.

Pfeffer and Salanck (1978) argued that discretion is the capacity to determine the allocation or use of the resource. They continued to argue that such discretion is a major source of power and is more important when resource is scarcer. Commenting on the means and basis for control, they authors noted that basis for control of resource include; possession (example of this is knowledge, ownership rights), access to resource, actual use of resource and who controls its use and finally is ability to make rules, or otherwise regulate the possession, allocation, and use of resources and to enforce the regulations

3.2.4 Concentration of Resource Control

The dimension of concentration of resource control, implies that the control of resources that are important will not have the final say on creation of dependency to another organization. This means that concentration and control add another important ingredient on the former.

> *That an interest group or organization controls a resource and that the resource is important, still does not assure that it will be able to create a dependency of another organization. The dependence of one organization on another also derives from the*

concentration of resources control, or the extent to which input or output transactions are made by a relatively few or only one significant organizations (Pfeffer & Salancik; 1978: 50)

Arguing on the source of concentration, Pfeffer & Salancik (1978) noted that concentration arise in multitude ways including organization having a monopoly position legally protected or legally established, collective organizations and associations also can lead into concentration

CHAPTER 4

CONCEPTUAL FRAMEWORK AND HYPOTHESIS:

4.0 Introduction:

This study will draw the analysis from TCA together with relevant aspects from RCT and RDT. There will be three concepts to be tested in this study, and in each of the concept there will be a set of independent, moderating or controlling variables from these theories as it will be described in this section. The concepts intended to be examined are buyer perceived opportunism, vertical coordination and formal contractual agreement.

Concept of buyer perceived opportunism

Buyer and Supplier asset specificity will be used as independent variable in determining their impact on buyer perceived opportunism. Again in this model will be extended by observing the effect of behavioral uncertainty and performance ambiguity as moderating variable on the relationship between asset specificity (buyer and supplier asset specificity) and buyer perceived opportunism. In the analysis the effect of single moderating variables will be tested first, followed by their combining effect.

Concept of Vertical coordination

Contractual flexibility and vertical coordination will be tested for a relation, where contractual flexibility will be used as independent variable and vertical coordination being dependent variable. In this relationship, environmental uncertainty and asset specificity will also be used as independent variables.

Concept of Formal contractual agreement

The last set of relation to be tested in this study will be between environmental uncertainty and formal contractual agreement. In addition the controlling effect of buyer dependence and asset specificity will be introduced in this model.

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4.1 Constructed Relations

Buyer specific asset specificity when employed will increase the buyer worries or perceived opportunism that the supplier might behave opportunistically. On the other side if supplier makes specific investment in the relationship, it will tend to reduce this perceived opportunism of the buyer (in case buyer has also made specific investment). Formally presented, I argue buyer asset specificity to increase buyer perceived opportunism, and for supplier asset specificity it is hypothesized to be opposite. On the other contractual flexibility is expected to increase the likelihood of vertical coordination while environmental uncertainty and asset specificity are expected to show a similar impact. With respect to formal contractual agreement, environmental uncertainty is expected to affect negatively the formal contractual agreement while asset specificity is expected to have a positive impact. Lastly the role of buyer dependence on formal contractual agreement is expected to be far more strongly negative on the sense that the positive effect of asset specificity will diminish.

4.2 Effect on Buyer Perceived Opportunism

Direct effects of buyer asset specificity

Investments in specific assets frequently occur in relationships between buyers and suppliers, and a key governance problem is to secure the return on such investments (Buvik & Haugland 2005: 43).

At the same time, specific investments involve considerable risk. The risk becomes apparent when the receiver of the investments in question is considered (Rokkan et al 2003:210). Findings that link asset specificity and opportunism have not always been consistency. For instance Rokkan et al (2003) noted that Specific investments pose an inherent dilemma because they have the potential to both promote and reduce opportunism on the receiver's part. Lui et al (2009), found a negative relationship between asset specificity and opportunism, taking case from China, but his findings was supported by Rokkan et al (2003) statement that since specific investments involve dedicated (rather than general purpose) assets, they also have the potential to create considerable value for the receiver and thus may actually discourage opportunism.

On the other hand Anderson (1987) found a positive impact of asset specificity on opportunism. These effects of asset specificity on opportunism fall under the category of passive or active in situations that might be existing or new as classified by Wathne & Heide (2000). Perceived opportunism is outside this box of this classification because it is more of assumed situation or anticipation and with respect to this perspective the findings suggested above are likely going to differ since the concepts predicted are different.

When buyer invest specific asset in a relationship with supplier or distributor, he will likely perceive opportunism risk from his partner. Any relationship, regardless of its overall description, may offer temptations for opportunism, such as when one party makes specific investment (Rokkan eta al, 2003:211). Authors as well recognized that opportunism may be influenced by some mental aggregation on a firm's part about the parties' relative exposure rather than by what each party has at stake individually.

With respect to findings related to perceived opportunism, Rokkan et al (2003), found a significant positive effect of buyer asset specificity on opportunism. The implication of this finding is that the level of buyer perceived opportunism will likely increase when he put specific investment in the relationship. This observation is more enlightening because the study (from Rokkan et al, 2003) divided buyer opportunism as well as supplier opportunism and each responded on how they perceived opportunism from their partner with respect to specific investments they committed in the relationship.

From this observation I do propose a positive relationship between buyer asset specificity and buyer perceived opportunism, meaning the increased buyer asset specificity will likely give rise to more buyer perceived opportunism from his partner (supplier or distributor).

H_{1a}: Buyer asset specificity increases buyer perceived opportunism.

Direct effect of supplier asset specificity

The argument raised on opportunism with respect to asset specificity do not differ with regard to sides which invest, but the differences regarding sides will occur when we start to consider the question about whom perceived opportunism are we discussing. Buyer or supplier will likely perceive an

inherent risk of opportunism when he commits specific assets, but if it is his partner who invests then he will not have to worry. If it is only supplier who invest specific asset and buyer does not, then the role then the effect of such investment will not have any significance with respect to buyer perceived opportunism. This is because of fact that the opportunism problem is associated with asset specificity and if the buyer has not invested such assets, he will not likely feel this problem.

Asset has been associated with opportunism in different studies. Coase (1987) argued that as assets become more specific and more appropriate quasi rents are created and therefore the possible gains from opportunistic behavior increases.

Asset specificity raises the prospect for opportunism (Demsetz 1991). Author added that this heightened prospect is presumed to raise the cost of transacting.

Study from Rokkan et al, (2003), did not found a significant impact of supplier asset specificity on buyer perceived opportunism towards supplier. On these grounds I do argue that when supplier invest specific investment in the relationship with the buyer, in a situation where buyer also has committed specific investment, the level of buyer perceived opportunism towards supplier will likely be reduced. Again when buyer has not committed specific investment in the relationship with supplier, there will be no significant relationship between supplier asset specificity and buyer perceived opportunism.

H_{1b}: Supplier asset specificity reduces buyer perceived opportunism.

Moderating effect of behavioral uncertainty

With respect to Wathne and Heide (2000) on classification of opportunism, aspects such as shirking for example, are more linked to behavioral uncertainty problem. In the study by Rokkan et al (2003), authors acknowledge such aspects (behavioral uncertainty) should be included in further studies with respect to opportunism (their study was limited by not including this variable). On the other hand Enderson (1988), found a positive association between performance evaluation problem and opportunism. Performance evaluation problem is a term that is mostly considered to be defined within a concept of behavioral uncertainty.

Transaction cost analysis views behavioral uncertainty as arising from the difficulties associated with monitoring the contractual performance of exchange partners (Williamson

1985). Rindefleisch and Heide (1997) as well noted that most of the studies in their review conceptualize behavioral uncertainty as the degree of difficulty associated with assessing the performance of transaction partner. Due to close definition of performance ambiguity within a concept of behavioral uncertainty, it is logical that if performance ambiguity has been found to have a positive relationship with opportunism, then it is anticipated that behavioral uncertainty will do the same, in case we separate the two terms. Since opportunism problem is arises as a result of commitment of specific assets, I do argue the existence of behavioral uncertainty will have a mediating effect on this relationship.

Basic assumption of trying to test the moderating effect of behavioral uncertainty in this relationship is due to the fact that perceived opportunism is highly associated with human element toward the relationship. Due to this assumption, behavioral uncertainty might as well impact the way which buyer perceives when it comes to specific asset commitment.
The main difference between behavioral assumptions and other relationships and constructs embedded in the structure and mechanism of a theory is that the former are more closely associated with human attitudes, beliefs and perception (Tsang, 2006)

> *H_{2a}: Behavioral uncertainty and has a moderating effect on relationship between asset specificity (supplier and buyer asset specificity) and buyer perceived opportunism*

Moderating effect of performance ambiguity:

The argument for including performance ambiguity does not differ much in terms of reasoning raised on above section regarding behavioral uncertainty, but the only different assumption here is derived from the fundamental causes for performance ambiguity. Stump & Heide (1996) noted that evaluation difficulty may be due to the efforts required or to a general lack of performance standards. In some context behavioral uncertainty is assumed to cause evaluation problem. This was noted by Rindfleisch & Heide (1997:46) when the authors pointed out that 'Transaction cost analysis claims that high levels of behavioral uncertainty increase the costs of evaluating the performance of exchange partner'.

The focus of this study is not to find out whether there are some differences in these concepts (behavioral uncertainty and performance ambiguity), but TCA literature has signalized the existence of some of the perspectives which may give rise to some fundamental causes of the two concepts. Based on the recommendations from Rokkan et al (2003) (on including

behavioral uncertainty aspect on relation between asset specificity and opportunism), a close association between performance ambiguity and behavioral uncertainty (Heide 1996, Stump & Heide 1997) as well as the positive association between performance ambiguity and opportunism (Anderson 1987; Oachi 1979) this study do suggest as well that performance ambiguity will have a mediating effect on the relationship between asset specificity and buyer perceived opportunism.

H_{2b}: Performance ambiguity has a moderating effect on relationship between asset specificity (supplier and buyer asset specificity) and buyer perceived opportunism.

4.3. Effects on Vertical Coordination

Direct effect of contractual flexibility

Flexibility defines a bilateral expectation of willingness to make adaptations as circumstances change (Heide & John 1992:35). Authors continued to argue that from supplier's perspective, it represents insurance that the relationship will be subject to good-faith modification if a particular practice proves detrimental in the light of changed circumstances.

It is not the degree to which agreements have been tightly worded *ex ante* that is of concern rather, it is the reaction toward change requests that matters (Noordewier et al 1990: 83). Also authors noted that as buyers and suppliers move from discrete continuum (where terms are more binding) they are expected to be more flexible as terms changes.

Flexibility is a sign of trust and confidence among trading partners, and basic assumption is that this might be an opening door towards vertical coordination. The other side of argument is that, flexibility is important ingredient for cooperation and when it exists for sometimes it will transform the relationship between supplier and buyer in a very positive level. This assumption will lead to the hypothesis that contractual flexibility will have a significant positive impact on vertical coordination.

H_3: Contractual flexibility has a positive impact on vertical coordination

Other effects (Asset specificity and Environmental uncertainty)

Asset specificity and environmental uncertainty has been proposed to have impact on vertical coordination. Buvik & Grøhhaug (2000), found a positive impact of both asset specificity and environmental uncertainty, but the interaction between the two terms were having a negative impact. On the other hand Frank and Henderson (1992) found similar results, but with respect to asset specificity they found R&D to have a positive impact while other form of asset specificity showed negative impact. I anticipate a positive impact of environmental uncertainty in vertical coordination but my assumption is that, in a situation dominated with contractual flexibility the effect of environmental uncertainty might be minimal. With respect to asset specificity I will have to take a note raised by Buvik and John (200) when they pointed out that vertical coordination assists buyer-seller ties to adapt better but simultaneously increases the hazard posed to the supplier's exposed specific investment. With this statement I anticipate a negative effect of asset specificity on vertical coordination is likely as well [this is supported by Frank and Henderson (1992)].

4.4 Effects on Formal Contractual Agreements

Direct effect of environmental uncertainty*:*

Environmental uncertainty assesses aspects of market turbulence and vendor-related uncertainties. Price and volume uncertainties are key aspects of this construct's domain. Spekman and Stern (1979) noted that environmental uncertainty can also be categorized in terms of external uncertainty (government regulations, economic conditions, and other related technological and volume changes) and Internal uncertainty (material tolerances, production estimates, sales forecasts and so on). Williamson (1985) indicated that the increased level of environmental uncertainty will give high chances for hierarchical governance form. With the same respect it is expected if the situation is an ongoing relationship, the increased environmental uncertainty will lead to more coordination.

On the other hand, if we view environmental uncertainty in its two components i.e. volume and technological uncertainty we can have different implications on these components. Heide & John (1990) established that the increased level of technological uncertainty will foster a choice of marketing governance so as to avoid be locked up in the technology that can will be old in a short time. This is consistent with empirical finding of Geyskens et al (2005). Anderson (1985) noted that some measures for environmental uncertainty reflect instability (complex, volatile, difficult to monitor, uncertain markets, high forecast error). Other items

reflect venturing into the unknown as the firms emphasis on new activities (new product sales, new markets).

In a study by Andersen & Buvik (2002) authors noted that the changes in market condition and technology represent a significant source of environmental uncertainty. In their study they used formative model to define the constructs.

In the same line of argument, the study makes an assumption that, when there is environmental uncertainty, it will demand frequent changes of fixed contracts a task which will be very demanding and sometimes not easy to comprehend when the turbulence is too huge and too frequent. Ivens (2005) agreed on the problematic impact of environmental uncertainty in establishing agreements. This implies that environmental uncertainty will have a negative impact on formal contractual agreements.

The other side of the observation which this study will take is on the assessment of the environmental uncertainty relation with performance ambiguity. The line of thought is that the increased level of environmental uncertainty will likely increase level of performance evaluation problem.

To the extent that uncertainty hinders the coordination of linked activities, greater uncertainty may result in mal-adaptation costs ((Leiblein & Miller, 2003:844). This observation was as well supported by Manolis et al (1997).

> *H_4: Environmental uncertainty has a negative impact on formal contractual agreement.*

Controlling the effect of specific investment

Buyer specific investment in the relationship with supplier will likely be associated with safeguarding through establishment of formal contractual agreement because of anticipation opportunism problem. Buvik & Reve (2002) found a positive association of specific investment on formal contractual agreement, but such an effect is contingent on buyer dependence. This means a weak power of buyer in the relationship will put him in disadvantaged position of negotiating contracts.

> *H_5: Commitment of specific asset specificity by the buyer will have a positive impact on formal contractual agreement*.

Controlling effect of buyer dependence.

Power may be conceptualized as a serious threat of one-sided opportunistic action, rendering the less powerful party more dependent on the other (Hawkin et al 2009). If the investor firm commits fewer resources to the trading partner, the investor firm assumes less risk of investee opportunism (Hawkin et al 2009).

With respect to unilateral dependency, Heide (1994) proposed that the unilateral dependency has a negative impact on bilateral governance in the form of flexible adjustment process. Bilateral dependency condition develops when one or both parties specializes their assets in support of exchange (Williamson 1986). Author added that such parties want to safeguard the relation against premature termination. Symmetric dependence is another term that refers to this concept.

> *In the absence of symmetric dependence an individual party will have little or no incentive to show flexibility, because no guarantee exists that such action will be reciprocated. In fact, short-term disturbances might represent an opportunity for individual parties to pursue opportunistically short-term advantages (Heide, 1994: 79)*

Macneil (1978) noted that the existence of symmetric dependence serves to align the respective parties' interests and promotes flexibility as a means of preserving the relationship. When buyer is dependent in the relationship, he will have less power to enforce the agreements or negotiation with the supplier and this will negatively affect formal contractual agreements. These findings are also supported by Buvik and Reve (2002) where they confirmed a strong negative effect of buyer dependence on formulation of contractual agreement when buyer has committed specific investments in the relation

> *H_6: Buyer dependence have a strong negative effect on formal contractual agreement than asset specificity*

CHAPTER 5

METHODOLOGY AND PROCEDURES

5.0 Study design and Sample Selection

The study was done by doing a survey of firms in Tanzania focusing on business to business producer to distributor relations. The distribution firm was a buying firm and the producing firm was supplying firm in this study setting. The distributing (buying firms) were the ones which were contacted for facilitation of this study. The buying firms that were used included small, medium and large enterprises so as to obtain enough response. The buying firm was asked to identify a very strong relation with a supplying firm. The character of relation has to reflect a high frequency, long term relations and even importance of the relation to buying firm in term of the quantity which is purchased by the buying firm from this supplier. The buying firm was then asked to use only this one relationship in answering the questionnaire. Since the instructions for filling out this questionnaire was quite necessary to be captured by respondents before filling it out, I found necessary to have personal contact with the respondents. The sample frame for this study was based on Tanzania revenue authority records for registered business of 2008.

Through personal contact with heads of Small and Medium business divisions in the country, I was able win their minds, and they were also willing to participate in this study as they found it worth going for.

Sample characteristics

25.8% of firms involved from the study were established between1990-2000, 73.2% were from established after year 2000, and the rest were established before 1990. There are many firms that were established in Tanzania after 1995 due to major economic reforms that aimed at improving local business participation by enhancing emergence of many SMEs. With respect to business turnover 30.9% of firms had an annual turnover of up to Tshs 5 million, 55.7% with annual turnover of between 5 to 200 million (exclusive), 12.4 had annual turnover of between 200 to 800 million (exclusive), and the rest with above 800 million. The number of employee these firms involved in the study was also relevant. 47.4% of the firms participated in this study had less than 5 employee, 27.8 with 5-10 employee, 11.3% had 10-15 employees, 8.2% the rest had more than 20 employees (5.2%). Data between the ranges are exclusive. With regard to amount purchased per annual, 25.8% of firms purchased from their supplier an amount of less than 10% of their total purchases, 33% with between 10-40 exclusively, 23.7% with between 40-70% exclusively and the rest were above 70%

5.1 Data collection

The major form of data collection was through a questionnaire. Due to the fact that the understanding of what I wanted the respondent to know before filling out the questionnaire, I decided to carry personal contact with respondents before delivering questionnaire to them. Once I made appointment with a respondent, which in most cases through phone call, I visited the respondent and explain to them which relation he should choose and use it in answering the questionnaire. The purpose was to avoid different respondents answering different things, which will confuse the study objective. The questionnaires were self administered. Due to little time constraint I had to deliver the questionnaire in person, and obtain appointment from the respondent on a time that I will pick it up. This method was very effective in obtaining respondents commitment to the study. About 150 firms were identified to participate in this study. Out of them, 130 firms were interested to take part in the study. 130 questionnaires were then distributed to these firms which agreed to participate in the study. From 130 questionnaires distributed 87 of them were collected on the first phase, followed by 10 questionnaires on the last phase after one reminder and follow up. The remaining 33 questionnaires were never returned. The difference between the first and second phase was not significant because the size of late phase was very minimal to cause any difference in the observation.

5.2 The Estimated Model

Linear regressive (additive and moderation) models were used to cover the conceptual framework and hypothesis established in this study. H1a and H1b were tested using equation 1, while H2a and H2b were tested using equation 2 and 3. On the other hand H3 was tested using equation 4, while equation 5 was used to test H4, H5 and H6.

$$Bopport = \beta_0 + \beta_1 BUASP + \beta_2 SUASP + \varepsilon \quad (i)$$

Where,

Bopport = Buyer perceived opportunism

BUASP = Buyer asset specificity

SUASP = Supplier asset specificity

$$Bopport = \beta_0 + \beta_1 BUASP + \beta_2 SUASP + \beta_3 BU + \beta_4 BUASPXBU + \beta_5 SUASPXBU + \varepsilon \quad (ii)$$

Where,

BU = Behavioral uncertainty

PA = Performance ambiguity

BUASPXBU = Interaction of buyer asset specificity and behavioral uncertainty

SUASPXBU = Interaction of supplier asset specificity and behavioral uncertainty

$$Bopport = \beta_0 + \beta_1 BUASP + \beta_2 SUASP + \beta_3 PA + \beta_4 BUASPXPA + \beta_5 SUASPXPA + \varepsilon \quad (iii)$$

Where,

PA = Performance ambiguity

BUASPXPA = Interaction of buyer asset specificity and performance ambiguity

SUASPXPA = Interaction of supplier asset specificity and performance ambiguity

This study supplemented other forms of relations as well covering aspects of contractual flexibility, vertical coordination, formal contractual agreement and environmental uncertainty. The models presented are additive and were used to test H3 up to H5

$$Vertcoord = \beta_{0+} \beta_1 CFlex + \beta_2 BUASP + \beta_3 SUASP + \beta_4 ENVU + \varepsilon \quad (iv)$$

Where,

Vertcoord = Vertical Coordination

$$FCA = \beta_{0+} \beta_1 ENVU + \beta_2 BUASP + \beta_3 SUASP + \beta_4 BUDEP + \varepsilon \quad (v)$$

Where,

FCA = Formal contractual agreement

ENVU = Environmental uncertainty

Some of the models indicated above included controlling variables in their analysis. At each moment when controlling variables will be used in analysis, it will be clearly indicated.

5.3 Measurement of Variables used

5.3.1 Asset specificity

Stump and Heide (1996) used five item, seven-point scale, anchored by "strongly disagree" and" strongly agree" statements in measuring buyer's specific investment. Using Anderson (1985) measurement on asset specificity, he had 7 elements that he used in evaluating this concept, but I have 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.

Examples of statements for assessing asset specificity by the buyer included,

Our production system that incorporates this item has been tailored to meet the requirements of dealing with this supplier;

We have spent significant resources to ensure that our specifications for this item fit well with this supplier's production capabilities;

Gearing up to deal with this supplier on this item required highly specialized tools and equipment on our part;

The procedures and routines we have developed to obtain this item are tailored

On the other side, the author measured supplier asset specificity as well using same scale and format but he changed some of statements. The example is as follows (Stumph & Heide 1996).

This supplier has spent significant resources to ensure the specifications for this item fit well with our firm's production capabilities;

This supplier's production system has been tailored to producing the items being sold to our firm;

Gearing up to deal with our firm on this item requires highly specialized tools and equipment on the part of this supplier;

The procedures and routines this supplier has developed for this item are tailored to the particular situation of our firm;

Our firm has some unusual technological norms and standards for this item, which have required extensive adaptations by this supplier;

Most of the training this supplier has undertaken relative to our firm's requirements for this item cannot be easily adapted for use with another customer.

When measuring asset specificity most researchers use what is called multi-item scales, normally of the Likert type. Multi-item scales contain several measures (operationalizations) in order to capture most of the concept that the researcher wishes to measure. Items are developed to capture both material and immaterial aspects of asset specificity. See, for instance, the example of measuring asset specificity by Buvik and John (1999).

Rokklan et al (2003) on their study on specific investments in marketing relations, they used 7-points likert scale of ``completely inaccurate description``/completely accurate description. Following are examples of items they used

We have made significant investments 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 systems have been tailored to meet the requirements of dealing with this supplier.

On the other had in measuring supplier-specific investments the authors used same scale and context but the items somehow changed. Example of items used in measuring supplier-specific investments included training, production system and logistic system tailored to meet the requirement of buying company. The above measures were also supported by the study carried by Heide and John (1992). This study used these items but again some minor adjustments were carried to ensure they fit with the study context.

Buvik and Reve (2002), used five items (α =0.79) in measuring supplier specific investment, while using six items (α =0.77) in measuring buyer specific investment, also same in Buvik (2000) study. In this study buyer asset specificity was measured using four items, which all of them 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 .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 $p < .01$, rejecting the null hypothesis that the correlation matrix was identity matrix. The buyer asset specificity was abbreviated by term BUASP in the analysis.

On the same grounds, Supplier asset specificity was measured using 4 items. By using factor analysis method the results from varimax rotation indicated that two of the items loaded in single component. The reliability coefficient for the variables in the component measured α = 95.91%, which was quite significant. Other measures were used for factor analysis justification like KMO, which measured at .813, indicating correlation among items were significant. Bartlett's test as well measured at λ^2= 573.517 which was significant at $p < .01$, rejecting the null hypothesis that the correlation matrix was identity matrix. Supplier asset specificity was abbreviated by term SUASP in the analysis.

5.3.2 Buyer Perceived opportunism

On the study carried by Rokkan et al (2003) on Opportunism they used seven-point likert-type scale having ``completely inaccurate description``, ``completely accurate description``. Following are examples of the items they used.

On occasion, this supplier lies about certain things in order to protect their interests;
This supplier sometimes promises to do things without actually doing them later;
This supplier does not always act in accordance with our contract(s);
This supplier sometimes tries to breach informal agreements between our companies to maximize their own benefits;
This supplier sometimes uses unexpected events to extract concessions from our firm.

This study in particular used 5 items above to measure this concept. By using factor loading, all components loaded into a single component. Further the reliability analysis measured a level of $\alpha = 70.89\%$ which is quite significant. KMO and Bartlett's test measured at .850 and 1106.298 (significant at $p < .01$) respectively, implying a significant level of correlation among the items, leading to rejection of null hypothesis that the correlation matrix was identity as well as justifying the factor analysis attempt. In the analysis this concept will be abbreviated by term Bopport

5.3.3 Contractual Flexibility

Flexible adjustment processes, was measured by a set of items describing the parties' expected flexibility in response to changing circumstances (Heide 1994). Measuring the flexibility Heide and John (1992) and Heide (1994) used 7-point likert scale consisting of three items of Completely inaccurate description/completely accurate description. Examples of items used on this study included the following;

Flexibility in response to request for changes is a characteristic of this relationship;
The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances;
When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms.

This study in trying to measure this concept it used all the three items and all loaded in a single component. The reliability analysis measured a level of α = 78.92% which was significant. KMO and Bartlett's test indicated a measure of .623 and λ^2 = 98.234 (significant at p < .01) respectively. The findings from these two measured indicate a significant correlation between the variables that supported as well the factor analysis method. In the analysis this term was abbreviated by CFLEX

5.3.4 Supplier and Buyer dependence

Heide (1994), agreeing with the measures developed by Kaufmann and Stern (1988), used four items in measuring both buyer and supplier dependence. These items were supplemented using 7-point likert scale ranking the statements of completely accurate description/completely inaccurate description.

Elements that were used in measuring buyer dependence included:

If we decided to stop purchasing from this supplier, we could easily replace their volume with purchases from other suppliers;

There are many competitive suppliers of these components;

Our production system can easily adapted to using components from a new supplier;

Dealing with a new supplier would only require a limited redesign and development effort on our part.

Items for Supplier dependence measurement included:

If we stopped buying from this supplier, they could easily replace our volume with sales to some other buyer;

It would be relatively easy for this supplier to find another buyer for these components;

Finding new buyers for these components would not have a negative impact on the price this supplier can charge;

If the relationship with our company was terminated, it would not hurt this supplier's operations.

One means to validate the reciprocal nature of TCE theory as it relates to dependence is to measure opportunism at both sides of the dyad (Hawkin et al 2009: 67)

Buvik & Reve (2002) in measuring supplier dependence they used two item (α =0.67. Items used included; should the sales to our company cease, it would be very difficult for this supplier to find an alternative purchasers; should the sales to our company cease, our supplier would face severe economic problem.

Also in measuring buyer dependence Buvik and Reve (2002) used two items (α =0.77) in measuring this concept. The items they used included; should our supplier terminate its activities, it would be very difficult for our firm to find substitute suppliers; our firm has access to several suppliers which can easily replace this supplier. The potential for opportunism will represent a disincentive for the dependent party to show forbearance or flexibility in the first place (Heide 1994). Rokklan et al (2003) used dollar size on sales between supplier and buyer to measure relative size between the firms. Again it is the intention of this study to build upon these instruments so as to facilitate the empirical consistence.

For this study in particular the buyer dependence was measured using four items. Using factor loading analysis the four items loaded in 1 component. Further reliability analysis indicated α =96.98% which is quite significant. KMO and Bartlett's test measure at a level of .854 and λ^2 = 507.724 (significant at $p < .01$) respectively, supporting the idea of high correlation among variables and the necessity for proceeding to factor analysis. The concept of buyer dependence is abbreviated by BUDEP in the analysis.

On the other hand supplier dependence was measured by four items. By factor loading analysis, the result from viramax rotation showed that all the items loaded highly into one component. Further reliability analysis indicated α = 95.53%. KMO and Bartlett's test also supported these findings by measuring .854 and λ^2 = 507.724 (significant at $p < .01$) respectively. The concept was abbreviated by the term SUPDEP.

5.3.5 Formal contractual agreements.

Buvik & Reve (2002), used five items (α =0.73) in measuring the formal contract with seven likert scale of completely disagree/completely agree.

Items used were as follows;

Written contracts regulate our firm's rights to insight and documentation of production costs at this supplier;

Firm agreements stipulate all aspects concerning the exchange of information about prices and market condition between our firms;

Written contracts stipulate all aspects regarding parties' tasks and influence in quality assurance;

Firm contract stipulates all aspects regarding the tasks and influence of two parties in the quality control of the products we purchase from this supplier;

Written contracts stipulate all aspects regarding the selection of sub-suppliers for the products we order from this supplier.

This study after carried several adjustment using factor loading analysis due to cross relation of items between components, the final result was to use three items in measuring this concept. All three items by using factor loading analysis measured component 1. Reliability analysis indicated a measure of $\alpha = 81.5\%$ which is quite above the cutting point. This was well confirmed by KMO and Bartlett's test which measured at .648 and $\lambda^2 = 117.283$ (significant at $p < .01$) respectively, implying a very high correlation among the measure items.

5.3.6 Behavioral Uncertainty:

This dimension was also measured using 7 points likert scale by identify different elements related to difficulties in measuring performance, for example one element was "we are cannot able to estimate effectiveness of the partner in relationship". These and other elements were ranked using this scale and 1 indicated lowest level of difficult in measuring performance where 7 will indicate highest level. Also to be sure that the elements are measuring the same dimension, the factor loading aspect was used in this respect.

Most studies conceptualize behavioral uncertainty as the degree of difficulty associated with assessing the performance of transaction partner (Rindfleisch & Heide 1997). Multi-item scales, has also been used in measuring this concept. Mainly the emphasis has been on how hard or difficult is it in terms of evaluating performance of the partner in relationship. In some relationship quality or efficiency may be the main thing they want the partner to do, and on this respect measurement of behavioral uncertainty will require items that are related to quality and efficiency as well. The study by Buvik and Andersen (2002) for example

international versus domestic setting impliedly used dummy variables where 1 indicates international relation and there is expectation of behavioral uncertainty, and 0 indicates none i.e domestic.

Again most instruments developed to measure behavioral uncertainty were related to employee-employer relations especially sales force as the agent. Example of these studies includes Anderson and Scmittlein (1984) who observed integration of sales force (empirical examination), Javorski & Macinnis (1989), who worked on marketing jobs and Management control as well as Ramaswami et al (1997) information asymmetry between salesperson and supervisor. Though items that were used might not make sense when duplicated to other forms of studies like buyer-supplier relations, their contextual meaning still make sense. However, I will borrow some elements that were highlighted in a discussion paper developed by Andersen and Buvik (2001) on Methodological discussion.

Items for measuring behavioral uncertainty included.

We are uncertain about how our supplier organizes purchases used for input;

Our knowledge about our supplier's production process is limited;

We have little knowledge about the terms of trade she/he offers to other buyers;

It is difficult to interpret how the supplier perceives the present relationship with our firm;

We are uncertain about our supplier's future plans for our relationship.

This study used all the five items in measuring this concept. By factor loading analysis all items loaded into one component. Further the reliability analysis measured $\alpha = 77.61\%$. KMO and Bartlett's test measured at .764 and $\lambda^2 = 134.549$ (significant at $p < .01$) respectively, implying the justification for factor analysis and support for the idea that the items are significantly correlated in measuring this concept. This concept was abbreviated by term BU.

5.3.7 Performance ambiguity

Stump and Heide (1996) used four-item, seven-point scale, anchored by "strongly disagree" and"strongly agree" statements in measuring the performance ambiguity.

Example of statements used included;

Items were precise standards by which to assess this supplier's performance is not readily available;

Evaluating this supplier's performance is a highly subjective process;

This supplier is performing so many different tasks that it is difficult to ascertain whether a good job is being done;

It is difficult to determine whether agreed upon quality standards and specifications are adhered to.

Anderson (1985), in measuring performance ambiguity he included items that measures behavioral uncertainty and environmental uncertainty.

> *The performance ambiguity scale describes the inherent difficulty faced by the buyer in accurately evaluating the supplier's performance. Evaluation difficulty may be due to the efforts required or to a general lack of performance standards (Stump & Heide 1996).*

Again it is important to note that concept of performance ambiguity has been used to imply uncertainty and this raise the question whether behavioral uncertainty or environmental uncertainty can replace this term. Anderson (1985) when made the study on sales people as outside agents he coined this scenario as follows ``Uncertainty exists for the manager of a`` sales force when performance is ambiguous. Gosh & John (2005) in measuring performance ambiguity used 6 items and were ranked by 7-point likert scale of 1-strong disagree to 7-strongly agree. Examples of elements that were used included:

> *It is inadequate to evaluate this supplier based on items(s) price; Evaluating the supplier's performance is a highly complex process; It is difficult to verify whether this supplier is performing all of its contractual obligations under this agreement; There would be significant costs associated with one-site monitoring of the supplier; Precise standards to assess this supplier's performance is not readily available.*

This study used four items in measuring this concept and all loaded into one component with reliability coefficient $\alpha = 70\%$. On the other side KMO and Bartlett's test measured at .771 and $\lambda^2 = 65.647$ (significant at $p < .01$) respectively implying a very significant correlation of these terms in measuring the concept. This concept of performance ambiguity was abbreviated by term PA in the analysis.

5.3.8 Environmental uncertainty:

Multi items scales has mostly being used in many studies for this variable. The elements used for explaining instabilities of environment are the risks in adding or investing in markets. Other studies broadened the environmental uncertainty into technological and volume

uncertainty where the former relates to limited ability in predicting technical aspects of relationship while later refers to limitations in predicting the volume aspects of relationship (this is mostly fluctuation that cannot be foreseeing). Other studies as well included the element of unpredictability and changeability o the environment.

This measure comprises five items consisting of 5-point strongly agree/strongly disagree scales in some studies. The mean of the five items was used as the measure of uncertainty (Noordiwier et al 1990). Anderson (1985) on items measuring environmental uncertainty noted that some items reflect instability (complex, volatile, difficult to monitor, uncertain markets, high forecast error) and other items reflect venturing into the unknown as the firm's emphasis on new activities(new product sales, new markets).

> *Among all the TCA constructs, environmental uncertainty seems to be the most problematic from a measurement standpoint. Specifically, there appear to be two competing operationalizations of this construct. The most commonly held perspective emphasizes the unpredictable nature of the external environment, whereas the second view examines both unpredictability and complexity (Rindfleisch & Heide 1997:42)*

The most popular operationalization of environmental uncertainty focuses on the unpredictability of the environment (Rindfleisch & Heide 1997:42). Buvik and John (2000) used four items (α =0.54) in measuring the uncertainty aspect. Items they used included;

> *The demand for our end products varies continually;*
>
> *The demand conditions for our supplier's product are very irregular;*
>
> *Our most important competitors are regularly carrying out product adjustment and development of new product*
>
> *The products we purchase from our suppliers have very high innovation rates and short life cycles.*

The reliability of these elements above was quite enough, so I also used some of them in measuring this concept in this study. The study used three items in measuring this concept after performing necessary adjustment using factor loading analysis. The three items used all loaded into one component. Further the reliability analysis indicated α = 82.78% which is quite significant. KMO and Bartlett's test measured .859 and λ^2 = 417.069 (significant at $p <$ .01) respectively, implying a significant correlation of the terms in measuring the concept. This concept in the analysis was then be abbreviated as ENVU

5.3.9 Vertical coordination

Vertical coordination is the purposive organization of the flow of activities and information between the transacting parties (Buvik and John 200:56). Buvik and John (2000) measured Vertical coordination using 5 items (α =0.78). The items used from this study also were extracted from works done by Heide & John (1990); Reve and Stern (1986). These items included;

We regularly exchange information about production costs with this supplier;

We regularly consult with this supplier about its selection of raw materials and components incorporated in the product (s) we order;

We regularly exchange information about price development and market conditions with this supplier;

We cooperate closely with this supplier on quality control of products delivered to our company.

This study used three items in measuring this concept. By factor loading analysis the three items loaded into 1 component. The reliability analysis indicated alpha was at 81.59% which was quite significant. The results was also confirmed by KMO and Bartlett's test which measured .717 and λ^2 = 97.153 (significant at $p < .01$), respectively signifying a very strong correlation of items measuring this concept.

5.4 SUMMARY OF MEASUREMENTS USED IN THIS STUDY.

TABLE 4

CONSTRUCT	**ITEMS**
Buyer Asset specificity (BUASP) (5 Items) λ^2 =501.174 p < .01 α = 93.35% KMO = .796,	1.We have made significant investment in equipment dedicated to our relationship with this supplier 2. We have made extensive internal adjustments in order to deal effectively with this supplier 3. Training our people to deal with this supplier has involved substantial commitments of time and money 4. Our logistics system have been tailored to meet the requirements of dealing with this supplier
Supplier Asset Specificity (SUASP) (4 Items) λ^2 =573.517 p < .01 α = 95.91 KMO = .813	1.Supplier has trained their employees to deal with our firm 2.Supplier has made substantial commitment of time and money 3.Supplier production systems has been tailored to produce for our firm. 4. Supplier logistics system have been tailored to meet the requirements of dealing with our supplies.
Buyer perceived opportunism (BOPPORT) (5 Items) λ^2 =1106.298 p < .01 α = 95.19% KMO = .850	1.On occasion, this supplier lies about certain things in order to protect his interest. 2. This supplier sometimes promises to do things without actually doing them later. 3.This supplier does not always act in accordance with out contract (s). 4. This supplier sometimes uses unexpected events to extract concessions from our firm.
Behavioral uncertainty (BU)	1.We are uncertain about how our supplier organizes purchases used for input

(5 Items) λ^2 =134.549 p < .01 α = 77.61% KMO= .764	2. Our knowledge about our supplier's production process is limited. 3. We have little knowledge about the terms of trade the supplier offers to other buyers. 4. It is difficult to interpret how the supplier perceives the present relationship with our firm. 5. We are uncertain about supplier's future plans for our relationship.
Performance ambiguity (PA) (4 Items) λ^2 =65.647 p < .01 α = 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.
Environmental Uncertainty (EU) (3 Items) λ^2 =417.069 p < .01 α = 82.78% KMO = .859	1 Demand for this product varies continually. 2. Our most important competitors are regularly carrying out product adjustment 3. Product we are purchasing from this supplier have high innovation rate and varies continually.
Vertical Coordination (VertCoord) (3 Items) λ^2 =97.153 p < .01 α = 81.59% KMO = .717	1.We regularly exchange information on this product with this supplier 2. We regularly exchange information about price development and market conditions with this supplier 3. We cooperate closely with this supplier on quality control of product delivered to our firm.

Contractual Flexibility (CFLEX) (3 Items) $\lambda^2 = 98.234$ $p < .01$ $\alpha = 78.92\%$ KMO = .623	1 Flexibility in response to request for changes is a characteristic of this relationship 2. The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances 3. When some unexpected situation arises, the parties would rather work out a new deal than hold each other to
Buyer dependence (BUDEP) (4 Items) $\lambda^2 = 507.724$ $p < .01$ $\alpha = 96.98\%$ KMO = .854	1 If we decide to stop purchasing from this supplier, we could easily replace this volume with purchase from another supplier. 2. There are many competitive suppliers of this product 3. Our firm will not have difficulties in using product from another supplier 4. Changing to another to another supplier will require us less effort and cost
Supplier dependence (SUDEP) (4 Items) $\lambda^2 = 507.24$ $p < .01$ $\alpha = 95.53\%$ KMO = .854	1 If we stopped buying from this supplier, he would easily replace our volume with another buyer. 2. If we stopped buying from this supplier, he would easily replace our volume with another buyer. 3. Finding another buyer would not affect the price this supplier charge. 4. If the relationship is terminated, it will not hurt this supplier.
Formal Contractual Agreements (FCA) (3 Items) $\lambda^2 = 117.283$ $p < .01$ $\alpha = 81.5\%$ KMO = .648	1 Firm agreements stipulate all aspects concerning exchange of information about price and market conditions between our firms. 2. 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 3. Written contracts stipulate all aspect regarding the order selection of sub-suppliers for the product we order from this supplier.

CHAPTER 6

DATA ANALYSIS AND FINDINGS

6.0 Introduction

This chapter provides an empirical analysis of the relations predicted in the hypothesis. The relationship between the variables will statistically be presented followed by brief comments, but the next chapter will give more literature input of the arguments that will be raised in this chapter. Also at the end of the analysis there will be a presentation of the summary of the findings.

6.1 The Response Rate

Total of 130 respondents were involved in this study, where 97 of them where able to give a response to the study. Out of 97, 87 were those who responded early, 10 were late respondents while those who did not able to respond at all were 33. The response rate was about 70%. The difference between early and rate respondents were insignificant. The table below presents the summary of response.

TABLE 5: Response rate

S/N	Total No. of questionnaires	No of questionnaires filled and returned	Early Response	Late response	Non response	Response rate
1	130	97	87	10	33	70%

Source (Author construct from survey, 2010)

6.2 REGRESSION RESULTS

6.2.1 EFFECTS ON BUYER PERCEIVED OPPORTUNISM

H1a- H1b: Direct Effects of buyer and supplier asset specificity

Taking model 1 in table 6 below, the direct impact of buyer asset specificity on buyer perceived opportunism is significant and positive ($t = 3.236$, $p < .01$). On the other hand supplier asset specificity was not significant in this model. Further more Eq 1 that is represented by model 1 in table 6 below was significant (R^2 Adj = .083, $F(2,95)=5.329$, $p <.01$), but it did not explain more variation in comparison to model 2 which took account of the moderation effect of behavioral uncertainty (this will be discussed later on the mediation effect). The extended model 4 in table below did not significantly affect the stability of regression coefficients of buyer asset specificity, implying the relevance of this variable in the determining the relationship with buyer perceived opportunism

TABLE 6

DEPENDENT VARIABLE: BUYER PERCEIVED OPPORTUNISM

	MODEL1		**MODEL 2**		**MODEL 3**		**MODEL 4**	
Independent Variables	**b**	**t**	**b**	**t**	**b**	**t**	**b**	**t**
CONST	9.6E-18	.00	-002	.017^{ns}	.001	.006	-.018	-.179^{ns}
BUASP	.316	3.236**	.166	1.669*	.317	2.981**	.203	1.829*
PA	-	-	-	-	.007	.068	-.094	-.710^{ns}
BUASPXPA	-	-	-	-	-.001	-.004*	-.313	-1.489^{ns}
BU	-	-	-.103	-1.039^{ns}			.012	.094^{ns}
BUASPXBU	-	-	.289	2.656**			.543	2.121*
SUASP	.041	.416					-.037	-.365^{ns}
SUASPXPA							-.204	.065^{ns}
SUASPXBU							.193	1.308^{ns}
	R^2 Adj =.083		R^2 Adj =.133		R^2 Adj =.071		R^2 Adj =.084	
	F (2, 95) = 5.329 P <.01		F (3, 94) = 4.085 P <.01		F (3, 94) = 3.402 P <.05		F (5, 92) = 5.532 P <.05	

Source (Author construct from survey, 2010)

* Indicates p <.05 (two - tailed)

** Indicates p < .01 (two-tailed)

Note: n.s = not significant

b = Unstandardized coefficients

t = t-values.

The implications of these findings do support H1a, which suggested buyer asset specificity to increase buyer perceived opportunism. This is consistency with Rokkan et al (2003) and Anderson (1988) on a positive coefficient of buyer asset specificity. On the other hand H1b is not supported as predicted

H2a-H2b: The Moderating Effects of behavioral uncertainty and performance ambiguity

Model 2 on table 6 above examines the moderating effect of behavioral uncertainty on the relationship between buyer asset specificity. Eq2 will be analyzed using model2, but this model removed supplier asset specificity after consideration of its insignificant effect on buyer perceived opportunism in table 6 above and the correlation matrix table 7 below. Note that all the interaction variables were mean centered to reduce the problem of multicollinearity.

Table7

CORRELATION MATRIX

	BU	PA	BUASP	SUASP	BUASPX BU	BUASPX PA	SUASPX BU	SUASPX PA	BOPPORT
BU	1	.600**	.012	-.002	-.084	-.164	.406**	-.061	-.155
PA		1	.007	.158	-.194	-.331**	-.055	-.201*	-.114
BUASP			1	.004	.412**	.337**	-.052	-.175	.234**
SUASP				1	-.074	-.205*	-.055	-.163	.928
BUASPXBU					1	.833**	-.024	-.036	.226**
BUASPXPA						1	-.024	-.044	.215*
SUASPXBU							1	.577**	-.016
SUASPXPA								1	-.073
BOPPORT									1
Means	.000	.000	.000	.000	.012	.0071	-.0021	.1570	.00
Standard deviation	1.00	1.00	1.00	1.00	.764	.9012	1.0858	1.0452	1.00

Source (Author construct from survey, 2010)

* Indicates significance at p<.05

** Indicates significance at p<.01

Model 2 in table 6 was found to be fit and significant (R^2Adj = .133, F (3, 94) = 4.085, p < .01), meaning the moderating effect of behavioral uncertainty is significant. Using behavioral uncertainty as a mediating variable increased the initial model's (direct effects of buyer asset specificity and supplier asset specificity) capacity by explaining more variation (13.3% versus 8.3%). This has supported H2a meaning behavioral uncertainty has a moderation effect on the

relationship between buyer asset specificity and perceived opportunism. Model 3, which examined the moderating effect of performance ambiguity on this relationship, did not turn out to be very significant compared to behavioral uncertainty moderating effect though it was still significant. The correlation matrix table 7 above indicated this pattern as well. The overall model of the moderating effect of performance ambiguity was significant but it decreased the initial model predictions (model 2). Further more the inspection of the interaction terms (buyer asset specificity and performance ambiguity) was significant though to not very strong. This leads to partial support of H2b.From the analysis above the very significant model is model 2 which can be summarized as follows:

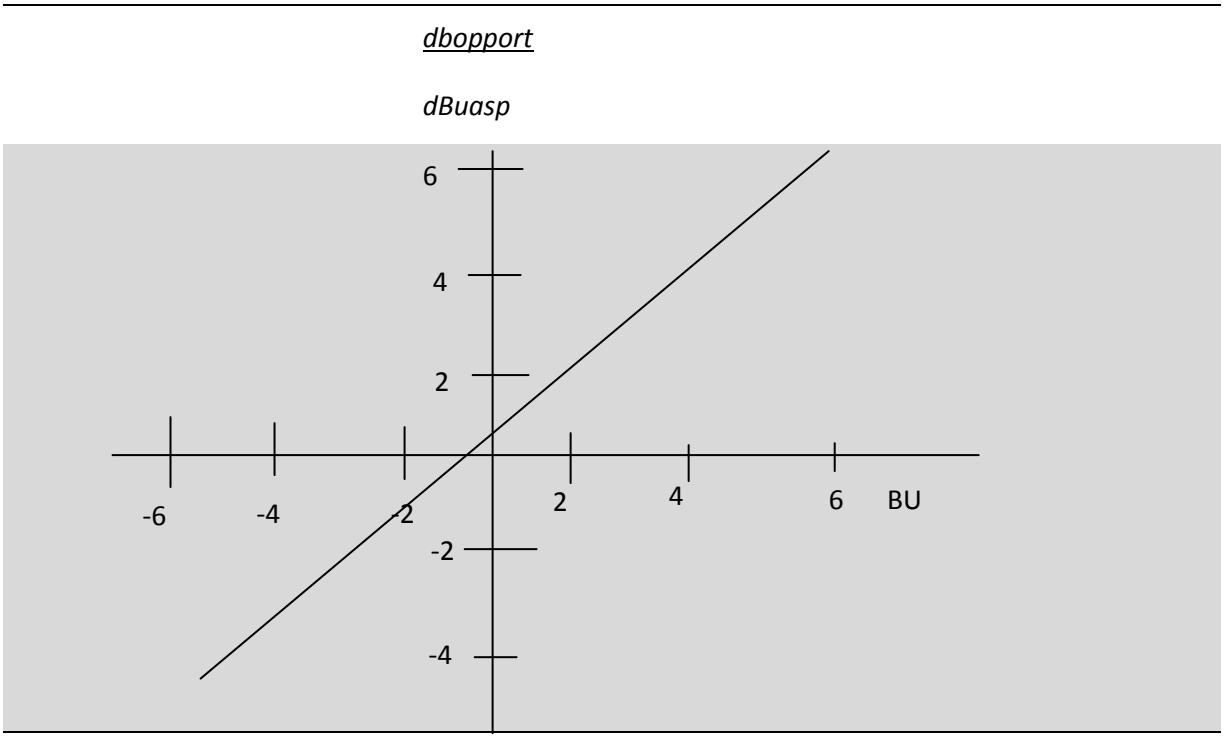
BOPPORT =.166BUASP +.289BUASPXBU

$\frac{dBopport}{dBUASP} = .166 + .289BU$

The figure below will help in simplifying the mathematical explanation above.

Figure2

IMPACT OF BEHAVIORAL UNCERTAITNY ON THE RELATION BETWEEN BUYER ASSET SPECIFICITY AND BUYER PERCEIVED OPPORTUNISM



Source (Author construct form survey, 2010)

6.2.2 EFFECTS ON VERTICAL COORDINATION

H3: Effect of contractual flexibility

In measuring the direct effect of contractual flexibility on vertical coordination, other variables were used as well so as to ensure that the true significance of this variable was not a result of other variables. Model 1 in table 8 used to examine Eq 4. The results has indicated that model 1 which uses only contractual flexibility as independent variable was significant and positive as predicted (R^2Adj = .184, F (1, 96) = 22.265, P <.001).

Implication of the findings is that contractual flexibility explains about 18.4% of the total variation. When asset specificity and environmental uncertainty were added in model1 (model 2 in table 8 below) the significance did not increase but the level of variance explained increases (from .184 to .192). Extended model 3 did not significantly affect the stability of regression coefficient of contractual flexibility. H3 is supported but further discussions on table 8 will be on the discussion section.

TABLE 8

DEPENDENT VARIABLE: VERTICAL COORDINATION

	MODEL 1		MODEL2		MODEL 3	
Independent variables	b	t	b	t	b	t
CONST	-9E-17	.000	-1.3E-16	.000	-.009	-.095
CFLEX	.439	4.8**	.466	4.8**	.454	4.8**
BUASP	-	-	-.055	-.583	-.061	-.66
SUASP	-	-	-.129	-1.163	-.165	-1.67*
ENVU	-	-	-.107	-1.162	-.127	-1.36
BUASPXENU			-	-	-.113	-1.17
	R^2 Adj = .184		R^2 Adj = .192		R^2 Adj = .196	
	F (1, 96) = 22.7		F (2, 95) = 6.721		F (4, 93) = 5.672	
	P <.001		P <.001		P<.001	

Source (Author construct form survey, 2010)

*Indicates p<.05 (One-tailed)

**Indicates p<.01 (two-tailed)

The inspection of correlation matrix on table 9 below indicated that contractual flexibility is positively related to vertical coordination, while supplier asset specificity was negatively related to this concept, but the remaining variables did not show significant correlation with

vertical coordination. The anticipation derived from Buvik & Grøhhaug (2000) with respect to positive impact of environmental uncertainty and asset specificity on vertical coordination was not supported but the negative effects of asset specificity that was found by Frank and Henderson (1992) was supported.

TABLE 9

CORRELATION MATRIX

	1	2	3	4	5	6
1.VERTCOORD	1					
2.CONFLEX	..439**	1				
3.SUASP	-.044*	.205*	1			
4.BUASP	-.134	.143	-.068	1		
5.ENVU	-.028	.112	.069	-.024	1	
6.BUASPXENVU	-.109	-.164*	-.342**	-.004	-.241*	1

Source (Author construct from survey, 2010)

* Significance at $p < .05$

** Significance at $p < .001$ (2-tailed)

Though the focus of this analysis was not to find out the influence of these variables apart from contractual flexibility, but it is important to note that their inclusion are relevant due to the fact that this study has been done in a different setting (developing economy) where most literature on this subject are found in developed economies. In spite of the different location of the study, the prediction of the negative effect from buyer asset specificity does not contradict with standing literature.

Other effects (Asset specificity and environmental uncertainty)

This study has found a negative influence of asset specificity (buyer asset specificity) on vertical coordination (model 3 in table 8 and correlation matrix in table 9). This negative effect of asset specificity does not contradict with Frank and Henderson (1992). Again the analysis did not found a direct significant effect of environmental uncertainty as was noted in Buvik & Grøhhaug (2000) and Frank and Henderson (1992).

In spite of such results I still agree on the influence of both asset specificity and environmental uncertainty in the vertical coordination. For instance from Model 2 in table 8, the inclusion of asset specificity and environmental uncertainty raised the model prediction i.e. Adjusted R^2 by .008 (from .184 to .192). On the other hand model 3, which added the interaction effect of buyer asset specificity and environmental uncertainty, increased the level of Adjusted R^2 by .012 (from .184 to .196).

6.2.3 EFFECTS ON FORMAL CONTRACTUAL AGREEMENT

H4 Effect of Environmental uncertainty

Mode 1 in table 10 below represents equation 5 that predicted a direct environmental effect on forma contractual agreement. Four controlling variables (buyer asset specificity, supplier asset specificity, buyer dependence and supplier dependence) as well were used in table 10 below and four different models were tested to see which represents the concept well.

Environmental uncertainty was significant in predicting a negative impact of on formal contractual agreement ($t = -1.837$, $p < .05$), but as a model it has explained very small percentage of total variation though significant ($R^2 = .024$, $F(1, 96) = 3.376$). On the other hand this variable does not seem to retain its significance when controlling for other variables and in particular buyer dependence even though the stability of regression coefficient (for environmental uncertainty) does not change much.

In comparison to model 3 in table 10 above (used four variables) which explained about 25% of the total variation, mode 1 was less relevant though significant. The most significant variable found to predict formal contractual agreement was buyer dependence (see model 3 and 4 in table 10 above). When buyer dependence is used together with environmental

uncertainty and other controlling variables, the only significant variable in the model is buyer dependence (this is true both in model 3 and 4 in table 10 above).

TABLE 10

DEPENDENT VARIABLE: FORMAL CONTRACTUAL AGREEMENT

	Model 1		Model 2		Model 3		Model 4	
Independent variables	b	t	b	t	b	t	b	t
CONST	-6.1E-18	.000	-8.8E-18	.000	-5E-18	.000	.006	.07
ENVU	-.185	-1.837*	-.162	-1.65*	-.136	-1.53*	-.123	-1.327
Controlling Variables								
BUASP	-	-	.261	2.659**	.115	1.204	.111	1.099
SUASP	-	-	.119	1.214	.107	1.207	.126	1.360
BUDEP					-.446	.096**	-.445	-4.6**
SUDEP							.015	.167
	R^2 Adj = .024		R^2 Adj = .085		R^2 Adj = .249		R^2 Adj = .238	
	F (1, 96) = 3.376		F (3, 94) = 3.971		F (5, 92) = 7.367		F (7, 90) = 5.28	
	P < .05		P < .01		P < .01		P < .01	

Source (Author construct from survey, 2010)

*Indicates P < .05 (one-tailed)

**Indicates p < .01 (2-tailed)

Apart from the results in table 10 above, the correlation matrix table 11 below highlights the contribution of each variable used in the model on the dependent variable as well as the relationship between the variables themselves. The results support the findings observed from model 3 and 4 in table 10 above signifying a very significant negative impact of buyer dependence and in addition buyer asset specificity was significantly negatively correlated with formal contractual agreement.

Also environmental uncertainty was found to be significantly negatively related to formal contractual agreement as was predicted in H4. The findings though support H4 the effect of buyer dependence is strongly significant.

TABLE 11

CORRELATION MATRIX

	1	2	3	4	5	6
1. BUASP	1	.004	-.3**	.122	-.08	.28**
2.SUASP		1	-.022	.061	.051	.112
3.BUDEP			1	.143	.083	-.5**
4.SUDEP				1	-.04	-.025
5.ENVU					1	-.178*
6.FCA						1
Mean	.00	.00	.00	.00	.00	.00
Standard deviation	1.00	1.00	1.00	1.00	1.00	1.00

Source (Author construct from survey, 2010)

*Indicates P < .05 (one-tailed)

**Indicates p < .01 (2-tailed)

H5: Controlling for effect of asset specificity

When a buyer or supplier commits specific assets into a relationship, he will expect to put safeguard to these assets through formalization of contracts. The findings support this hypothesis by showing a significant positive beta value of buyer asset specificity (2.67, p < .01). This is as well consistency with Buvik & Reve (2002). Again the model 2 (R^2 Adj =. 085 F (3, 94) = 3.971, p < .01), which did not include the aspect of buyer dependence was significance more than model 1 (which had only environmental uncertainty), by increase of Adj R^2 of about .061. This increase is very large suggesting that the inclusion of asset specify in the model was quite relevant.

H6: Controlling the effect of buyer dependence

The effect of buyer dependence was predicted to negatively affect the formal contractual agreements because the buyer will be in disadvantaged position with respect to negotiations. This study has supported this argument by the use of model 3 (R^2 Adj = .249, F (5, 92) = 7.367, $p < .01$) in table 10. The effect of buyer dependence in the model was very robust (increased Adj R^2 by .164) This suggest that buyer dependence has a very strong negative effect on formal contractual agreement than environmental uncertainty itself and asset specificity combined. The other side of this implication is that environmental uncertainty and asset specificity stop to be determinants of formal contractual agreement when there is buyer dependence. The findings are still consistency with Buvik & Rev (2002) with respect to strong negative effect of buyer dependence on formal contractual agreement.

6.3 Summary of findings

Table 12

HYPOTHESIS	**RESULTS**
H1a	Supported
H1b	Not supported
H2a	supported
H2b	Partial Supported
H3	Supported
H4	Supported
H5	Supported
H6	Supported

Source (Author construct from analysis, 2010)

CHAPTER 7

DISCUSSION, CONCLUSION AND IMPLICATION FOR FUTURE STUDIES

7.0 Introduction:

This chapter will present the discussion on the analysis made in chapter 6. There will be a discussion for each concept that was measured i.e. buyer perceived opportunism, vertical coordination and formal contractual agreement. Further this chapter will draw some theoretical and practical implications and final close the subject by a conclusive remark.

7. 1 BUYER PERCEIVED OPPORTUNISM

Buyer perceived opportunism was found to be increased by presence of buyer asset specificity as was assumed in the H1a. Further the moderating effect of behavioral uncertainty was found to be significant (model 2 and 3 in table 6) and it also improved the level of variance explained in comparison to model 1 in table 6 which had only buyer asset specificity as independent variable. Again the results from the mediation effect of behavioral uncertainty on the relationship between buyer asset specificity and perceived opportunism were as well in accordance to predictions in H2a. Both in table 6 and 7, the direct effect of supplier asset specificity on buyer perceived opportunism was not significant, implying that H1b was not supported. The extended model 4 in table 6 did not affect the regression coefficients of buyer asset specificity, implying the significance of this variable in predicting opportunism.

Behavioral uncertainty as an individual variable did not have any significance impact on the buyer perceived opportunism nor performance ambiguity. The correlation matrix in table 7 indicated performance ambiguity and behavioral uncertainty to be moderately related (.600), but this still this did not account for a problem of multicollinearity because the level of association did not exceed the cutting point of +/-.600 as suggested by Hair et al (2007). The moderating effect of behavioral uncertainty and performance ambiguity in the relation between asset specificity and buyer perceived opportunism were significant in support of H2a and H2b, but the effect of behavioral uncertainty was larger than that of performance ambiguity. Moderating effect of behavioral uncertainty (model 2 in table 6) was able to explain about 13.3% of the total variation, where the effect of performance ambiguity as a moderating effect was able to explain 7.1% of the variation which is smaller even than the direct effect of buyer asset specificity (model 1 in table 6) that explained about 8.3%. With

same respect, the extended model 4 in table 6 did not affect strongly the stability of regression coefficients for the interaction between buyer asset specificity though there were slightly improvements. The results from table 6 that showed a less moderating effect of performance ambiguity as compared to behavioral uncertainty as well as the results from the correlation matrix on table 7 that indicated a very close association between behavioral uncertainty and performance ambiguity. It will be logical to reduce the model of buyer perceived opportunism to include buyer asset specificity and the interaction effect of buyer asset specificity with behavioral uncertainty (see model 2 in table 6). The reduced model is what was summarized in figure 2, which involved a relationship between a partial derivative of buyer perceived opportunism per buyer asset specificity versus behavioral uncertainty.

The results do not refute Demsetz Harold (1991) and Rokklan et al (2003) findings on the mixed results of asset specificity role on perceived opportunism. The assumption regarding supplier asset specificity on a relation will result into reduced buyer perceived opportunism. The findings indicated a negative standardized beta value of supplier asset specificity on the relation but this was not significant. By no support of the hypothesis regarding supplier asset specificity role in reducing buyer perceived opportunism, does not make conclusive argument because other methodological approach or another setting different from Tanzania environment might yield a different result. I do also argue that buyer perceived opportunism might be reduced by other factors which are considered to be more important in social-economic setting of Tanzania.

7.2 VERTICAL COORDINATION:

The result from table 8 has supported the H3 on a positive impact of contractual flexibility on vertical coordination. Model 1 in table 8 with only contractual flexibility as a predictor variable was very significant than all models in terms of F value (22.7, $p < .001$), and it was able to explain about 18.4% of the total variation though there were slightly increments of .008 when asset specificity and environmental uncertainty were added (model 2 in table 8), and .012 when the interaction effect of buyer asset specificity and environmental uncertainty were added (model 3 in table 8).

While in model 1 and 2 the effect of asset specificity on vertical coordination was not significant, the results from extended model 3 in table 8 indicate that supplier asset specificity has a negative impact on vertical coordination which was consistent with Frank and

Henderson (1992. The results from this extended model have also indicated that regression coefficient for contractual flexibility was very stable. Correlation matrix in table 9 has well indicated a significant negative impact of supplier asset specificity on vertical coordination. For me it seems most small business firms in Tanzania due to their small size relative to the supplying firms (manufactures/distributors) their investment in asset specificity has less role to influence the type of relations but the suppliers have more voice on this and when these suppliers put their specific assets they will likely want to ensure that they are safe through other forms of governance. I do further suggest the inclusion of different types of asset specificity as was in Frank and Henderson (1992), so as to capture the detailed explanation of this variable on vertical coordination.

On the other hand environmental uncertainty did not turn out to support positively the idea of vertical coordination as anticipated from literature, but for me it seems the buying firms are more concerned with flexibility less than environmental changes when it comes to vertical coordination.

7.3 FORMAL CONTRACTUAL AGREEMENTS

The prediction from H4 on a negative effect of environmental uncertainty on formal contractual agreement was supported though the use of this variable as a predictor of this relationship will increase when asset specificity is added but the effects of both wears off when controlling for buyer dependence. A point of notice is that environmental uncertainty when it is used by itself in determining or predicting formal contractual relation (model 1 in table 10) it explain very little variation though significant (R^2Adj = .024, F (1, 96) = 3.376, $p < .05$). The other aspect to note in the findings is that buyer asset specificity has a positive impact on formal contractual agreement, implying that when buyer make specific investments, they will try to safeguard them through formalization of contracts. When buyer asset specificity is used together with environmental uncertainty (model 2 in table 10), the impact improve slightly (Adjusted R^2 increase by .061). The findings from extended model 3 in table 10, which showed a very significance role of buyer dependence, changed the previous results by implying a non significance (though the regression coefficients were relatively stable) impact of both environmental uncertainty and buyer asset specificity when there is buyer dependence. This suggests a very strong negative impact of buyer dependence on the formal contractual agreement [consistent with Buvik & Rev, (2002)] which outweigh even the influence of environmental uncertainty and buyer asset specificity. In most business relations

in developing economies where small and medium businesses are dominated by large few players as large enterprises especially in the source of distribution chains, the expectation is more of buyer dependence, and this minimizes the use of formal contractual agreements. The correlation matrix in table11 confirmed contractual flexibility, buyer asset specificity and buyer dependence to be significantly correlated with formal contractual agreement.
I do also argue that these findings could be better modified in a situation where environmental uncertainty is broken down into sub components like technical uncertainty and volume uncertainty or changeability

The role of environmental uncertainty on formal contractual agreement was found to be negative in this study. The findings do not contradict with findings from other studies on this construct. Nakhla (2003) and Ivens (2005) found environmental uncertainty to be having negative consequences on formal contractual agreements. This is due to the fact that when environment is very uncertain; there will be frequent modifications of these contracts, something which is problematic for parties in the contract. The two studies mentioned above were done in developed nations, but still their findings are significant in Tanzania, which is regarded as emerging economy.

7.4 Conclusion

Buyer asset specificity was found to increase buyer perceived opportunism as was predicted in H1a, but the predictions from H1b concerning supplier asset specificity to reduce buyer perceived opportunism was not supported. On the other hand the moderating effects of behavioral uncertainty and performance ambiguity on the relationship between asset specificity and buyer perceived opportunism were significantly supported (H2a and H2b) as well but with some implications. The implication drawn from these two variables (behavioral uncertainty and performance ambiguity) resulted from their close association (see correlation matrix on table7) on which behavioral uncertainty was having stronger mediation impact on the model (see model 2 in table 6) than performance ambiguity. This in turn suggest in spite support for these hypothesis, a mediation model should consider behavioral uncertainty and the resulted model will include buyer asset specificity and interaction effect of buyer asset specificity and behavioral uncertainty. It should as well be noted that the individual variables used for mediation were not having direct significant impact on buyer perceived opportunism, but it was through their interaction effect.

On the other hand contractual flexibility was found to have a significant positive effect on vertical coordination as predicted in H3. The findings suggested that contractual flexibility by itself when it is used as independent variable (see model 1 in table 8), is able to account about 18.4% of the total variation, but it is important to note the slightly improvement of the model with the inclusion of asset specificity and environmental uncertainty. With regard to asset specificity, it seems buyer asset specificity does not have a direct influence on vertical coordination but supplier asset specificity has a significant negative association with it. The negative effect of supplier asset specificity did not contradict with literature [negative effect was observed by Frank and Henderson (1992)]. On the other hand environmental uncertainty did not show a direct positive effect predicted by Buvik & Grøhhaug (2000) but the differences in results might be due to the differences perceived environmental uncertainties from firms in Tanzania versus those which are in developed economies.

Furthermore the predicted negative effect environmental uncertainty and a positive effect of asset specificity together with a negative effect of buyer dependence on formal contractual agreement was in accordance to predictions in H4, H5 and H6. A key note to take in to consideration is on the huge control effect of buyer dependence which wears out the

significance of environmental uncertainty and asset specificity in determining formal contractual agreement (see model 2 in table 8)

The study has been able to find a lot of consistency pattern of results as it was predicted by other literatures in the western settings, implying the strength of standing TCA literature in predicting business to business relations in developing economies though with some slightly deviations. With respect to environmental uncertainty impact on vertical coordination that also might be as well be influenced by firm perception on this variable, the nature of institutions as well as nature of business and relations. The other side of argument is that small and medium enterprises do not contradict with most of the findings from literature, meaning size of the business had not changed the prediction from literature regarding the direction of relations highlighted above.

The study is one of very rare studies in my country that had gone outside individual to business relations into business to business relations, bringing together small medium and large enterprises. Though two effects had been surrounded this study setting i.e. aspect of business size and institutional differences, still most of predicted relations do hold the same, indicating that a body of literature which has hugely centered in developing economies involving big manufacturing business to business relations, could be applicable in developing economies though with some careful consideration especially the business specifics and institutional specific factors.

Again as many other studies suggest the influence of other factors such as culture, governance and other institutional settings on TCA, I do suggest other studies to incorporate these other issues and find out their strength of impact on most literature predictions which have not included them

7.5 Implication on the Further Research

7.5.1 Theoretical Implications

Though this study did not obtain a significant impact of supplier asset specificity on buyer perceived opportunism, I do suggest further studies to use more constructs on this term and even more sample size. With respect to environmental uncertainty, I do suggest for further break down of this variable to reflect more focus like volume, technology, or changeability and then these small components to be used to test the predicted relations.

This study used buyer as a respondent, but I do propose for other studies to use supplier as a respondent or combination of both so as to reflect another alternative approach for measuring the predicted relations. The involvement of different sizes of business I do suggest to involve at least equal samples so as to have more representatives for each business size. This will lead into a more systematic analysis of the influence of size on the TCA predictions. Another issue will be to test size against other relations, because in this study size did not significantly affect predicted relations.

In relations to findings in the study, I propose the analysis on buyer perceived opportunism to consider the use of behavioral uncertainty instead of combining it with performance ambiguity because these two terms are significantly related. The capacity for behavioral uncertainty to have stronger mediation effect than performance ambiguity, might suggest that performance ambiguity is a concept embedded in behavioral uncertainty, something which will require further examination on these two variables.

Furthermore, with respect to vertical coordination in I do suggest other studies to break down asset specificity into specific types [as was in Frank and Henderson (1992)]. Also I do suggest more findings to be done on how businesses in developing economies perceive environmental uncertainty because the way they perceive it, may have implication in explaining the deviation found with respect to its impact on vertical coordination. Again I would suggest the model regarding formal contractual agreement especially in developing economies to try in adding other social-cultural perspectives because these are assumed to influence the formality of contracts.

7.5.2 Policy Implications

In developing economies networks and business groups formulates a very important self enforcement mechanism when it comes to issues related to buyer-supplier relations in business to business relation. Biggs & Shah, (2006) recognized the role of these networks and business groups. Because specific investment committed by the buyer in the relationship will likely raise his level of perceived opportunism, the governing institutions in the developing countries particularly in Tanzania can encourage business forums, which will link the buyers and suppliers in a place where they can have close networks or develop some kind of relations so as to minimize their perceived opportunism through confidence building with their partners. The large enterprises can do that but when there are small and medium enterprises, things do not work automatically. Focus could be to continue to use the self enforcement mechanism to be a key solution in solving business to business opportunism problems, but the mechanism to achieve this could be facilitated by policy makers.

In developing economies like Tanzania, where most of business organizations are small and medium, buyer dependence is expected to exist in large extent. This situation suggest to impact negatively on the formality of contract at the extent that environmental uncertainty becomes insignificant. Dealing with such challenges of informality, the government could encourage small businesses to formulate corporations or associations that will give them voice to solve such expected existence of informality in business dealings which in most cases cannot be well resolved in courts.

Since most of findings does not contradict with predictions from most of western settings, there is a room for developing economies to benefit from most of findings with respect to relations predicted by different TCA dimensions, but again this should involve some feasibility or preliminary studies to remove out the strong effect of other factors which were not included in those former studies.

SMEs policies should as well take into account the aspect of TCA dimensions and their relation with other dimensions or concepts so as to give a holistic approach.

7.5.3 Managerial Implications

Since buyer will more likely increase his perceived opportunism when he commits specific assets, managers in supplier firms can use different approaches to lower this perceived opportunism such as cross investing on the buyer together with close social corporations (though this was not significantly supported in this study). One of the approach noted by (Stump and Heide 1996) on how to manage the problem caused by specific investments is to design an incentive structure that discourages opportunistic behavior by the other party. Manager in the buying side could consider establishing other safeguarding mechanisms like contracts especially when the situation is surrounded by behavioral uncertainty because the interaction effect with buyer asset specificity will likely heighten the perceived opportunism by the buyer. With respect to formation of contracts, when buyer is in a dependence position, he/she need to formulate or join in some sort of associations that will help him/her to have command over powerful suppliers.

Managers has to consider the use of contractual flexibility in improving inter-business relations, though this should be carefully practiced by ensuring the asset specificity is not involved because it will have a negative association with regard to such a hybrid relation (at least as predicted in this study). On the other hand, the formal contractual agreement can be used in addition to contractual flexibility in an event buyer decide to commit specific investment in a balanced relation.

Managers in small business firms especially in Tanzania should expect to prepare their mind in dealing with contractual informality because of existence of buyer dependence by strategic mitigation of the situation through use of socially enforcement mechanisms or joining in the small business associations so as to have added power in informally resolving business to business related problems.

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Appendix 1

QUESTIONNAIRE

1. Business name..... (Option)

2. Year of **establishment**.....

3. Business annual turnover (TSHS)

- up to 5 million
- 5-200 million
- 200-800 million
- Above 800 million

4. How many employees' does your firm has

- Below 5
- 5-10
- 10-15
- 15-20
- above 20

5. How much do you buy from this supplier per year (approximately?)

…….

6. How often do you receive the supplies from this supplier?

(Choose one category and indicate number of times)

Category	
Monthly	Annually
Number of times	

7. Statements below give a description on investment made by you or the supplier in the relationship. Please rank them to the extent they give accurate description (1-comletely inaccurate, 7-Completely accurate).

By your firm	1	2	3	4	5	6	7
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.							
By the supplier							
Supplier have trained their employee to deal with our firm							
Supplier has made substantial commitment of time and money							
Supplier production system has been tailored to produce for our firm							
Supplier logistics system have been tailored to meet the requirements of dealing with our firm.							

8. Following statements relates to how your firm views the supplier firm. Please give a rank to an extent which you think they give an accurate description (1-Completely inaccurate, 7- Completely accurate).

	1	2	3	4	5	6	7
On occasion, this supplier lies about certain thing in order to protect his interest.							
This supplier sometimes promises to do things without actually doing them later							
This supplier does not always act in accordance with our contract (s).							
This supplier sometimes tries to breach informal agreements we have made to maximize his benefit.							
This supplier sometimes uses unexpected events to extract concessions from our firm.							

9. Statements below relates to form of relationship between your firm and supplier's firm. Please rank them to the extent which you accept them (1-completely disagree, 7-Completely agree).

	1	2	3	4	5	6	7
We regularly exchange information on this product with this supplier							
We regularly exchange information about price development and market conditions with this supplier							
We cooperate closely with this supplier on quality control of product delivered to our firm							

10. To what extent does the statement below give a description of the flexibility between your firm and this supplier? (1-Completely inaccurate, 7-Completely accurate).

	1	2	3	4	5	6	7
Flexibility in response to request for changes is a characteristic of this relationship							
The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances							
When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms.							

11. To which extent does the statement below gives an accurate description of your dependence on this supplier (1-Completely inaccurate, 7-completely accurate)

	1	2	3	4	5	6	7
If we decide to stop purchasing from this supplier, we could easily replace their volume with purchase from another supplier							
There are many competitive suppliers of this product							
Our firm does not have difficulties in using product from another suppliers							
Changing to another supplier will require us less effort and cost							
If we stopped buying from this supplier, he would easily replace our volume with another buyer							
It is relatively easy for this supplier to find another buyer for this products							
Finding another buyer would not affect the price this supplier charge							
If the relationship is terminated, it will not hurt this supplier.							

12. The below statements relates to contractual relations between your firm and the supplier. Rank the statements to the extent on which you agree or disagree with them (1- Completely disagree, 7-Completely agree).

	1	2	3	4	5	6	7
Firm agreements stipulate all aspects concerning exchange of information about price and market condition between our firms							
Written contracts stipulate all aspects regarding the tasks and influence of two parties in the quality control of the products we purchase from this supplier.							
Written contracts stipulate all aspects regarding the selection of sub-suppliers for the products we order from this supplier.							

13. Following statements below give description on the behavior uncertainty of the supplier. Please rank the accuracy of these statements (1-Completely inaccurate, 7-Completely accurate).

	1	2	3	4	5	6	7
We are uncertain about how our supplier organizes purchases used for input							
Our knowledge about our supplier's production process is limited							
We have little knowledge about the terms of trade the supplier offers to other buyers							
It is difficult to interpret how the supplier perceives the present relationship with our firm.							
We are uncertain about our supplier's future plans for our relationship.							

14. Following statements relates to performance measurement. Please rank then to the extent on which you agree or disagree with tem (1-Completely disagree, 2-Completely agree).

	1	2	3	4	5	6	7
It is inadequate to evaluate this supplier based on item(s) price.							
It is difficult to verify whether this supplier is performing all of its contractual obligations under this agreement							
Evaluating the supplier's performance is highly complex process							
It is difficult to verify whether this supplier is performing all of its contractual obligations.							
There would be significant costs associated with one-site monitoring of the supplier							
Precise standards to assess this supplier's performance is not readily available.							

15. The statements below measures the environmental variations (uncertainty). Please rank these statements at the extent which you agree or disagree with them (1-Completely disagree, 7-Compleltely agree).

	1	2	3	4	5	6	7
Demand for this product varies continually.							
The demand conditions for our supplier's product are very irregular.							
Our most important competitors are regularly carrying out product adjustment.							
Product we are purchasing from the supplier have high innovation rate and varies continually.							

THANK YOU!

APPENDIX II
Analytical results from SPSS

TABLE I: Impact of asset specificity and behavioral uncertainty on buyer perceived opportunism

DEPENTENT VARIABLE: BUYER PERCEIVED OPPORTUNISM

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,001	,098		,015	,988		
	BUASP	,112	,100	,203	1,829	,041	,966	1,036
	BU	-,195	,100	-,195	-1,952	,054	,970	1,031
	BUASPx BU	,260	,110	,240	2,367	,020	,938	1,066

TABLE II: Impact of contractual flexibility, asset specificity and environmental uncertainty on Vertical Coordination.

DEPENDENT VARIABLE: VERTICAL COORDINATION

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,003	,102		-,033	,974		
	CONFLEX	,465	,195	,465	4.886	,000	,908	1,101
	BUASP	,098	,103	,098	,946	,347	,974	1,027
	SUASP	-,157	,105	-,157	-1,492	,069	,893	1,120
	ENVU	-,160	,106	-,160	-1,514	,133	,932	1,073

TABLE IIIa: Impact of environmental uncertainty and buyer asset specificity on formal contractual agreements.

DEPENDENT VARIABLE: FORMAL CONTRACTUAL AGREEMENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3,135E-17	,097		,000	1,000		
	ENVU	-,165	,098	-,165	-1,684	,096	,994	1,006
	BUASP	,262	,098	,262	2,673	,009	,994	1,006

TABLE IIIb: The effect of buyer dependence on relationship above

DEPENDENT VARIABLE: FORMAL CONTRACTUAL AGREEMENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-2,708E-17	,087		,000	1,000		
	ENVU	-,150	,088	-,150	-1,704	,092	,993	1,007
	BUASP	,116	,093	,116	1,244	,217	,889	1,125
	BUDEP	-,448	,093	-,448	-4,818	,000	,891	1,122

APPENDIX III

Factor Analysis Results

BUYER ASSET SPECIFICITY

TABLE IV: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,361	84,022	84,022	3,361	84,022	84,022
2	,510	12,755	96,777			
3	,101	2,534	99,311			
4	,028	,689	100,000			

Extraction Method: Principal Component Analysis.

TABLE V: Component Matrix

	Component
	1
We have made significant investment in equipment dedicated to our relationship with this supplier	,763
We have made extensive internal adjustments in order to deal effectively with this supplier	,971
Training our people to deal with this supplier has involved substantial commitments of time and money	,974
Our logistics system have been tailored to meet the requirements of dealing with this supplier	,941

Extraction Method: Principal Component Analysis.
a 1 components extracted.

TABLE VI: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,796
Bartlett's Test of Sphericity	Approx. Chi-Square	501,174
	df	6
	Sig.	,000

SUPPLIER ASSET SPECIFICITY

TABLE VII: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,570	89,242	89,242	3,570	89,242	89,242
2	,300	7,496	96,738			
3	,112	2,800	99,538			
4	,018	,462	100,000			

Extraction Method: Principal Component Analysis.

TABLE VIII: Component Matrix

	Component
	1
Supplier has trained their employees to deal with our firm	,973
Supplier has made substantial commitment of time and money	,878
Supplier production systems has been tailored to produce for our firm	,940
Supplier logistics system have been tailored to meet the requirements of dealing with our supplier	,984

Extraction Method: Principal Component Analysis. 1 components extracted.

TABLE IX
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,813
Bartlett's Test of Sphericity	Approx. Chi-Square	573,517
	df	6
	Sig.	,000

PERCEIVED OPPORTUNISM

TABLE X: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,278	85,562	85,562	4,278	85,562	85,562
2	,665	13,307	98,868			
3	,039	,785	99,653			
4	,012	,237	99,890			
5	,005	,110	100,000			

Extraction Method: Principal Component Analysis.

TABLE XI: Component Matrix

	Component
	1
On occasion, this supplier lies about certain things in order to protect his interest.	,630
This supplier sometimes promises to do things without actually doing them later	,980
This supplier does not always act in accordance with our contract (s).	,990
This supplier sometimes tries to breach informal agreements we have made to maximize his benefits	,983
This supplier sometimes uses unexpected events to extract concessions from our firm.	,988

Extraction Method: Principal Component Analysis.
a 1 components extracted.

TABLE XII: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,850
Bartlett's Test of Sphericity	Approx. Chi-Square	1106,298
	df	10
	Sig.	,000