

**EARLY SUPPLIER INVOLVEMENT AND ORGANISATIONAL PERFORMANCE IN
A MANUFACTURING COMPANY: A CASE STUDY OF
MUKWANO INDUSTRIES, KAMPALA-UGANDA**

BY

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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS AND
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DECLARATION

This dissertation is my original work and has never been presented for a degree, or any other academic award in any university or institution of learning.

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Date: 8th 09/2018

APPROVAL

This is to certify that this research report is submitted with the approval of the University supervisor.

Signed: Date.....

Mr. Ayasi Asadi

DEDICATION

I dedicate this work to the Almighty God who blessed me and saŵ me through the whole process, my dear wife Nannozi Monica, my children Fabian and Noella, you all made this happen.

ACKNOWLEDGEMENT

This report was only possible because of the Grace of God and also the tremendous contributions from a number of people. I wish to extend my heartfelt thanks to my supervisor Mr. Ayasi ASADI for the time she offered to guide me through the research process, advice and guidance. I would like to acknowledge my colleagues in the supply and procurement management class for the support and Kampala International University department of procurement management for the opportunity to conduct the research study. And I wish to thank the Almighty God for giving me Health, wisdom and knowledge that enable me to accomplish the research report.

LIST OF ACRONYMS

ESI	Early supplier involvement
ASL	Approved Supplier's List
APICS	American Production and Inventory Control Society
SDRL	Supply Chain Disruption Research Laboratory
PWC	Price Water House Coopers
FMCG	Fast Moving Consumer Goods
VMI	Vendor Managed Inventory
SOP	Standard Operating Procedure
USAID	United States Agency for International Development

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ABSTRACT

The study established the effect of early supplier involvement on organisational performance in Mukwano Industries. three specific objectives guided this study and these were: (i) to find out the factors affecting early supplier involvement in Mukwano Industries. (ii) to examine the level of organizational performance in Mukwano Industries Ltd, and (iii) to establish the relationship between early supplier involvement and organizational performance in Mukwano Industries Ltd. The study adopted the following designs; descriptive correlational to measure the degree of association between variables and cross-sectional research design was used because data was drawn/collected from a wide spread of respondents. The study used a research population of 48 and a sample size of 41. The findings indicated that Mukwano Industries has embraced the concept of early supplier involvement as it had incorporated most variables in their operations. Mukwano Industries built relationship with its suppliers based on informing sharing, joint decision making and incentive alignment but with most of the emphasis on incentive alignment, organizational performance was rated satisfactory and this was indicated by the overall mean of 2.73 and this implies that the Mukwano Industries do the work efficiently and effectively, the findings indicated a positive significant relationship between buyer- supplier relationship and organizational performance in Mukwano Industries, and this was indicated by the sig value of 0.001 which was less than 0.05, this therefore implies that high early supplier involvement increases the level of organizational performance, and low early supplier involvement reduces it. The researcher concluded that; the linkage between buyer-supplier collaboration and performance is clear in that when manufacturing firms align incentives, jointly make decisions and share information, performance will improve in regard to customer satisfaction, supplier retention and timely deliveries whereby supplier retention 2.86 was found to be the most practiced activity in Mukwano Industries compared to customer satisfaction 2.60 and timely deliveries 2.73. The researcher concluded that Mukwano Industries focused mainly on supplier retention compared to both customer satisfaction and timely deliveries. Also basing on the findings, the researcher concluded that that highly satisfying early supplier involvement contributes to organizational performance in Mukwano Industries. The researcher recommended that; Mukwano Industries should make sure that their suppliers are always free to share important information that is of their interest, the researcher recommends that the suppliers should provide them with sales forecasts for the products the company buys from them, still the researcher recommends that the Mukwano Industries should always have joint investments with their suppliers, and Mukwano Industries should make sure that they continue with the purchasing arrangements with most of the suppliers.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter of the proposal report clearly indicates what is entailed in the entire report as regard to the topic of research in question.

1.1 Back Ground to the study

Involving suppliers in cross-functional teams at the early stages of product development has strong roots in the Japanese automotive industry (Johnsen, 2009). Today ESI remains quite common in automotive and consumer electronics industries (Leenders *et al.*, 2002). Many purchasing organisations view coordination with critical suppliers via ESI as important enablers to product, process and as a cost reduction exercise (Millson and Wilemon 2002). In addition, adopting ESI practices may offer additional benefits to organisations, including the management of supply chain (Zsidisin and Smith, 2005). For a supplier, participation may be embedded in the manufacturer, or a way of securing the business (Leenders *et al.*, 2002).

Supply chain process management has received much attention in the recent years basing on the changing global trends. Supply chain management as defined by APICS (American production and inventory society) dictionary is the design planning, execution, control and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally.

In the recent years, supply chains have become longer and more complex while the severity and frequency of supply chain disruptions seem to be increasing. And the world economic forum indicated that significant supply chain disruptions reduce the share price of the affected companies by as much as 7% on average. Therefore, research by the Forbes magazine shows that 80% of companies worldwide see better protection of supply chains by early supplier involvement as a priority (Forbes magazine, 2013).

The supply chain resilience 2013 survey of over 500 business continuity professionals from 71 countries found three quarters of businesses experienced at least one supply chain disruption

during 2012. It said 42% of the failures originated below the immediate supplier (Gurjit Degun, 2013).

Early supplier involvement (ESI) has gained its importance in manufacturing sector in developing competitive advantage and to outperform rivals in market share while defending against competitive forces (Mikkola and Larsen, 2003). By practicing early supplier involvement, suppliers in approved suppliers list will work closely together with manufacturers in sharing information, technological capabilities, knowledge, technical skills and experience. Great benefits and advantages can be obtained if suppliers are involved in the customer's product development as early as possible. Huang and Mark, 2000 proposed that the rationale is that suppliers frequently possess vital product and process technology that can lead to improvements in product design and effective supply chain processes.

The Mukwano Industries began operations in the early 1980, in Kampala Uganda with a single enterprise store dealing in general merchandise and produce. The company took its first major step in the direction of manufacturing, coinciding Uganda's economic resurgence in the late 1980's. With overwhelming success achieved in the manufacturing sector, the company diversified its business interests beyond manufacturing, investing heavily in agriculture, property (estates), development and logistics supply chain from 2000 till today.

1.2 Statement of the Problem

The role of early supplier involvement in operations in a manufacturing company which is Mukwano Industries. Rapid technological development, shorter product life cycle, clock speed competition, and increased outsourcing have prompted many company to involve their suppliers early in their new product development activities (Mikkola and Larsen, 2003). The increasing level of end-product complexity, combined with myriad product choices, makes early suppliers vital. (McKeefry, 2000). Mukwano industries according to the USAID Uganda value chain analysis 2005, adopted some mechanisms on how to achieve better supplier relations and this involved purchasing seeds and other inputs from farmers so as to have an effective supply chain process that will enhance timely delivery of the their products. However, Mukwano industries is still facing disruptions in their supply chain process despite all the efforts to achieve an effective supply chain. It is against this background that the researcher will investigate about the impact of

early supplier involvement on effective supply chain in manufacturing industries with a case of Mukwano industries (2005).

1.3 Purpose of the Study

The purpose of the study examined the impact of early supplier involvement in achieving an effective supply chain process.

1.4 Specific Objectives

- To find out the factors affecting early supplier involvement in Mukwano Industries.
- To examine the level of organizational performance in Mukwano Industries Ltd.
- To establish the relationship between early supplier involvement and organizational performance in Mukwano Industries Ltd.

1.5 Research Questions

- What are the factors affecting early supplier involvement in Mukwano Industries?
- What is the level of organizational performance in Mukwano Industries Ltd?
- What is the relationship between early supplier involvement and organizational performance in Mukwano Industries Ltd?

1.6 Scope of the Study

1.6.1 Subject Scope / Content

The study focused on early supplier involvement which in this case is the dependent variable and the organizational performance. The dependent variable was measured in terms of information sharing, joint decision making and incentive alignment. Whereas the dependent variable was measured in relation to timely deliveries, customer satisfaction and supplier retention. The study examined the relationship between early supplier involvement and organizational performance.

1.6.2 Geographical Scope

The study was carried out from the manufacturing company of Mukwano Industries located on Plot 30 industrial area; Mukwano road East of Kampala City Central Division in Uganda.

1.6.3 Time Scope

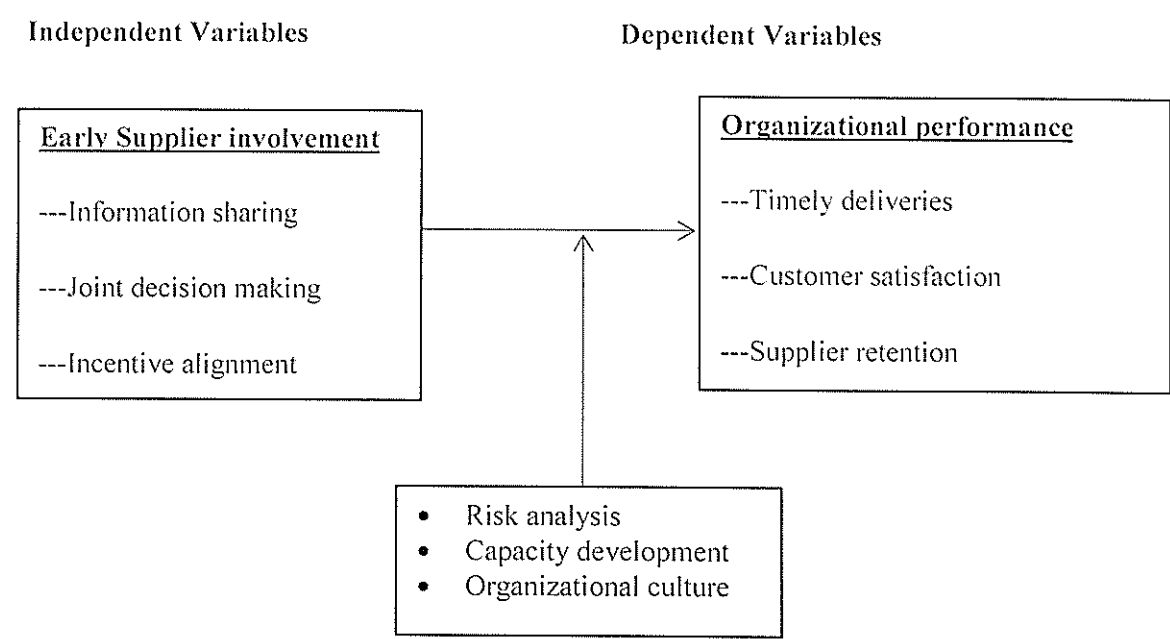
The study was carried out for months between May to August 2018. This period was chosen because the researcher was in holydays and that helped him to carry out research properly.

1.7 Significance of the Study

- The findings of the study shall be of great importance to the members of the company in achieving and maintaining an effective supply chain process and good relationships with the suppliers and will benefit the company in recognizing the importance of involving suppliers when making company decisions.
- The study findings shall act as a source of information for other students conducting research on the related study.
- The study will be aiming to create the awareness of early supplier involvement in Mukwano Industries and that will rectify the misperception of those manufacturers who neglect the early supplier involvement.

1.8 Conceptual frame work

Figure 1 conceptual framework



The supply chain effectiveness highly depends on early supplier involvement if the various stakeholders and factors are involved. To implement an effective early supplier involvement program, the internal and external areas of a company are important and those requirements represent the design, manufacturing and procurement.

1.9 Operational Definition of Terms

Early supplier involvement (ESI) will refer to a form of vertical collaboration between supply chain partners in which the manufacturer involves the supplier at an early stage of the product development process.

Supply Chain management (SCM) means the management of the flow of goods and services. It include the movement and storage of raw materials, work- in- process inventory, and finished goods from point of origin to point of consumption.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter states the concepts that will be explored, studied and presented by various authors in already existing literature about early supplier involvement and on effective supply chains.

In this chapter, the researcher reviewed literature on the variables under management and specifically covered the factors affecting the effectiveness of supply chains in manufacturing companies, the various strategies were employed by manufacturing companies to achieve an effective supply chain and how early supplier involvement can impact on the effectiveness of a supply chain in the manufacturing companies.

2.1 Key variables

2.1.1 Early supplier involvement

Early supplier involvement is a form of vertical collaboration between supply chain partners in which the manufacturer involves the supplier at an early stage of the product development process (Mikkola and Skjott Larsen, 2006). Involving suppliers in cross-functional teams at the early stages of product development has strong roots in the Japanese automotive industry (Johnsen, 2009). Today early supplier involvement remains quite common in automotive and consumer electronics industry (Leenders *et al.*, 2002). Many purchasing organizations view coordination with critical supplies via early supplier involvement as important enablers to product, process and supply chain structure development and as a cost reduction exercise (Millson and Wilemon, 2002).

In addition, adopting early supplier involvement practices may offer additional benefits to organizations, including the management of supply risk in new product development and the upstream supply chain (Zshidisin and Smith, 2005). Globalization has caused increasing competitive pressures to manufacturers worldwide such as rapid technology development, increasing level of end-product complexity, shorter product life cycle and lead time, clock speed competition and increased outsourcing. Thus, early supplier involvement in new product

development is becoming vital to manufacturing industry is the forerunner of economic growth in Malaysia.

According to Richard (2003), a supply chain system whose constituent parts include material supplies, production facilities, distribution services of material and the feedback flow of information. In summary, supply chain management is characterized by an emphasis on the end customer, the integration of systems, policies and inventory within the supply chain, thus achieving a synergy where all organizations gain competitive advantage and subsequently prosper. In order to compete, the effective management of the supply chain in the management of the supply chain is critical and supply chain management has been defined as the management of the upstream and downstream relationships with suppliers, distributors and customers to achieve greater customer value-added at less costs.

Richard (2003) identifies three 3Ts of highly effective supply chains; time, trust and transparency. Understanding the 3Ts of highly effective supply chains provides a simple yet powerful framework that organizations can use to start building robust supply chain processes and structures. The 3Ts are interrelated and dependent on the other. Understanding the time dimension of the supply chain enables organizations to gain transparency of what is happening within the supply chain system, when everyone knows what is going to happen and confidence is built because of transparency, trust develops between all the players in the supply chain. This in turn, results in greater understanding to the time dimension, hence greater levels of transparency and higher levels of trust. But what if one of these key dimensions is missing, the cycle is broken and transparency, trust and an understanding of time are lost. So the 3Ts are dependent on each other, but what has been found is that by using time as the starting point, organizations can create transparency and thus achieving effective supply chains (Richard, 2003).

Keely (2001) identified that effective supply chain management is increasingly being recognized as the integration of key business processes across the supply chain. For example, Hammer argues that now that companies have implemented processes within the firm they need to integrate them between firms. Effective supply chain takes into consideration every facility that has an impact on cost and plays a role in making the product conform to customer requirements, from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores. Indeed, in some supply chain analysis, it is necessary to account for the

Government support

The level of support that the company receives from government when importing raw materials or products from overseas or using domestic materials. It includes the use of norms, regulations and policies and advice for the sector.

The research conducted by Elzarka *et al* (2011) describes how government can make a series of reforms to encourage exporters by increasing manufacturing sectors competitiveness in the international market through logistic competence. The increase of international trade for acquiring resources from other countries introduces complicated matters such as language barriers, transportation costs, exchange rates, tariffs and administrative practices (Quayle, 2006).

Uncertainty aspects from overseas

When requiring the outsourcing of raw materials or products, it is important to acknowledge the existence of environmental factors such as political uncertainties in other countries that can increase the risk of suppliers provoked decisions of no investments, change business strategies, and in general influence business decisions. Social uncertainties such as religion, language, cultural issues, limitations of communication (Bhattacharyya *et al*, 2010) and also technology used in other countries might interfere with supply chain planning and function (Bized, 2007).

2.2.2 Information Technology

Telecommunications and computer technology allow all the actors in the supply chain to communicate among each other. The practices and processes for effective and efficient flow of materials and information between a company and its immediate suppliers and customers has to justification, the first management and integration of supply chains only rarely extends beyond the first tier suppliers and customers, the second corresponds to the perception our case companies have on SCM (Frohlich and Westbrook, 2001). A study carried out by Tim (2007) states that through the use of communication tools such as the website, industrial organizations can build value in their supply chain relationships. The utilization of information of information technology, in turn, is considered an imperative requirement for managing these networks, and has been associated with significant supply chain efficiency improvements (White and Billington, 2001).

According to O'Neil (2008) failure to incorporate the newly developing communication technology systems is one of the major factors the supply chains are crumbling with less competitiveness and higher costs being incurred in buying to run the operation of companies.

2.2.3 Supply Chain Relationships

According to Fraza (2000), supply chain management is related to relationship management which includes suppliers and customers. Turner (2001) established direct manufacturer relationships, to provide both the information and context, to help you maximize purchasing decisions on both a project and program level. Two sub factors are considered in the model relationship with suppliers and customers.

Relationship with Suppliers

Companies are inclined to work together with different suppliers in different ways. It is important that the relationship with suppliers satisfies their company needs. Hines (2004) mentioned that in products it is common to find an adversarial relationship mainly based on price between the buyer and the supplier. This type of relationship with suppliers does not allow for cost reduction the supply chain. It may be beneficial to network the supplier to production, personal and or symbolic networking that will turn on strategic alliances allowing information sharing, risk sharing, obtaining mutual benefits and coordinating plans, permitting the improvement of supply chains.

Relationship with Customers

The global market offers a variety of products or different quality and cost, as a result companies are always competing and trying to reduce costs and improve quality. According to Burguess (1998) and Hoek (1999), customers look for more choices, better services, higher quality and faster delivery. The relationship with customers has turned a strategic issue for today's companies.

2.2.4 Business Management

Business management consists of leading, planning, organizing, monitoring and controlling all the involved actors and activities in the company to achieve goals and objectives. it is described by

Ford and Mouzes (2010) as the process of managing networking between companies' fast changes in customer demands, globalization of markets and changing technology which requires companies to focus their efforts on improving competitiveness, trying to achieve customer satisfaction through adding value to their products (Hung, 2010). Thus improving business process performance is critical for business management (Linzalone, 2008).

2.3 Strategies employed by manufacturing companies to achieve an effective supply chain

According to David L. Anderson (1997), he identified that for a manufacturing company to achieve an effective supply chain, it should follow certain seven principles which are fundamental in the supply chain management processes;

Segment customers based on the service needs of distinct groups and adopt the supply chain to serve these segments profitably. Segmentation has traditionally grouped customers by industry product or trade channel and then taken a one-size fits all approach to serving them, averaging costs and profitability within and across segments. The typical result, as one manager admits "we don't fully understand the relative value customers place on our service offerings" but segmenting customers by their particular needs equips a company to develop a portfolio of services tailored to various segments, surveys, interviews and industry research have been the traditional tools for defining key segmentation criteria.

Research can also establish the service valued by all customers versus those valued by only certain segments. Then the company should apply disciplined, cross-functional process to develop a menu of supply chain programs and create segment-specific service packages that combine basic services for everyone with the services from the menu that will have the greatest appeal to particular segments. To strike and sustain the appropriate balance between service and profitability, most companies will need to set priorities sequencing the rollout of tailored programs to capitalize on existing capabilities and maximize customer impact.

Listen to market signals and align demand planning accordingly across the supply chain, ensuring consistent forecasts and optimal resource allocation. Forecasting has historically proceeded silo by silo with multiple departments independently creating forecasts for the same products all using their own assumptions, measures and level of detail. Many consult the market place only informally and few involve their major suppliers in the process. The functional

orientation of many companies has just made things worse, allowing sales forecasts to envision growing demand while manufacturing second-guesses how much product the market actually wants. Such independent, self-centered forecasting is incompatible with excellent supply chain management. Excellent supply chain management in fact calls for SOP that transcends company boundaries to involve every link of the supply chain (from the supplier's supplier to the customer's customer) in developing forecasts collaborating and then maintaining the required capacity across operations. Channel-wide SOP can detect early warning signals of demand lurking in customer promotions, ordering patterns and restocking which takes into account under and carrier capabilities, capacity and constraints;

Differentiate product closer to the customer and speed conversion across the supply chain. Manufacturers have traditionally based production goods on projections of the demand for finished goods and have stockpiled inventory to offset forecasting errors. These manufacturers tend to view lead times in the system as fixed, with only a finite window of time in which to convert materials into products that meet customer requirements;

Manage sources of supply strategically to reduce the total cost of owning materials and services. Excellent supply chain management requires a more enlightened mindset- recognizing as a more progressive manufacturer did "our suppliers costs are in effect our costs". If we force our supplier to provide 90 days of consigned material when 30 days are sufficient, the cost of that inventory will find its way back into the supplier's price to us since it increases his cost structure. While manufacturers should place high demands on suppliers, they should also realize that partners must share the goal of reducing costs across the supply chain in order to lower prices in the market place and enhance margins. The logical extension of this thinking is gain-sharing arrangements to reward everyone who contributes to the greater profitability. Manufacturers can then consider how to approach suppliers soliciting short term competitive bids, entering into long term contracts and strategic supplier relationships, outsourcing or integrating vertically. Excellent supply chain management calls for creativity and flexibility;

Develop a supply chain-wide technology strategy that supports multiple levels of decision making and gives a clear view of the flow of products, services and information. To sustain reengineered business processes (that at last abandon the functional orientation of the past),

many progressive companies have been replacing inflexible, poorly integrated systems with enterprise –wide systems. Yet too many of these companies will find themselves victims of the powerful new transactional systems they put in place. Unfortunately, many leading-edge information systems can capture reams of data but cannot easily translate it into actionable intelligence that can enhance real world operations. Despite making huge investments in technology, few companies are acquiring this full complement of capabilities. Today's enterprise systems remain enterprise boon, unable to share across the supply chain the information that channel partners must have to achieve mutual success. According to Andersen consulting, ironically the information that most companies require most urgently to enhance supply chain management resides outside of their own systems and few companies are adequately connected to obtain the necessary information. Electronic connectivity creates opportunities to change the supply chain fundamentally from slashing transaction cost through electronic handling of orders, invoices and payments to shrinking inventories through vendor-managed inventory programs. Adopt channel spanning performance measures to gauge collective success in reaching the end-user effectively and efficiently;

Customize the logistics network to the service requirements and profitability of customer segments. Companies have traditionally taken a monolithic approach to logistics network design in organizing their inventory, ware house and transportation activities to meet a single standard. For sure, the logistic network has been designed to meet the average service requirements of all customers for others to satisfy the toughest requirements of a single customer segment.

Neither approach can achieve superior asset utilization or accommodates the segment –specific logistics necessary for excellent supply chain management. In many industries especially such commodity industries as fine paper, tailoring distribution assets to meet individual logistics requirement is greater source of differentiation for a manufacturer than the actual products, which are largely undifferentiated;

According to John A.Muckstadt (2002), during the past two decades, operationally excellent companies have focused on creating lean organizations. As a consequence, these companies have shortened internal lead times and made them more predictable and repeatable, reduced

work in progress inventories from months of supply to days, implemented just-in-time delivery strategies for their most costly component materials and have worked to dramatically reduce setup times. These actions have substantially reduced indirect costs and improved use of physical space. More importantly they have created cross-trained, empowered and more highly motivated workers. For maximum supply chain efficiency and effectiveness, all partners must engineer. Align and execute their processes so that the entire chain has the aforementioned attributes. Lean supply chains must also be designed as a system that quickly and profitably responds to market demand fluctuations.

Therefore, lean philosophies must be extended beyond a company's internal operations to the entire supply chain.

According to the EVCO plastics 2015, early supplier involvement (ESI) is considered one of the two most critical factors in the engineering and development of manufacturing companies. And this is so because early supplier involvement enables proactive communication and collaboration on product specifications, performance, design, materials and more.

Early supplier involvement is where best-in-class suppliers are invited to participate in the company's product process development projects at an early stage.

Early supplier involvement aids in the process of new product development and involving buyers in development processes at an early stage can result in contribution of new knowledge and better understanding of construction, suitable materials, and supplier knowledge involving the supplier in new product development can also result in considerable savings;

Early supplier involvement provides for supplier quality assurance and internal quality assurance regarding supplier. This is aided by preparing the purchase order specification, the sample inspection procedure, quality agreement and certification, periodic verification and the implementation of supplier quality assurance can be achieved by the manufacturing company or buyer making clear task descriptions and performance measures, ensuring clarity concerning supplier selection followed by conducting a quality test and measuring the performance of supplier;

Peterson *et.al* (1999), Suggests that a major reason for early supplier involvement is to access more and better information earlier in the development process by leveraging the supplier's expertise. For example, the automotive industry- a major user of cast- components is constantly trying to shorten the development time of new products through implementing early supplier involvement;

Of the supplier;

Early supplier involvement helps us to build quality and low cost into every product. This is so because time after time, we have proven that extra effort up front ensures success and early supplier involvement is considered one of the most critical factors in the engineering

and development of products as it enables proactive communication and collaboration on product specifications, performance, design, materials and much more;

Early supplier involvement is a strategy that manufacturing companies employ to eliminate potential problems early on so as to save time and reduce the costs that may arise in the supply chain as a result of delays of deliveries which subsequently affect the production as well as final delivery of finished;

A knowledgeable supplier can help identify product designs that aren't feasible, even before prototyping designs. Saving time and money by eliminating design iterations that may seem attractive but which in the end will not prove out.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in the study. The chapter specifically presented the research design, the population, sampling design, sources of data, research instruments, measurement of variables, reliability and validity tests, data analysis and anticipated limitations of the study and how they were addressed.

3.1 Research Design

Research design is “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (Burns & Grove, 2003). The study adopted and employed a descriptive survey design which according to Mugenda & Mugenda (2003) determines and reports the way things are. The researcher made use of descriptive research design using both qualitative and quantitative approaches to data collection. The qualitative approach was used because some aspects in early supplier involvement and organisational performance may not be quantifiable and therefore could not be used to generate a representative sample size. According to Kombo and Tromp (2009) descriptive research design is suitable as it collected information about people’s attitudes, opinions or habits.

3.2 Study population

The survey population consisted of the staff members/employees of the Mukwano Industries from the different departments that included Production, Procurement, Stores and Logistics.

3.3 Sample Size

The study was conducted in Mukwano Industries the researcher used the table by Krejcie and Morgan (1970) that determined the required sample size because of the different levels of employees in Mukwano Industries. According to the published table no calculations are needed, when the population size is 48, therefore the sample size was 44 respondents.

Table 1: Sampling size

Department	Number of respondents.
Administrative	2
Production	28
Procurement	14
TOTAL	44

3.4 Sampling Techniques

A sampling technique is a specified process used by the researcher to select entities of the sample (Kothari, 2012). The study employed simple random sampling technique. Simple random sampling is a method of sampling that involves the identifying specific respondents representative of a given population to take part in the study. In simple random sampling, the respondents were drawn based on members' shared attributes or characteristics. Respondents were randomly selected to participate in this study and this will be based on convenience and knowledge about the discipline of early supplier involvement in Local Governments. Purposively, respondents with a wide exposure of the entity's operations were also sampled to take part in this study.

3.5 Sources of Information

3.5.1 Secondary Data

The entire exercise involved looking through the existing literature from both online and unpublished textbooks on early supplier involvement, using libraries as key information sources, journal articles and, internet in search for relevant information.

3.5.2 Primary Data

Primary data was collected with the help of structured and semi-structured questionnaires which will be generated by the researcher. Face to face interviews were conducted with the help of an interview guide which was helpful in gathering in-depth information from respondents on the subject.

3.6 Methods of Data Collection

3.6.1 Questionnaire

Questionnaires formed the main research instruments in this study. Questionnaires were used as data collection instruments because according to (Cooper & Schindler, 2014) questionnaires are the most common data collection instruments in business research. A four point likert scale type questionnaire (ranging from Agree, Strongly Agree, Disagree and Strongly Disagree) was developed by the researcher so as to generate information free of influence. The likert type of questions were advantageous in that they are easily filled out, saves time and keeps respondents on the subject. Questionnaires were the most appropriate method of data collection since it permitted collection of data from a much larger sample.

3.6.2 Interviews

Kakinada, (2005) points out that an interview is a face to face conversation between the researcher and a respondent to elicit information about the subject under investigation. Bell, E., & A. (2007), further describes an interview as a dialogue between the interviewer and respondent with the purpose of eliciting certain information from the respondents. Interviews take different forms ranging from face-to-face interviews to technology mediated interviews. In this study face-to- face interviews will be conducted to obtain primary data. This type of method is credited for allowing the interviewer with room for probing and gathering more information depending on the knowledge, ability and experience of the respondents. Both structured and unstructured interviews were used. The unstructured interviews helped in obtaining first hand, in-depth information by making further inquiries where respondents may not have given satisfactory information.

3.6.3 Observation

According to Katebire (2007), observation can be defined as a purposeful examination of research phenomenon for purposes of gathering data. It involved the use of sensory organs to make sense of this study phenomenon. This was a good technique especially for activities that cannot be measured; for example the time the users spent inspecting and evaluating the quality of works and appropriateness of use of the facility, the number of users of the facility, the time the users spend in searching for documents, the condition of the equipment especially the machines.

3.7 Data Analysis

The analysis was done using means and percentages with the aid of the package (SPSS) which besides being user friendly, was appropriate for handling the correlations between the variables in the study. All variables were assigned with coded, edited for computer entry and screened in order to minimize data entry errors. Quantitative data was analyzed using descriptive statistics and Pearson Correlation to examine the relationship between the independent and the dependent variables in the study.

3.8 Validity & Reliability

Literature was reviewed to establish items that were appropriate for inclusion in an instrument in assessing the impact of early supplier involvement customer organisational performance. Thereafter, an instrument was developed and tested to determine its validity and reliability. Pre-testing of the instrument was done by contract managers at Iganga District Local Government where a few employees were requested to attempt questions in the instrument. According to Amin (2005), pre-test reliability can be used to measure the extent to which the instrument can produce consistent scores when the same group of individuals is repeatedly measured under same conditions. Thereafter, the researcher proceeded to administer the instrument to the respective respondents at the study area.

3.9 Research Procedure

An introductory letter was obtained from the Head of department HR & Supply, Kampala International University to the Head Human Resources or Personnel Jinja District Local Government to seek permission to conduct and/or administer the questionnaires to the respective respondents. Thereafter, the researcher had to proceed and administer the questionnaire to the respective respondents in selected departments so as to obtain responses relating to the study.

3.10 Limitations

While conducting the research, the researcher anticipated to face the following.

- 1) The respondents could not easily interpret and translate the research instruments since it was designed in English especially Contract Management Committee members and other contractors.

- 2) A lot of time was spent while trying to simplify and/or translate the questions. The value of the research depends critically on the accuracy of the data that was collected.
- 3) There was a likelihood of biased responses since some of the respondents could not be able to provide accurate and reliable information.

However the researcher ensured that data is accurate and the samples are representative enough.

3.11 Ethical Procedure

The ethical issues considered in this study included worthiness, consent, and confidentiality. To ensure informed consent, respondents and all those who participated in this study were provided with all the relevant information about this study. This was done via the letter of introduction that was sent to the interviewees seeking access to organizations and to individuals, to collect, analyze and report on findings. Also, findings were reported in a complete and honest fashion, without misrepresenting any responses given or intentionally misleading readers and researchers interested in this study. The researcher adequately ensured that no suppression, falsification or inventing of evidence occurs at the point of transcription and analysis. This was done through processes such as reaffirmation of unclear issues from respondents or retrieving and re-examining of raw data and indexed documents. Newman (2000:12) argues that engaging in such fraudulent practices is not acceptable in professional research communities as they constitute scientific misconduct. However, as a compromise to avoid putting the respondents in any danger, the categories of respondents in the interviews were listed without their names.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This study was carried out to establish the effect of Early supplier involvement on organizational performance among large manufacturing firms in Uganda. The study focused on Mukwano Industries in Uganda as the case study. Data was collected from supply chain managers, assistant supply chain managers, supply chain officers, finance managers and operation managers. The findings are presented next.

4.1 Response Rate

A total of 48 questionnaires were distributed to the targeted population which included the managerial staff, some employees, and a randomly selected group of customers. Out of the 48 questionnaires distributed, 44 were returned to the researcher. This represented a response rate of 91.7%. This percentage was considered sufficient for this study. 4 of the questionnaires were not returned; the 8.3% who never returned the questionnaires cited busy schedules as the main reason for lacking time to fill them.

4.1.0 Departments of respondents

Table 2: Table showing the different departments of respondents

Response	Frequency	Percentage
Marketing department	8	18.2%
Procurement department	5	11.4%
Finance department	4	9.1%
Human Resource department	15	34.1%
Machine operators	7	15.9%
Store managers	5	11.4%
Total	44	100%

Source: primary data, 2018

From the table above 18.2% of the respondents were in the marketing department, 11.4% were in procurement, 9.1% were in finance department, 34.1% were in the human resource department,

15.9% were machine operators, and 11.4% were store managers. This implies that the human resource department holds the highest percentage (34.1%) since most of the organizational employees lie in this department and the finance department holding the lowest number (9.1%) simply because it is a sensitive department which does not need very many personnel but only experts.

4.1.1 Position of Respondents

The table below shows the various respondents that took part in the interview with their respective positions in the company.

Table 3: Table showing the position of respondents in Mukwano Industries

Position of Respondents	Frequency	Percentage
Human resource	9	20.55%
Finance	3	6.82%
Procurement	13	29.65%
Marketing	7	15.91%
Others(customers, support staff)	12	27.3%
Total	44	100%

Source: Primary Data, 2018

The table above indicates that there are 20.55% Human Resource officers, 6.82% Finance officers, 29.65% procurement officers and 15.19% marketing officers. This totals to 32 respondents who can vividly give correct and valid information about Early supplier involvement and organizational performance of Mukwano Industries because most of them have knowledge on the supply chain or procurement operations at the company. This implies that the researcher was able to collect valid and correct information on early supplier involvement and organizational performance of Mukwano Industries.

4.1.2 Duration of service

The data below shows the duration for which the respondent has spent in the particular position of the firm.

Table 4: Table showing the duration served by the respondents in Mukwano Industries

Years of service	Frequency	Percentage
Less than 5 years	13	29%
5 to 10 years	10	23%
11 to 15years	6	14%
15 years and above	15	34%
Total	44	100%

Source: Primary Data, 2018

From the table above, 29% served less than 5yrs, 23% between 5-10 years, 14% 11-15 years, 15 years and above 34%. This implies that respondents with the highest percentage (34%) served in the organization for 15 years and above. This shows that the majorities of the respondents are well knowledgeable about the activities of Mukwano Industries and may therefore be more productive in feedback provision which may not be the case with those respondents who have served Mukwano Industries in the other time durations.

4.1.3 Age of Respondents

Table 5: Table showing the age of the correspondents in Mukwano Industries

Age of Respondents	Frequency	Percentage
18-29	6	13.6%
30-39	22	50%
40-49	11	25%
50 and above	5	11.4%
Total	44	100%

Source: Primary Data, 2018

From the table above 50% were between 30 to 39years, 25% were between 40 to 49years, 13.6% of the respondents were between 18 to 29years of age, and 11.4% were 50years and above. This

implies that respondents with the highest percentage (50%) are aged between 30 to 39 years. This shows that many of the respondents are well knowledgeable about the operations of Mukwano Industries and are very productive which may not be the case with those falling in the other aged brackets.

4.1.4 Qualification of respondents

Table 6: Table showing the highest education level attained by respondents

Highest education level of Respondents	Frequency	Percentage
Secondary	6	13.6%
Diploma	9	20.5%
Degree	22	50%
Professional	4	9.1%
Masters	3	6.8%
Total	44	100

Source: Primary Data, 2018

The results indicated that the majority of the respondents were degree holders (50.0%) while only 13.6% had secondary education as their highest level of education. Those that had Diploma, professional course and masters comprised 20.5%, 9.1% and 6.8% of the sample respectively. This therefore indicates that the highest number respondents were degree holders meaning that Mukwano Industries recruited more degree holders compared to the other levels of education while the lowest number of respondents were master holders this may be due to the scarce number of master holders in that field. This implies that most of the workforce of Mukwano Industries are degree holders and therefore provide valid and essential information necessary for the researcher.

4.2 Extent of early supplier involvement

Table 7: Table showing the level of early supplier involvement at Mukwano Industries

Items on early supplier involvement	Mean	Interpretation	Rank
Information sharing			
We share information on delivery schedules with our suppliers	3.69	Very high	1
We share information on supply disruption with our suppliers	3.44	Very high	2
We share information on inventory policy with our suppliers	2.78	High	3
Our suppliers always inform us in advance of changes in the supply market	2.50	High	4
We believe our suppliers freely share important information that is of interest to us	2.44	Low	5
Average	2.79	High	
Joint decision making			
Our suppliers always consult us on pricing policy	3.54	Very high	1
We Jointly develop demand forecasts with our suppliers	3.33	Very high	2
Our company makes its procurement plans for the next seasons together with its suppliers	2.67	High	3
Our suppliers provide us with sales forecasts for the products our company buys from them	2.53	High	4
Average	3.01		
Incentive alignment			
We frequently share benefits of this relationship with our suppliers	3.29	Very high	1
We frequently share losses resulting from our relationship with our suppliers	2.90	High	2
We usually have joint investments with our suppliers	2.48	Low	3
Average	2.89	High	
Total average	2.90	High	

Source: Primary Data, 2014

Key for interpretation of means

Mean range	Response range	Interpretation
3.26 - 4.00	strongly agree	Very high
2.51 - 3.25	agree	High
1.76 - 2.50	disagree	Low
1.00 - 1.75	strongly disagree	Very low

Results indicated that Early supplier involvement is mainly composed of information sharing; joint decision making and incentive alignment which constitute an average mean of 2.79, 3.01 and 2.89 respectively. The results indicated that with information sharing, essential issues have to do with sharing information on delivery schedules with suppliers 3.69 and sharing information

on supply disruption 3.44. In addition, it was noted that with this component, it is very important that a firm shares information on inventory policy with suppliers 2.78 and also ensure that suppliers always inform them in advance of changes in the supply market 2.50. Finally, the firms should have confidence that their suppliers freely share important information that is of interest to them 2.44.

With joint decision making, the researcher noted that suppliers should always consult buyers on the pricing policy 3.54 and that buyers should also interactively develop demand forecasts with their respective suppliers 3.33. Furthermore, buyers should always make their procurement plans for the next seasons together with their suppliers 2.67 and alternatively suppliers should always provide their buyers with sale forecasts for the products buyer companies buy from them 2.53.

With incentive alignment, the researcher noted that buyers frequently share benefits 3.29 and losses 2.90 with suppliers in their collaborative relationships. Results also revealed that buyers usually engage in joint investments with their suppliers 2.48.

Joint decision making 3.01 constituted the highest value with Information sharing 2.79 constituting the least value. This implies that Mukwano Industries concentrates most of its early supplier involvement activities on joint decision making and less on Information sharing 2.79, but the overall early supplier involvement was high at an average mean of 2.90.

4.3 Level of organizational performance

Table 8 Table showing the level of organizational performance at Mukwano Industries

Items on organizational performance	Mean	Interpretation	Rank
Timely deliveries			
Our suppliers supply our goods at the expected time	3.28	Very satisfactory	1
Our firm is comfortable with the re-order levels	2.59	Satisfactory	2
We are always replenished as soon as the stock is suspected to drop	2.56	Satisfactory	3
We are satisfied with the mode of deliveries from the suppliers	2.48	Unsatisfactory	4
Average	2.73	Satisfactory	
Customer satisfaction			
We are satisfied with the level of collaboration we have with our suppliers	3.29	Very satisfactory	1
Our major suppliers have always been fair to us	2.62	Satisfactory	2
We are satisfied with the products and services we get from our suppliers	2.59	Satisfactory	3
Our firm is comfortable about its relationship with its suppliers	1.91	Unsatisfactory	4
Average	2.60	Satisfactory	
Supplier retention			
In the foreseeable future we will consider our current suppliers as part of our selection set	3.42	Very satisfactory	1
It would be a long and difficult process to change our major suppliers, hence our continuous relationship with them	2.60	Satisfactory	2
We intend to continue the purchasing arrangements with most of our suppliers	2.55	Satisfactory	3
Average	2.86	Satisfactory	
Total average	2.73	Satisfactory	

Source: Primary Data, 2018

Key for interpretation of means

Mean range	Response range	Interpretation
3.26 - 4.00	strongly agree	Very satisfactory
2.51 - 3.25	agree	Satisfactory
1.76 - 2.50	disagree	Unsatisfactory
1.00 - 1.75	strongly disagree	Very unsatisfactory

Results indicated that organizational performance is mainly composed of timely deliveries, customer satisfaction, and supplier retention.

With timely deliveries, the researcher noted that buyers are supplying them with their goods and services at the expected time 3.28, the buyers are comfortable with the re-order levels 2.59, the buyers are replenished as soon as the stock is suspected to drop 2.56 and the buyers are satisfied with the mode of deliveries from the suppliers 2.48 with an average of 2.73.

With customer satisfaction, the researcher noted that buyers are satisfied with the level of collaboration they have with their suppliers 3.29, buyers are satisfied with the products and services they get from our suppliers 2.62, their major suppliers have always been fair to them 2.59 and their firm is comfortable about its relationship with its suppliers 1.91 with an average of 2.60.

Lastly, with supplier retention, the results showed that in the foreseeable future the buyers will consider their current suppliers as part of their selection set 3.42

This implies that Mukwano Industries concentrates much on timely delivery of goods and services 2.60 and less on supplier retention 2.55 meaning that much of its attention is focused on timely deliveries.

4.4 Significant relationship between Early supplier involvement and Organizational performance in Mukwano Industries

The last objective in this study was to establish whether there is a significant relationship between early supplier involvement and organizational performance in Mukwano Industries. The researcher stated a null hypothesis that there is there is a significant relationship between the early supplier involvement and organizational performance in Mukwano Industries, to achieve this objective and to test this null hypothesis, the researcher correlated the means on early supplier involvement and that on organizational performance by using the Pearson's Linear Correlation Coefficient as indicated in table 4 below:

Table 9: Significant relationship between Early supplier involvement and Organizational performance

Variables correlated	r-value	Sig	Interpretation	Decision on Ho
Early supplier involvement Vs Organizational performance	475	.001	Significant correlation	Rejected

Source: Primary Data, 2018

Results in table 4 indicated a positive significant relationship between early supplier involvement and organizational performance in Mukwano Industries, since the sig. value (0.001) was less than 0.05 and which is the maximum level of significance required to declare a significant

relationship in social sciences. This implies that high early supplier involvement increases the level of organizational performance, and low early supplier involvement reduces it. here the stated null hypothesis was rejected basing on these results and hence concluding that highly satisfying early supplier involvement contributes to organizational performance in Mukwano Industries.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This study was carried out to establish the effect of Early supplier involvement on organizational performance among large manufacturing firms in Uganda. The study had three objectives, to determine the extent to which large manufacturing firms in Uganda have adopted the concept of buyer - supplier relationships, to determine the challenges facing buyer - supplier relationships and to determine the effect of buyer supplier relationships on organizational performance. This chapter presents the summary of findings for the three objectives mentioned above, the conclusions, recommendations made based on findings and the suggestions on areas that need to be researched as far as this concept is concerned.

5.1 Summary of Findings.

The study confirmed that Mukwano Industries has embraced the concept of early supplier involvement as it had incorporated most variables in their operations. Mukwano Industries built relationship with its suppliers based on informing sharing, joint decision making and incentive alignment but with most of the emphasis on incentive alignment. This revealed that the early supplier involvement was rated high at 2.90. However, management is planning to adopt the long term relationship which is more sustainable especially that much of the purchases are on credit.

The findings revealed that organizational performance was rated satisfactory and this was indicated by the overall mean of 2.73 and this implies that the Mukwano Industries do the work efficiently and effectively. The study revealed that Mukwano Industries concentrated mostly on timely deliveries as its core activity to attain its level of performance with less emphasis on customer satisfaction and supplier retention.

The findings indicated a positive significant relationship between buyer- supplier relationship and organizational performance in Mukwano Industries, and this was indicated by the sig value

of 0.001 which was less than 0.05. this therefore implies that high early supplier involvement increases the level of organizational performance, and low early supplier involvement reduces it.

5.2 Conclusion

From the above summary of findings based on the objectives, the researcher made the following conclusions;

The study examined buyer-supplier collaboration dimensions of incentive alignment, joint decision making and information sharing and performance most of which were found to have a positive and significant relationship. In addition among the components of early supplier involvement joint decision making 3.01 was found to be a better predictor of performance than information sharing 2.79 and incentive alignment 2.89. The researcher therefore concludes that Mukwano Industries concentrated much on joint decision making compared to information sharing and incentive alignment.

The linkage between buyer-supplier collaboration and performance is clear in that when manufacturing firms align incentives, jointly make decisions and share information, performance will improve in regard to customer satisfaction, supplier retention and timely deliveries whereby supplier retention 2.86 was found to be the most practiced activity in Mukwano Industries compared to customer satisfaction 2.60 and timely deliveries 2.73. The researcher concluded that Mukwano Industries focused mainly on supplier retention compared to both customer satisfaction and timely deliveries.

Also basing on the findings, the researcher concluded that that highly satisfying early supplier involvement contributes to organizational performance in Mukwano Industries.

5.3 Recommendations

- 1 The researcher recommends that the Mukwano Industries should make sure that their suppliers are always free to share important information that is of their interest.
- 2 The researcher recommends that the suppliers should provide them with sales forecasts for the products the company buys from them.
- 3 Still the researcher recommends that the Mukwano Industries should always have joint investments with their suppliers.
- 4 The Mukwano Industries should make sure that they continue with the purchasing arrangements with most of the suppliers.

5.4 Areas for further Research

- 1) Effective collaborative relationships for Business Continuity Planning in Purchasing and Supply Management
- 2) Exploring the relationship between formal contracts and relational Governance in multinational companies.

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APPENDIX: I

KAMPALA INTERNATIONAL UNIVERSITY

Questionnaire

Dear respondent, I'm conducting a study on early supplier involvement and organizational performance manufacturing firms in Uganda as part of my study programme at Kampala International University. This questionnaire is to be filled by buyers only. Your firm has been chosen as one of those that is able to avail me the information that I need to realize the objectives of this study. The information provided will only be used for academic purposes, and will be treated with utmost confidentiality.

SECTION A:

BACKGROUND INFORMATION (Please tick appropriately)

a) Gender Male ☐ Female ☐

b) Age 24 Years and below

25-34 years ☐ 35-44 years ☐ 45 and above ☐

c) Highest education level

Secondary ☐ Diploma ☐ Degree ☐ Professional ☐ Masters ☐ others
(Specify.....)

d) How long have you served in the organization?

1-5 years ☐ 6-10 years ☐ 11-16 years ☐ above 16 years ☐

e) Which suppliers does your company deal with?

Plastics ☐ Glasses ☐ Water ☐ Carbon ☐

Others (specify.....)

f) Which department do you work in?

Marketing ☐ Procurement ☐ Finance ☐ Human resource ☐

Machine operators ☐ store managers ☐ others (specify.....)

h) How long have you dealt with most of your suppliers?

1 year ☐ 2 Years ☐ 3 Years ☐ Above 3 years ☐

*The table below shows the alternative responses and the number assigned to each response.
Please evaluate the statement by ticking in the box with the number that best suits your response.*

Strongly disagree	Disagree	Agree	Strongly agree
1	2	3	4

SECTION B: EARLY SUPPLIER INVOLVEMENT

Incentive alignment		1	2	3	4
1	We frequently share benefits of this relationship with our suppliers				
2	We frequently share losses resulting from our relationship with our suppliers				
3	We usually have joint investments with our suppliers				
4	We usually have joint agreements on order changes with our suppliers				
Information sharing					
1	We share information on delivery schedules with our suppliers				
2	We share information on price changes with our suppliers				
3	Our suppliers share with us information about relevant third parties for our successful operations (e.g. technology companies, consultants etc.)				
4	We share information on supply disruption with our suppliers				
5	We share information on inventory policy with our suppliers				
6	Our suppliers always inform us in advance of changes in the supply market				
7	We share information on order status with our suppliers				
8	We believe our suppliers freely share important information that is of interest to us				
Joint decision making					
1	Our suppliers always consult us on pricing policy				
2	We Jointly develop demand forecasts with our suppliers				
3	In most aspects of the relationship, the responsibility for getting things done is shared				
4	Our company makes its procurement plans for the next seasons together with its suppliers				
5	Our suppliers provide us with sale forecasts for the products our company buys from them				
6	We frequently have joint resolutions on order exceptions with our				

	suppliers in this relationship				
7	We make Joint decisions on inventory requirements with our suppliers in all our transactions				

SECTION F: ORGANIZATIONAL PERFORMANCE

Customer satisfaction		1	2	3	4
1	We are satisfied with the level of collaboration we have with our suppliers				
2	Our major suppliers have always been fair to us				
3	We are satisfied with the products and services we get from our suppliers				
4	Our firm is comfortable about its relationship with its suppliers				
5	Our collaboration with most of our suppliers reflects a happy and trouble-free situation				
Timely deliveries					
1	Our suppliers supply our goods at the expected time				
2	Our firm is comfortable with the re-order levels				
3	We are always replenished as soon as the stock is suspected to drop				
4	We are satisfied with the mode of deliveries from the suppliers				
Supplier retention					
1	It would be a long and difficult process to change our major suppliers, hence our continuous relationship with them				
2	In the foreseeable future we will consider our current suppliers as part of our selection set				
3	We intend to continue the purchasing arrangements with most of our suppliers				

Thank you for your cooperation

APPENDIX II

Table for Determining Sample Size of a known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

SOURCE: Kraljic and Morgan (1970)