

**SUPPLIER DEVELOPMENT AND OPERATIONAL  
PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI  
CITY COUNTY**

**BY**

**JOB M. KIVITE**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF  
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION,  
SCHOOL OF BUSINESS UNIVERSITY OF NAIROBI**

**NOVEMBER, 2015**

**DECLARATION**

I declare that this research project is my original work and has never been submitted to any other University for assessment or award of a degree.

Signature..... Date.....

**Job Makau Kivite**

**D61/71183/2014**

This research project has been submitted with my approval as the university supervisor.

Signature..... Date.....

Ernest Akelo, Lecturer University of Nairobi, School of Business

## **ACKNOWLEDGEMENT**

My special and sincere thanks go to my supervisors Mr. Ernest Akelo and Michael Chirchir for their guidance, support, suggestions, useful comments and constructive critique which were all instrumental to the successful completion of this research project. I also wish to appreciate the support and encouragement from my family and friends during the tough time that I had to balance between the demands of a rigorous academic program and an equally demanding work life. My gratitude to God Almighty who renewed my strength at every single stage of this study.

God bless you all.

## **DEDICATION**

This project of dedicated to: my family members, for their support and encouragement throughout this project: my friends and colleagues, I appreciate them for their guidance and support: To God almighty, thank you.

## **ABSTRACT**

This study was carried out to establish the effect of supplier development on operational performance among large manufacturing firms in Kenya. The study had three objectives, to determine the extent to which large manufacturing firms in Kenya have adopted the concept of supplier development, the effect of supplier development on operational performance and to determine the challenges facing supplier development implementation in the large manufacturing firms in Nairobi. The research design involved a cross sectional survey of 56 large manufacturing companies in Nairobi, Kenya. Data was collected using a questionnaire that was administered through “drop and pick” method. Mean and standard deviation were used to analyse the extent of concept implementation whereas regression analysis was used to analyse the relationship between supplier development and operational performance among large manufacturing firms in Kenya. The findings are presented in tables. The research found it evident that there is a significant relationship between supplier development and operational performance represented by  $R^2$  value of 0.894 which translates to 89.4% variance explained by the seven independent variables of supplier training, standardization, financial support, communication, certification, recognition and auditing. The study only focused on the large manufacturing companies in Nairobi. Therefore, the researcher recommends further research on other manufacturing firms not located in Nairobi and others not in the manufacturing industry. The researcher has also recommended that all manufacturing companies and other organizations embrace supplier development so that they can acquire competitive advantage associated with the concept application.

## TABLE OF CONTENTS

<b>PRELIMINARY PAGES.....</b>	<b>I</b>
TITLE PAGE.....	I
DECLARATION.....	II
ACKNOWLEDGEMENT .....	III
DEDICATION.....	IV
ABSTRACT.....	V
TABLE OF CONTENTS.....	VI
LIST OF TABLES.....	IX
LIST OF FIGURES.....	X
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND OF THE STUDY .....	1
1.1.1 SUPPLIER DEVELOPMENT .....	1
1.1.2 SUPPLIER DEVELOPMENT .....	1
1.1.3 IMPACT OF SUPPLIER DEVELOPMENT .....	3
1.1.4 OPERATIONAL PERFORMANCE.....	3
1.2 MANUFACTURING FIRMS OF NAIROBI.....	4
1.3 STATEMENT OF THE PROBLEM .....	5
1.3.1 GENERAL OBJECTIVE.....	7
1.3.2 SPECIFIC OBJECTIVES.....	8
1.4 VALUE OF THE STUDY.....	8
<b>CHAPTER TWO: LITERATURE REVIEW .....</b>	<b>9</b>
2.1 INTRODUCTION .....	9

2.2.1 UTILITY THEORY.....	7
2.2.2 THE SOCIAL CAPITAL THEORY.....	10
2.3 SUPPLIER DEVELOPMENT .....	10
2.3.1 SUPPLIER DEVELOPMENT PROCESS.....	11
2.3.2 SUPPLIER DEVELOPMENT TECHNIQUES.....	12
2.4 OPERATIONAL PERFORMANCE .....	13
2.4.1 EMPERICAL LITERATURE REVIEW.....	16
2.5 SUMMARY OF THE LITERATURE.....	19
2.6 CONCEPTUAL FRAMEWORK.....	19
<b>CHAPTER THREE: RESEARCH METHODOLOGY.....</b>	<b>21</b>
3.1 INTRODUCTION.....	21
3.2 RESEARCH DESIGN.....	21
3.3 POPULATION OF THE STUDY.....	21
3.4 SAMPLE DESIGN.....	22
3.5 DATA COLLECTION .....	22
3.6 DATA ANALYSIS.....	23
<b>CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND</b>	
<b>DISCUSSION.....</b>	<b>24</b>

4.1 INTRODUCTION.....	24
4.2 RESPONSE RATE.....	24
4.3 GENERAL INFORMATION.....	24
4.4 REGRESSION MODEL SUMMARY.....	31
4.5 SUPPLIER DEVELOPMENT & OPERATIONAL PERFORMANCE .....	32
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>35</b>
5.1 INTRODUCTION.....	35
5.2 CONCLUSIONS.....	35
5.3 RECOMMENDATIONS.....	36
5.4 LIMITATIONS OF THE STUDY.....	37
5.5 SUGGESTIONS FOR FURTHER RESEARCH.....	37
<b>REFERENCES:.....</b>	<b>38</b>
<b>APPENDICES.....</b>	<b>43</b>
<b>APPENDIX I: QUESTIONNAIRE.....</b>	<b>43</b>
<b>APPENDIX II: SAMPLING FRAMEWORK.....</b>	<b>49</b>
<b>APPENDIX III: LIST OF 56 SAMPLE FIRMS.....</b>	<b>50</b>



## LIST OF TABLES

TABLE 4.1 SUPPLIER DEVELOPMENT DIMENSIONS.....	25
TABLE 4.2 SUPPLIER TRAINING.....	26
TABLE 4.3 SUPPLIER PRODUCT STANDARDIZATION.....	26
TABLE 4.4 SUPPLIER FINANCIAL SUPPORT.....	27
TABLE 4.5 SUPPLIER COMMUNICATION.....	28
TABLE 4.6 SUPPLIER CERTIFICATION.....	28
TABLE 4.7 SUPPLIER RECOGNITION.....	29
TABLE 4.8 SUPPLIER AUDIT.....	30
TABLE 4.9 CHALLENGES IN SUPPLIER DEVELOPMENT.....	30
TABLE 4.10 REGRESSION MODEL SUMMARY.....	31
TABLE 4.11 REGRESSION COEFFICIENTS.....	33
TABLE 4.12: ANOVA REPORT.....	33

## LIST OF FIGURES

FIGURE. 1: CONCEPTUAL FRAMEWORK.....	19
--------------------------------------	----

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of The Study

In the advent of intense business competitive environment, business organizations are relying more on their supply chain as a source of competitive advantage. Suppliers play strategic roles in organizations and are significantly engaged in creating a competitive advantage with their actions having a positive impact on the organizations' performance (Jabbour, 2009). In order for firms to compete effectively and survive in the global market, they need to develop operational strategy to ensure they maintain and build relationships with a capable and competent network of suppliers and extract maximum value from these relationships. To create and maintain such a network and to improve capabilities that are necessary for the buying organisation to meet its increasing competitive challenges, the buying firm may need to engage in supplier development.

Despite some consensus that direct supplier development plays a critical role in promoting performance improvement and contributes strategically to overall operational effectiveness, little research has empirically examined the impact of supplier development programs on the operational performance in the manufacturing sector of Kenya. This paper endeavours to examine this gap and present findings and recommendations on how supply development can be used to enhance operational performance in the context of the mentioned sector of Kenya.

#### 1.1.2 Supplier Development

Supplier development is defined as any effort by a buying firm to increase the performance and capabilities of their supplier. It is the process of working

collaboratively with suppliers to improve or expand their capabilities (Dominick, 2006). It is a bilateral effort by both the buying and supplying organization to jointly improve the supplier's performance or capabilities in one or more of the following areas: cost, quality, delivery lead time, technological advancement, safety and environmental responsibility, managerial capability and financial viability (Krause & Handfield, 2011). It is the process of having the buying organization work directly with certain suppliers to improve their performance for the benefit of the buying organization. There are various objectives which buying organizations seek to accomplish in their supplier development undertaking. These may include; improving supplier performance, reducing product costs, reducing lead-times, resolving serious quality issues, developing new routes to supply, developing new product in the market etc. Before undertaking supplier development on any supplier, the purchasing professionals responsible for the project must select the ideal supplier for development based on their current capacity compared to ideal capability, their cooperation with buying organization, product or service supplied, nature and scope of development required, etc.

Supplier development however is faced with some challenges which impair realization of the desired benefits. These may include but are not limited to inadequate financial resources, lack of technical capability, lack of commitment by the suppliers, resistance to change, among other factors. Opponents of supplier development concept argue that hedging may expose the buying firm to supplier activities and may give a lot of control over the business operations to an external force notwithstanding the immense use of resources during the exercise (Krause, 1998).

### **1.1.3 Impact of Supplier Development on Firm's Operations**

Supplier development is mainly focused on the effects that affect the product aspects as well as the supplier's capabilities. This basically involves improvement of product aspects which include; quality, design, reliability, safety and conformance as well as total ownership cost of the product. In supplier capacity aspects, supplier development basically works to improve and enhance supplier's performance related with; increased production capacity, shorter product development cycle, productivity, research and development, improved and reliable processes, shorter delivery lead times, flexibility and overall organizational visibility to the buying organization by adoption of information interchange (Wagner & Krause, 2009).

### **1.1.4 Operational Performance**

Operational performance is focused on improving efficiency and effective systems which are reliable and can ensure excellent which exceed customer expectations. To get such sustainable operational results, operations strategy is developed which supports the organization in ensuring the key operational aspects of the firm are met; cost reduction, speed of product development and production, flexibility of the production system and quality assurance for the product (Wiley, 2010). As business organizations compete in the market place where prices are driven by the market forces, most of the firms seek to device other means of influencing customers to buy their products. This will call for methods like lowering product cost, reducing lead times, improving quality of product, showing sincere attention to safety and environmental protection etc.

The overall organizational performance is a cumulation of independent functional performance metrics. That is, for market share to grow, product quality must be improved; for customer satisfaction to be achieved, quality must be improved and lead times reduced. For financial growth to be realised, product cost must be lowered since the final product price is dictated by the market forces. In this research therefore, we take a critical look at the elements of performance which are directly attributable to the operational performance parameters i.e., quality, cost, lead time, and production capacity.

## **1.2 Manufacturing Firms of Nairobi City County**

Manufacturing is to make or process (a raw material) into a finished product, especially by means of a large-scale industrial operation. According to Awino (2011) manufacturing is an important sector in Kenya and it makes a substantial contribution to the country's economic development. It has the potential to generate foreign exchange earnings through exports and diversify the country's economy. This sector has grown over time both in terms of its contribution to the country's gross domestic product and employment (Magutu, 2014)

The manufacturing sector in Kenya constitutes 70 per cent of the industrial sector contribution to GDP, with building, construction, mining and quarrying cumulatively contributing the remaining 30 per cent. Kenya Vision 2030 identifies the manufacturing sector as one of the key drivers for realizing a sustained annual GDP growth of 10 per cent. The key challenges facing the sector include low value addition, limited diversification, high costs of production and influx of counterfeits. (KIPPRA, 2013)

### **1.3 Statement of the Problem**

Supplier development requires both the supplier and buyer to commit maximum efforts to achieve the greatest results out of the program. Even though both sides agree that a strong commitment is required, there is still no guarantee that the supplier development will be successful. In the early 90's companies started reducing the number of direct suppliers and maintaining more cooperative relationships with the remaining suppliers (Hartley & Choi, 1996). Being a long term business strategy, this research project will seek to establish the various factors which affect the strategy.

Several supply chain researchers have done research on the subject of supplier development subject and filed their findings. Among them are;

(Plane & Green, 2011) conducted a study on Buyer-supplier collaboration and the aim of facilities management procurement. The study established that there emerged a general consensus that a more relational procurement process has a positive influence on the relationship established and also that the perceived benefits of relational approaches included clarity of service requirements, value delivery, and cultural alignment. This study however did not show how buyer – supplier relationships affect operational performance.

Waraporn (2012) in the study on the impact of supplier development on supplier performance investigated the role of buyer-supplier commitment in supplier performance improvement. The study revealed that the buying company would implement the supplier development strategies by focusing on buyer-supplier relationship commitment for performance improvement. The authors therefore recommended that managers should place strong emphasis on developing specific

relationship with suppliers. The study however did not dwell on the significance of supplier development on the buyer firm's performance.

Mukhwana, (2010) discussed effects of supply chain management practices on performance in the telecommunication sector in Kenya. The study found that indeed supply chain management practices have an effect on the organizational performance. However this study was general in referring to supply chain management and not specific areas in supply chain management that affects organizational performance. The study also focused on the service industry hence not sufficient to conclude the effect in the manufacturing firms.

Njeru (2013) in her case study of Kenya Power sought to investigate factors which influence supplier development in public entities in Kenya. The study concluded that the management of Kenya Power recognized supplier development as a means to improving their efficiency. However, the study was too narrow to only supplier communication as the only tool in supplier development. It also focused on public entity narrowing on a case study context of Kenya Power hence no enough scope to generalize on the effect of supplier development on other organizations particularly in the private sector.

Kamau (2013) in the study of the relationship between Buyer-supplier relationships and organizational performance among large manufacturing firms in Nairobi, Kenya concluded that Buyer- supplier relationships had assisted the large manufacturing companies to enhance the performance of their organizations. The study though pointed out that indeed supplier relationship improved organizational performance, it had a



general application on relationships but did not focus on supplier development concepts. More research on other supplier development methods would be necessary to establish how such it would influence firm's performance.

Wachiuri (2015) in a case study of east Africa breweries limited investigated the Role of supplier development on organizational performance of manufacturing industries in Kenya. Though the study concluded that supplier relationship had a positive impact on the selected organization, it was general on the context of relationship. More investigation needed to be done to specifically establish the effects of supplier development as a mode of supplier relationship on a wider pool of manufacturing firms in Kenya.

This research seeks to answer questions regarding supplier development concept such as; to what extent are Kenyan manufacturing companies aware of supplier development concept, to what extent is supplier development concept applied in Kenyan manufacturing sector and what are the effects of applying the supplier development concepts to the firms' performance.

### **1.3.1 General Objective**

The general objective is this study was to investigate the role of supplier development on improving operational performance of manufacturing industries.

### **1.3.2 The Specific Objectives**

- i. To determine the extent of supplier development among manufacturing companies in Nairobi.
- ii. To determine the effect of supplier development on operational performance in manufacturing firms in Nairobi.
- iii. To determine the challenges of supplier development in manufacturing firms in Nairobi.

### **1.4 Value of the Study**

This study will provide insight to the manufacturing firms in Kenya on how they can leverage on supplier development process to enhance their operational performance for their firms.

Upon gathering evidential proof that supplier development fosters operational performance and hence growth, other non-manufacturing organizations can consider adopting the recommendations thereby benefiting from the study.

The findings of this study will be used as a reference point by future supply chain management researchers for further research on the same field with expanded scope or different contexts.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews both the theoretical and empirical literature about the study topic already in existence. It includes a review of the various studies that have been conducted by other researchers on supplier development models in specific scenarios. Among the areas reviewed include: buyer supplier development models; supplier development process and techniques. Operational performance, dimensions/metrics and measurement techniques available for use. The chapter also provides the research gaps identified and a conceptual framework to show the relationship between the dependent and independent variables.

#### **2.2 Theoretical Literature Review**

The concept of supplier development has been developed based on some existing theories established in economics. The advocates of the concept point out that the objectives of supplier development must be well-known and the cost established so as to measure efficiency and effectiveness of the development exercise. Some theories underscoring supplier development principles are explained below;

##### **2.2.1 The Utility Theory**

A standard model of motivation is that a person has a desire Y, and if they believe that by doing act X, they can achieve Y, then (assuming there is no barrier to doing X or some stronger desire than Y) they will choose X. The most well established approach to this problem is rational choice theory, which prescribes the most effective ways to

achieve given desires (Sugden, 1991). Utility theory assumes that any decision is made on the basis of the utility maximization principle, according to which the best choice is the one that provides the highest utility to the decision maker. Buying firms therefore need to evaluate the incidental benefits associated with their investments on supplier development and compare with the utility generated as a result of the activities.

### **2.2.2 The Social Capital Theory**

Social capital refers to the norms and networks that enable people to act collectively (Portes, 1998). The principles of this theory is that, while different entities in a capitalistic society have their personal objectives and goals to focus on accomplishing, players have realized that combining efforts with likeminded partners yields better results than working in isolation. The supplier strives to sell their products to any buyer who can offer the best price without any regard to the relationship. This theory underpins the need for establishing working relationships between a buyer and a supplier to enhance mutual benefits. This therefore calls for both firms deploying their resources in support of each other so as to realize common goals. The buyer therefore commits their firm's resources and infrastructure to support their selected suppliers to enhance their capabilities in production related activities whose effect is shared by the buying firms. (Granovetter, 1992).

### **2.3 Supplier Development**

As more and more manufacturing firms have realized the importance of supplier performance in establishing and maintaining their competitive advantage, purchasing research has tended to focus on supplier development programs and exploring how these initiatives impact on buyer and supplier performance. In the manufacturing

setting, supplier development at its basic level can involve undertaking evaluation of supplier's performance and giving feedback to them, sourcing from a limited number of suppliers, Parts standardization and Supplier qualification. At advanced stage, provision of equipment or capital, on-site consultation, education and training programs, temporary personnel transfer, inviting supplier's personnel, taken as a whole the transfer of knowledge and qualifications to the supplier firm (Humphreys, 2001).

Supplier development programme has primarily two objectives. First is to reduce the problems of supplier by making immediate changes in the supplier's operations and second is try to increase suppliers' capability in such a way that supplier will be able to make their own improvements. Many supplier development programs are results-oriented and focused on solving specific problems of suppliers. These results-oriented programs will make improvements in their suppliers' quality and cost. Results oriented supplier development increases the performance of supplier but does not help supplier to increase their capabilities for continuous improvement.

### **2.3.1 Supplier Development Process**

For supplier development to be successful, the buying organization must conduct the process with great prowess and caution. The process starts by Identifying critical commodities to ensure that the organization develop suppliers for commodities strategic to their business operations. The procurement team then embarks on the next stage of selecting suppliers for the said critical commodities. This helps in identifying prospective suppliers for development. (Gordon, 2008). A cross functional team is thereby formed by the buyer organization to facilitate the development of the key capabilities of the supplier to ensure that the process is done professionally. The formed

team meets the supplier top management to discuss the development process, resource allocation and strategies to be adopted (Handfield et al., 2000). Prospective projects for consideration are then ranked according to return on investment and selected for implementation. The team therefore sets contractual agreements between the two organizations and the rules of engagement during the development process. Finally, evaluation and monitoring development progress with change of strategies where necessary (Wisner, Tan, & Leong, 2009).

### **2.3.2 Supplier Development Techniques**

Supplier training programs are designed by the buyer focused on enhancing and improving supplier technical capability in terms of key competencies like quality, production processes and management best practices to enhance firm's productivity.

Communication between buyer and supplier is considered a critical mode of supplier development. Sanders et al. (2011) found out that buyer-to-supplier information sharing, buyer-to-supplier performance feedback and buyer investment in inter-organizational information technology are key enablers of buyer-to-supplier communication openness (Krause, 1998).

Supplier evaluation and assessment is done to evaluate potential supplier's capability of controlling quality (delivery, quantity, price, and all other factors to be embedded in a contract). Such evaluation is carried out at the pre-contract phase of supplier sourcing. This exercise helps in enabling the suppliers rate their capabilities relative to the buying organization expectations and hence establish areas to invest in so as to match expectations. Supplier Certification/Qualification is where the buying organization establishes a set of criteria to evaluate the supplier and then physically go to the plant

to complete certification. It requires an actual inspection and can clearly identify strengths and weaknesses in production lines. Provision of financial support may be extended to specific suppliers who may experience financial difficulties so as to empower them to meet their financial obligations. This can be in the form of down payments, loans, equipment donations etc. which helps a supplier in acquiring operational capacity which they may not have been capable of.

Providing incentives and recognition can be adopted by some buyers to show appreciation of their supplier achievement and improved performance. This is a means of motivating the supplier to work hard and invest more to maintain their good performance. Supplier audits done by auditors are used for examining supplier's performance and procedures to ensure compliance to buyer policies. Recommendations from the audit team may be used by the supplier to improve on their performance in line with the buyer expectations and standards.

## **2.4 Operational Performance**

Inayatullah et al., (2012) points out that overall organizational performance can be divided in to three parts: financial performance, product performance, and operational performance. Financial performance of organization includes: market share, return on investment, profit margin, inventory turnover rate, and productivity. Product performance includes: functionality, service, operating expenses, comfort, and ease of use. Higher product performance enhances the customer and employee satisfaction. Operational performance includes: product/service quality, lead time/service completion time, product development time, utilization of resources, responsiveness to customer demand, and operational cost. Different organizations develop different

metrics for measuring their business performance. However, the key and universal metrics adopted across all sectors to measure their operational performance include the following:

Product cost directly affects the overall profit margin, this is because the product price is a combination of the total product cost, other expenses and the markup. The principles and strategies behind improving margins basically are; increasing your sales and increasing your operational efficiency to bring down the cost of goods sold (Richard et al., 2009). Flexibility has been generically defined as the ability of an organization to effectively handle uncertainty in its operational environment (Koste & Malhotra 1999). It is required to address uncertainty in demand quantity, i.e., variations in the volume of output. Flexibility is found to directly improve growth in return on equity, sales, and return on sales (Swamidass & Newell 1987). Speed of operations is also key element of operational performance. This determines time taken to design, develop and produce a product for sale. By measuring the extent to which perceived waiting time period matches customers' expectations for a specific transaction, it has been found that long waiting time negatively affects customers' satisfaction and post-sale judgement. Product quality is an important operations performance element that has been widely investigated in previous research concerned with drivers of customer satisfaction (Bielen & Demoulin, 2007).

In order to ascertain the operations performance accurately, some tools have been devised to help organizations perform this task effectively. These include;

The balanced scorecard is a conceptual framework for translating an organization's strategic objectives into a set of performance indicators distributed among four



perspectives: Financial, Customer, Internal Business Processes, and Learning and Growth. Some indicators are maintained to measure an organization's progress toward achieving its vision; other indicators are maintained to measure the long term drivers of success. Through the balanced scorecard, an organization monitors both its current performance (finance, customer satisfaction, and business process results) and its efforts to improve processes, motivate and educate employees, and enhance information systems, its ability to learn and improve (Kaplan, 2010). The Performance prism is used as a starting point for all organization's stakeholders, including investors, customers and intermediaries, employees, suppliers, regulators and communities etc. According to PP proponents, strategy should follow from stakeholder analysis. The PP framework also focuses on the reciprocal relationship between the organization and its stakeholders as opposed to just stakeholder needs. The five facets of the Performance Prism are stakeholder satisfaction, strategies, appropriate processes, level of capabilities and stakeholder contribution (Neely, 2012)

The European Foundation Quality Framework Excellence Model provides a holistic view of the organization and it can be used to determine how these different methods fit together and complement each other. The Model can therefore be used in conjunction with any number of these tools, based on the needs and function of the organization, as an overarching framework for developing sustainable excellence. Excellent organizations achieve and sustain outstanding levels of performance that meet or exceed the expectations of all their stakeholders. The EFQM Excellence Model allows people to understand the cause and effect relationships between what their organization does and the Results it achieves. (Hendricks, 1996) The X-Matrix is a process for converting strategy to Reality by using both horizontal and vertical alignment in the

organization. There are several variations of X-matrix. It is created in the beginning of the financial year and updated every month. Once in a year, the X-matrix and its contents are revisited by the leadership team. Any strategic plan has to be cascaded to the entire organization (Kanri, 2011).

### **2.4.1 Empirical Literature Review**

When viewed from the broad perspective, supplier development can be a strategic weapon for the buying firm. This perspective becomes especially important in light of the fact that manufacturing firms spend approximately 55% of their sales dollars on purchased goods and services (Tully, 1995). Ideally, the purchasing function, as a boundary-spanning unit within the firm, interacts with manufacturing and corporate strategies internally, and with suppliers' capabilities externally (Watts, 1992).

Several supply chain researchers have done research on the subject of supplier development subject and filed their findings. Among them are;

Plane & Green, (2011) conducted a study on Buyer-supplier collaboration and the aim of facilities management procurement. The study established that there emerged a general consensus that a more relational procurement process has a positive influence on the relationship established and also that the perceived benefits of relational approaches included clarity of service requirements, value delivery, and cultural alignment. This study however did not show how buyer – supplier relationships affect operational performance.

Waraporn (2012) in the study of the impact of supplier development on supplier performance investigated the role of buyer-supplier commitment in supplier

performance improvement in Thailand. The study revealed that the buying company would implement the supplier development strategies by focusing on buyer-supplier relationship commitment for performance improvement. The authors therefore recommended that managers should place strong emphasis on developing specific relationship with suppliers. The buying firm expected to develop the key suppliers who have long-term relationship with a sharing of information and benefits including joint problem solving. However, the study did not explore the effect of supplier development on the buyer firm's performance.

Mukhwana (2010) discussed effects of supply chain management practices on performance in the telecommunication industry in Kenya. The study found that indeed supply chain management practices have an effect on the organizational performance. However this study was general in referring to supply chain management practices and not specific areas in supply chain management that affect performance. The study was also very specific on the telecommunication industry and hence not sufficient for generalization of its findings in all other sectors.

Kamau (2013) in the study of the relationship between Buyer-supplier relationships and business performance among large manufacturing firms in Nairobi, Kenya concluded that Buyer- supplier relationships had assisted the large manufacturing companies to enhance the performance of their organizations. The study though pointed out that indeed supplier relationship improved performance, it had a general application on relationships but did not focus on supplier development concepts. By maintaining good relationships with their suppliers, manufacturing companies ensure that they perform well and also help the suppliers themselves to perform well and also achieve their goals.

More research on other supplier development methods would be necessary to establish how such would influence performance.

Njeru (2013) in her case study of Kenya power investigated factors which influence supplier development in public entities in Kenya. The study concluded that the management of KPLC recognized supplier development as a means to improving their efficiency. The researcher pointed out that for effective supplier development process, there should be management support, commitment and good communication channels between the two parties. Use of Enterprise Resource Programs systems should be adopted to shorten the time taken in the supplier development. However, the study was too narrow to only supplier communication as the only tool in supplier development. It also focused on public entity narrowing on a case study context of KPLC hence not enough scope to generalize on the effect of supplier development on other organizations particularly in the private sector.

Wachiuri (2015) in a case study of east Africa breweries limited investigated the Role of supplier development on organizational performance of manufacturing industries in Kenya. The case study was carried out to establish the effect of buyer – supplier relationships on organizational performance for east African breweries in Kenya. The study recommended that the organisation should fund training programs that they administer to their suppliers to enhance better performance. In addition, enhanced communication should be put into practice in the supplier development program. In firm involvement firms ought to evaluate and give feedback to their suppliers more often. This gives the suppliers an opportunity to know their weaknesses and shortfalls as well as adjust their operations to meet the needs of the manufacturing firms. The

study recommended rewarding of firms which show great improvement so as to motivate them to improve.

## **2.5 Summary of the Literature and Research Gaps**

The chapter has discussed the concept of supplier development, theories about it, the process and best practices for implementation of supplier development in organization. The researcher has also dwelt on the processes and different approaches to supplier development. It has analysed several studies about the concept done by different authors with critical focus on their findings, recommendations and the research gaps noted in the previous studies. The researcher has also analysed some of the key pitfalls which are likely to impact negatively on the implementation of supplier development hence rendering it unsuccessful. Other than the supplier development strategies, the chapter discusses organizational performance concept in business context. The author has discussed the meaning of organization performance, metrics used for measuring organizational performance, tools and techniques used to rate organizational effectiveness and significance of measuring organizational performance and reporting.

## 2.6 Conceptual Framework

### Independent Variables:



### Dependent variables

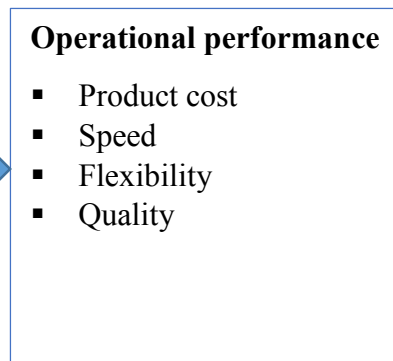


Figure 3.1, Source: author, 2015

The conceptual framework in figure 3.1 demonstrates the interaction between the buying firm and the external firm (supplier) and the impact on the dependent operational variables. From the Michael porter's competitive forces model, the dependent variables impact significantly in overcoming the competitive forces in the market. The dependent variables are the key operational elements which facilitate operational excellence and competitive advantage. Ferdows and De Meyer (1990) suggest that lasting improvements in performance depend on effort being applied in creating a particular sequence of capabilities and that these capabilities should be considered as cumulative developments, building on each other. They further classify the four main competitive focus areas into quality, flexibility, speed and product cost in their sand cone model of competitive advantage building. The conceptual framework shown here depicts how the independent variables directly affect the key operations strategy elements which help in developing a competitive advantage and ultimate operational excellence which is a derivative of operational performance.

## **CHAPTER THREE RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter presents the research methodology applied in conducting the study; data qualification, collection, analysis and presentation. It discusses the research design, target population, sampling design and sample size, data collection procedures and instruments, determination of reliability and validity as well as data analysis techniques to draw conclusion.

### **3.2 Research Design**

The study involved a descriptive research design. The research was designed to produce quantitative descriptions of aspects of the study sample population in which case it is concerned either with relationships between variables, or with projecting findings descriptively about a predefined population; data collection was done by asking people structured and predefined questions from a fraction of the target population. (Pinsonneault & Kraemer, 1992).

### **3.3 Population of the Study**

The population was composed of the large manufacturing companies listed by the Kenya association of manufactures. The main reason for this choice was that these firms are likely to exhibit an elaborate supplier development philosophies and make use of such programs. According to the KAM website (2015), there were approximately 560 registered manufacturing firms in Kenya.

### **3.4 Sample Design**

The sample was stratified and then respondents selected randomly. The researcher picked respondents randomly from the population strata with all firms having same probability for being selected. According to Mugenda & Mugenda (2003), at least 10% of the target population is important for a study. The sample therefore comprised of 56 large manufacturing firms which is 10% of total population. The firms were located within Nairobi County and hence easily accessible to give information.

### **3.5 Data Collection**

The primary data was gathered from supply chain officials from the selected manufacturing firms in Nairobi. The supply chain officials are considered appropriate respondents since they have in-depth understanding of the effect of supplier development on the performance of their function. The data was collected by use of a structured questionnaire that was administered by “drop and pick later” method. The questionnaire was in the form of Likert scale where respondents were required to indicate their views on a scale of 1 to 5.

The questionnaire had 4 sections: Section 1; data on the company profile, section 2; dimensions of supplier development, 3; effects of application of supplier development on organizational performance, 4; challenges in implementation of supplier development.



### 3.6 Data Analysis

The main objective of data analysis was to analyse the relationship that exists among the variables in question, that is; organizational performance and supplier development variables. The following equation had been formulated to analyse the relationships between the variables:

$$P = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5 X_5 + B_6X_6 + B_7X_7$$

Where: **P** = organizational performance; **a** = the **P** intercept when **X** is zero; **B<sub>1</sub>**, **B<sub>2</sub>**, **B<sub>3</sub>**, **B<sub>4</sub>**, **B<sub>5</sub>**, **B<sub>6</sub>** and **B<sub>7</sub>** are regression coefficients for the following variables respectively;

**X<sub>1</sub>** = training; **X<sub>2</sub>** = Standardization; **X<sub>3</sub>** = Financial support; **X<sub>4</sub>** = Communication  
**X<sub>5</sub>** = Certification; **X<sub>6</sub>** = Recognition; **X<sub>7</sub>** = Auditing.

The data collected will be analysed using descriptive statistics by use the statistical package for social sciences (SPSS). Pearson's correlation was run to examine the relationship between the study variables which are set out in the objectives of the study.

## **CHAPTER FOUR**

### **DATA ANALYSIS, FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This study was carried out to establish the effect of supplier development on operational performance among large manufacturing firms in Nairobi. Data was collected from procurement officers, buyers and supply chain managers from the respective respondent firms.

#### **4.2 Response Rate**

A total of 56 questionnaires were distributed to large manufacturing firms in Nairobi. Out of the 56 questionnaires, 34 were filled-up and returned to the researcher. This gave a response rate of 60%. This response rate was favourable according to Mugenda and Mugenda (2003) in which they assert that a 50% response rate is adequate, 60% good and above 70% rated very well. The 40% who never returned the questionnaires cited busy schedules as the main reason for lacking time to fill them.

#### **4.3 General Information**

The first part of the questionnaire contained general information regarding the organization and the respondent. The areas sited in this part were: company name and address, sector and duration the company has been in operation, size of workforce and the position of the respondent in the organization, the duration the respondent has worked in that position. According to the underlying objectives for this research, such information did not have a lot of significance hence no much analysis was done.

### 4.3.1 Supplier Development

**Table 4.1 Supplier development dimensions Data**

	<b>Supplier development dimension</b>	<b>Mean</b>	<b>Std Dev</b>
1	Supplier development awareness	4.29	0.80
2	Supplier development significance	4.09	0.90
3	Extend of supplier selection practice	4.12	0.84
4	Enhancement of supplier capabilities	4.15	0.74
5	Training of suppliers	4.24	0.61
6	Standardization of supplier products	4.21	0.64
7	Financial support to suppliers	2.97	1.24
8	Constant communication with suppliers	4.12	0.73
9	Assistance in supplier certification	3.47	1.19
10	Supplier recognition	3.98	0.80
11	Supplier audit	4.06	0.95

Research data (2015)

Table 4.1 shows the mean and standard deviation for the response with regard to the extent supplier development concept adoption. According to the data reported in table 4.1, many large manufacturing organizations in Nairobi agree that: supplier training (mean =4.24), Standardization (mean =4.21), Communication (mean =4.12) and Auditing (mean =4.06) enhances their firm's operational performance. All of the above factors had a mean of between 4 and 5. An indication that majority large manufacturing organizations in Nairobi have adapted these dimensions to a large extent. However, the study showed a mean of 2.97 on extending financial support to suppliers 3.47, for supplier certification and 3.98 for supplier recognition. This showed that for majority of the companies sampled, offering financial support to suppliers, assisting suppliers to get certification and supplier recognition were not adopted or were adopted to a very small extent.

### 4.3.2 Supplier Training

**Table 4.2 Supplier Training Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	4.29	0.80
2	Has improved our product quality	4.21	0.91
3	Has improved on our speed to market	4.18	0.80
4	Has improved our operational flexibility	4.35	0.95

Research data (2015)

Table 4.2 shows the mean and standard deviation for the response with regard to the impact of adoption supplier training on operational performance. According to the data reported, many large manufacturing organizations in Nairobi agree that: supplier training reduced product cost (mean =4.29), Improved product quality (mean = 4.21); improved on speed to market (mean =4.21) and improved firm’s operational flexibility (mean =4.35) of the firm. All of the above factors had a mean of between 4 and 5. An indication that majority large manufacturing organizations in Nairobi agree that training of supplier on best management practices impacts positively on firm’s key operational parameters to a large extent.

### 4.3.3 Supplier Product Standardization

**Table 4.3 Supplier Product Standardization Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	4.35	0.85
2	Has improved our product quality	4.06	0.89
3	Has improved on our speed to market	4.09	1.11
4	Has improved our operational flexibility	3.79	1.20

Research data (2015)

Table 4.3 shows the mean and standard deviation for the response with regard to the impact of adoption supplier product standardization on operational performance.

According to the data reported, many large manufacturing organizations in Nairobi agree that: supplier product standardization reduced product cost (mean =4.35), Improved product quality (mean = 4.06) and improved on speed to market (mean =4.09) of the firm. However, majority firms were undecided on whether adoption of supplier product standardization improved their firm’s operational flexibility (mean =3.79).

#### 4.3.4 Supplier Financial Support

**Table 4.4 Supplier Financial Support Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	3.00	1.26
2	Has improved our product quality	3.09	1.31
3	Has improved on our speed to market	2.91	1.24
4	Has improved our operational flexibility	2.85	1.21

Research data (2015)

Table 4.4 shows the mean and standard deviation for the response with regard to the impact of extending financial support to suppliers on operational performance. According to the data reported, majority of large manufacturing organizations in Nairobi were not decided whether the technique reduced their product cost (mean = 3.00) and improved on product quality (mean = 3.09). Majority of the manufacturing firms disagreed that extending financial support to suppliers improved speed to the market (mean =2.91) and improved operational flexibility (mean = 2.85).

### 4.3.5 Supplier Communication

**Table 4.5 Supplier Communication Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	4.35	0.85
2	Has improved our product quality	4.32	0.81
3	Has improved on our speed to market	4.24	0.85
4	Has improved our operational flexibility	4.06	1.10

Research data (2015)

Table 4.5 shows the mean and standard deviation for the response with regard to the impact of adoption Supplier Communication on operational performance. According to the data reported, majority large manufacturing organizations in Nairobi agree that: supplier training reduced product cost (mean =4.35), Improved product quality (mean = 4.32); improved on speed to market (mean =4.24) and improved firm's operational flexibility (mean =4.06) of the firm. All of the above factors had a mean of between 4 and 5. An indication that majority large manufacturing organizations in Nairobi agree that Supplier Communication impacts positively on firm's key operational parameters to a large extent.

### 4.3.6 Supplier Certification

**Table 4.6 Supplier Certification Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	3.03	1.03
2	Has improved our product quality	3.21	1.09
3	Has improved on our speed to market	2.97	1.03
4	Has improved our operational flexibility	2.97	1.09

Research data (2015)

Table 4.6 shows the mean and standard deviation for the response with regard to the impact of supplier certification on operational performance. According to the data reported, majority of large manufacturing organizations in Nairobi were not decided whether the technique reduced their product cost (mean = 3.03) and improved on product quality (mean = 3.21). Majority of the manufacturing firms disagreed that supplier certification improved speed to the market (mean =2.97) and improved operational flexibility (mean = 2.97).

### 4.3.7 Supplier Recognition

**Table 4.7 Supplier Recognition Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	4.00	0.89
2	Has improved our product quality	3.88	0.95
3	Has improved on our speed to market	4.06	0.89
4	Has improved our operational flexibility	3.97	0.97

Research data (2015)

Table 4.7 shows the mean and standard deviation for the response with regard to the impact of adoption supplier recognition on operational performance. According to the data reported, many large manufacturing organizations in Nairobi agree that: supplier recognition reduced product cost (mean =4.00) and Improved speed to market (mean = 4.06) of their firm. Majority of the firms were undecided whether supplier recognition improved product quality (mean =3.88) and improved their firm’s operational flexibility (mean =3.97) of the firm.

### 4.3.8 Supplier Audit

**Table 4.8 Supplier Audit Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Has reduced our product cost	4.18	0.87
2	Has improved our product quality	4.21	0.84
3	Has improved on our speed to market	4.24	0.82
4	Has improved our operational flexibility	4.09	0.87

Research data (2015)

Table 4.8 shows the mean and standard deviation for the response with regard to the impact of adoption supplier audit on operational performance. According to the data reported, majority large manufacturing organizations in Nairobi agree that: supplier audit reduced product cost (mean =4.18), Improved product quality (mean = 4.21); improved on speed to market (mean =4.24) and improved firm’s operational flexibility (mean =4.09) of the firm. All of the above factors had a mean of between 4 and 5. An indication that majority of large manufacturing organizations in Nairobi agree that supplier audit impacts positively on firm’s key operational parameters to a large extent.

### 4.3.9 Challenges in Supplier Development

**Table 4.9 Challenges in Supplier Development Data**

	<b>Impact on operational performance</b>	<b>Mean</b>	<b>Std Dev</b>
1	Lack of supplier commitment	4.18	0.76
2	Insufficient supplier resources	4.12	0.81
3	Lack of trust between parties	4.03	0.83
4	Poor alignment of firm cultures	3.97	0.87
5	Insufficient Inducements to the Supplier	3.82	1.11
6	Insufficient top management support	4.03	1.06

Research data (2015)



A scale was used to show the extent to which the respondent thought the statements affect supplier development implementation was true: 5=strongly Agree, 4= Agree, 3=Undecided, 2=Disagree, & 1=Strongly Disagree. A mean of 4-5 therefore shows an agreement that the statement in question affects supplier development success. A mean of 3, shows that the respondent is undecided, a mean of 1 -2 Shows that the respondent does not agree that the factor in question affects Supplier development. This research shows that majority of the respondents agreed that the following factors affect negatively supplier development success; Lack of supplier commitment, Insufficient supplier resources, Lack of trust between parties and insufficient top management support. This therefore means that the above factors pose a challenge in supplier development success. Poor alignment of firm cultures and insufficient Inducements to the supplier whose mean values are 3.97 and 3.82 respectively demonstrate that the two factors do not pose a challenge in supplier development according to the research findings.

**Table 4.10 Regression Model Summary**

Mod l	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.946 <sup>a</sup>	.894	.866	.27647

Research data (2015)

Table indicates that there is an R<sup>2</sup> value of 89.4%. This value indicates that the seven Independent variables explain 89.4% of the variance in operational performance of large manufacturing firms in Nairobi. It is therefore suffices to conclude that supplier development plays a significant role in enhancing operational performance given that the unexplained variance is only 10.6%. The indicated value for R=0.946. This means

that the dependent variable has a positive and strong direct relationship with the independent variable. It therefore suffices that by varying the independent variables in the equation, operational performance will change in the same direction.

#### **4.5 Relationship between Supplier Development and Operational Performance**

The study also sought to determine the relationship that exists between supplier development and organizational performance among large manufacturing firms in Kenya. The researcher conducted a regression analysis to assist explain this relationship. The study adopted the following linear regression model to depict the expected relationship between the variables:  $P = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7$ . Where: P= Operational performance measured using the responses on the effect of various supplier development dimensions. ; a= the Y intercept, that is the value of P when X is zero; B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>5</sub>, B<sub>6</sub> and B<sub>7</sub>, are regression coefficients of the following variables respectively; X<sub>1</sub> = Training; X<sub>2</sub> = Standardization; X<sub>3</sub> = Financial support; X<sub>4</sub> = Communication; X<sub>5</sub> = Certification; X<sub>6</sub> = Recognition; X<sub>7</sub> = Audit.

**Table 4.11 Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	0.201	0.303		0.664	0.013
<b>X<sub>1</sub> = Training</b>	0.394	0.213	0.411	1.849	0.036
<b>X<sub>2</sub> = Standardization</b>	0.308	0.106	0.487	2.897	0.008
<b>X<sub>3</sub> = Financial Support</b>	-0.082	0.133	-0.097	-0.614	0.544
<b>X<sub>4</sub> = Communication</b>	0.238	0.115	0.262	2.07	0.049
<b>X<sub>5</sub> = Certification</b>	-0.056	0.126	-0.073	-0.439	0.664
<b>X<sub>6</sub> = Recognition</b>	-0.151	0.099	-0.178	-1.519	0.141
<b>X<sub>7</sub> = Audit</b>	0.279	0.184	0.27	1.517	0.041

Research data (2015)

From table 4.11; X<sub>1</sub>, Training; t (1.85),  $p < 0.05$ ; X<sub>2</sub>, Standardization; t (2.89),  $p < 0.05$ ; X<sub>4</sub>, Communication; t (2.07),  $p < 0.05$ ; X<sub>7</sub>, Audit; t (1.85),  $p < 0.05$  have p-value less than 0.05 hence are found significant. X<sub>3</sub>, Financial support; t (0.61),  $p > 0.05$ ; X<sub>5</sub>, Certification; t (4.39),  $p > 0.05$ ; X<sub>6</sub>, Recognition; t (1.52),  $p > 0.05$ ; have p-value greater than 0.05 hence are found not significant.

Substituting the coefficients in the equation gives the following regression equation for predicting the operational performance behaviour when the independent variables are altered.

$$P = 0.201 + 0.394X_1 + 0.308X_2 - 0.082X_3 + 0.238X_4 - 0.056X_5 - 0.151X_6 + 0.279X_7$$

X<sub>1</sub>, Training; X<sub>2</sub>, Standardization; X<sub>4</sub>, Communication and X<sub>7</sub>, Audit; have positive coefficients which implies they directly influence the operational performance of a firm. X<sub>3</sub>, Financial support; X<sub>5</sub>, Certification and X<sub>6</sub>, Recognition have negative coefficients implying that they do not directly influence the operational performance of a firm. X<sub>3</sub>, X<sub>5</sub> and X<sub>6</sub> having been found not to be significant, they do not affect the

dependent variable significantly. The predictor equation for the operational performance model therefore becomes:

$$P = 0.201 + 0.394X_1 + 0.308X_2 + 0.238X_4 + 0.279X_7 + e$$

**Table 4.12 ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.821	7	2.403	31.437	.000 <sup>b</sup>
	Residual	1.987	26	.076		
	Total	18.808	33			

Research data (2015)

At 5% level of significance, the numerator DF=7 and denominator DF =26, the computed F value as 31.437. Hence, the regression model is statistically significant, meaning that it is a suitable prediction model for explaining how supplier development affect operational performance.

#### **4.6 Comparison of results findings and Literature Review**

Kamau (2013) in the study of the relationship between Buyer-supplier relationships and business performance among large manufacturing firms in Nairobi, Kenya found out that Buyer- supplier relationships had assisted the large manufacturing companies to enhance performance of their organizations. From the study findings, the researcher demonstrated that indeed supplier-relationship had a strong relationship with the buyer organizational performance. The research findings in this study are therefore in tandem with the earlier findings hence reinforcing the fact that supplier development activities influence the operational performance of the buying organization positively.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This study was carried out to establish the effect of supplier development concept implementation on operational performance among large manufacturing firms in Nairobi. The study had three objectives; to determine the extent of supplier development awareness among manufacturing companies in Nairobi, to determine the effect of supplier development on operational performance in manufacturing firms in Nairobi, to determine the challenges of supplier development in manufacturing firms in Nairobi. This chapter presents the summary of findings for the three objectives mentioned above, the conclusions, recommendations made based on findings and the suggestions for further research with regard to the concept of supplier development.

#### **5.2 Conclusion**

According to the data provided in chapter four, there is sufficient evidence for the study conclude that most large manufacturing companies in Kenya have been embracing supplier development. The regression analysis done also indicates that there is a strong correlation between supplier development implementation and improved operational performance for manufacturing firms involved in the research. The key dimensions found to yield best results to the manufacturing firms are; supplier training, standardization of supplier product, communication with suppliers and constant auditing of the suppliers. These techniques have helped the manufacturing firms in reducing product cost, improving product quality, hastening time taken to the market and also improving on the operations flexibility of the manufacturing firm. These are the key four metrics for operations performance of a firm and hence the researcher

deduces that implementing supplier development concept assists large manufacturing companies to enhance their operational performance of their organizations which affects their organizational performance in turn.

The researcher also sought to investigate the challenges which hinder success of supplier development concept among large manufacturing firms in Nairobi. The research findings identified Lack of supplier commitment, insufficient supplier resources, Lack of trust between parties and insufficient top management support to be the most challenges affecting supplier development success. This therefore indicates that firms need to work out strategies to deal with such challenges so as to ensure supplier development is implemented successfully in their organizations.

### **5.3 Recommendations**

The study has confirmed that supplier development is very significant in enhancing the operational performance of manufacturing organizations in terms of reduction of production cost, improving quality of product, speed to the market and operational flexibility. The researcher therefore recommends application of the supplier development concept to all manufacturing companies so as to reap the benefits accrued from using the concept. Other organizations are encouraged to embrace the concept so as to enjoy the benefits associated with developing suppliers. Suppliers to manufacturing firms are also advised to embrace the concept and encourage working together with their customers so as to develop their capabilities as envisaged by the customer requirement.

## **5.4 Limitations of the Study**

This study was successfully undertaken but not without a few limitations. One key limitation being failure for 40% of questionnaire respondents to return the questionnaires send to them and others returning them late. Another challenge encountered during the research was the inadequacy of the stipulated time for the completion of the project according to the university calendar. It was a big challenge to cover all the areas required for the research project adequately within the provided time.

It was also an enormous challenge for the researcher to convince the respondents to participate in the study. Manufacturing companies are very are very competitive organizations whereby they try to outdo each other in terms of key competencies for their survival. Most of the respondents were reluctant to participate in the questionnaire citing concern that the information could reach their competitors hence lose their core competence. Those who agreed to participate gave a condition that the information should never be divulged to any other party other than for use for academic purposes only.

## **5.5 Suggestions for Further Research**

This study was confined to the supplier development practices in the large manufacturing firms in Nairobi. It would be of interest for future researchers to establish how the supplier development concept has been applied in the service industry in Nairobi and other parts of Kenya. Similar research can be done to investigate the success factors to guarantee full benefits of supplier development application in supply chain management.

## REFERENCES

- Wachiuri, E.W et al, (2015). “Role of supplier development on organizational Performance of manufacturing industry in Kenya; a case of East Africa breweries limited” *International Journal of Education and Research* Vol. 3 March 2015.
- Kamau (2013), “Buyer-supplier relationships and organizational performance among Large manufacturing firms in Nairobi, Kenya” *Unpublished MBA Project*, University of Nairobi
- KIPPRA (2013) retrieved from:  
<http://www.kippira.org/downloads/Kenya%20Economic%20Report%202013.pdf>
- Waraporn et al (2012), *European Journal of Business and Management*, 2012.
- Sanders Nada R., Chad W. Autry, David M. Gligor, “the Impact of Buyer Firm Information Connectivity Enablers on Supplier Firm Performance: A Relational View”, *International Journal of Logistics Management*, 2011.
- Lascelles, D.M. and Dale, B.G. (1989) the buyer-supplier relationship in total quality Management, *Journal of Purchasing and Materials Management*.
- Handfield R, Krause D et al, (2000). “Avoid the Pitfalls in Supplier Development” *MIT Management Sloan Review*, winter 2000.
- Landeros, R., (1995). “Maintaining buyer–supplier partnerships”. *International Journal of Purchasing and Materials Management*.
- Landeros, R., Monczka, R.M., (1989). “Cooperative buyer seller relationships and a



- Firm's competitive posture". *Journal of Purchasing and Materials Management*.
- Larson, P.D., (1994). "An empirical study of inter-organizational functional Integration and total costs". *Journal of Business Logistics* 15, 153–169.
- Mandal, A., Deshmukh, S., (1994). "Vendor selection using interpretive structural Modelling" *International Journal of Operations and Production Management*.
- Martin, X., Mitchell, W., Swaminathan, A., (1995). "Recreating and extending Japanese Automobile buyer–supplier links in North America". *Strategic Management Journal*.
- McMillan, J., (1990). "Managing suppliers: incentive systems in Japanese and U.S. Industry". *California Management Review*.
- Michael Woolcock and Deepa Narayan (1999), "Social Capital: Implications for Development Theory, Research, and Policy". Retrieved from:  
<http://deepanarayan.com/pdf/papers/woolcock.pdf>
- Farris, Bendle, Pfeifer and Reibstein, (2012). "Marketing Metrics: The Definitive Guide to Measuring Marketing Performance".
- Naceur Jabnoun and Mohamed Khalifah, (1984) *International Journal of Quality & Reliability Management*.
- Porter, M. E., (1980), *Competitive Strategy: Techniques for Analysing Industries and Competitors*". *Free Press, New York, NY*.
- Mukasa V. Mukhwana (2010). "Supply chain management practices on performance: Case of Safaricom Ltd. *Unpublished MBA Project*, University of Nairobi.

- Dyer, J.H. and Nobeoka, K. (2000), "Creating and managing a high-performance Knowledge-sharing network: the Toyota case", *Strategic Management Journal*, Vol. 21 No. 3, pp. 345-67.
- Cousins, P. D., Lawson, B., & squire, B. (2008). "Performance measurement in Strategic Buyer-supplier relationships". *International journal of operations & Production management*, 238-258.
- Terpend, R., Tyler, B., Krause, D.R., and Handfield, R. (2008). "Buyer-Supplier Relationships: Derived Value Over Two Decades". *Journal of Supply Chain Management*, Vol. 44, No. 2, pp.28-55.
- Tan, K.-C., Kannan, V.R., Handfield, R.B. and Ghosh, S. (1999), "Supply chain Management: an empirical study of its impact on performance", *International Journal of Operations & Production Management*, Vol. 19 No. 10, pp. 1034-52.
- Tully, S., (1995). "Purchasing's new muscle". *Fortune* 131 \_3. 75–83.
- Watts, C.A., Kim, K.Y., Hahn, C.K., (1992). "Linking purchasing to corporate Competitive strategy". *Int. J. Purchasing Mater. Manage.* 28 \_4. 15–20.
- Krause, D.R., (1997). "Supplier development: current practices and outcomes". *Int. J. Purchasing Mater. Manage, Spring*, 12–19.
- Charles Dominick (2006) "Supply Base Rationalization: Not 1, But 5 Options"  
*Purchasing Tips Edition #92*
- Oyiela Beatrice Mary (2011), "Competitive strategies and performance of commercial banks in Kenya. *Unpublished MBA project*, University of Nairobi

- Renee Fontenot, Richard P. Vlosky, Elizabeth Wilson and David T. Wilson (1997),  
“Effect of Buyer-Seller Relationship Structure on Firm Performance”, ISBM  
Report 6-1997. The Pennsylvania State University
- Terpend, R., Tyler, B., Krause, D.R., and Handfield, R. (2008), .Buyer-Supplier  
Relationships: Derived Value Over Two Decades, *Journal of Supply Chain  
Management*, Vol. 44, No. 2, pp.28-55.
- Stank, T., Keller, S.B., Daugherty, P.J. (2001), “Supply chain collaboration and  
Logistical service performance”, *Journal of Business Logistics*, Vol. 22 No.1,
- O’Toole, T. and Donaldson, B. (2002), “Relationship performance of buyer-  
Supplier exchanges”, *European Journal of Purchasing & Supply  
Management*, Vol. 8, pp.197-207.pp.29-48.
- Aydin Inemek, “Enhancing supplier performance in buyer – supplier relationships:  
The roles of supplier assessment, buyer assistance, and supplier involvement  
in product development,” proceedings of the European Operations  
Management Association (EurOMA), 2011.
- D.R. Krause, R.B. Handfield and T.V. Scannell, “An empirical investigation of  
supplier development: reactive and strategic processes,” *Journal of Operations  
Management*, vol. 17, pp. 39-58, 1998.
- C S. Chakraborty and T. Philip, “Vendor development strategies,” *International  
Journal of Operations & Production Management*, vol. 16, pp. 54-66, 1996
- R.M. Monczka, R.J. Trent and T.J. Callahan, “Supply base strategies to maximize

supplier performance,” *International Journal of Physical Distribution & Logistics Management*, vol. 23, pp. 42-54, 1993.

C. Sanchez-Rodriguez, "Effect of strategic purchasing on supplier development and performance: a structural model,” *Journal of Business & Industrial Marketing*, vol. 24, pp.161-172, 2009.

P. Hines, “Internationalization and localization of kyoryoku kai: the spread of best Practice Supplier Development,” *The International Journal of Logistics Management*, vol. 5, pp. 67-72, 1994.

L.C. Giunipero, “Motivating and monitoring JIT supplier performance,” *Journal of Purchasing and Materials Management*, vol. 26, pp. 19-24, 1990.

D.R. Krause, “Supplier Development: current practices and outcomes,” *International Journal of Purchasing and Materials Management*, vol. 33, pp. 12-19, 1997.

**APPENDIX I: QUESTIONNAIRE**  
**SUPPLIER DEVELOPMENT AND OPERATIONAL**  
**PERFORMANCE IN LARGE MANUFACTURING FIRMS IN**  
**NAIROBI**

This questionnaire is designed to collect information on the effects of supplier development on operational performance of large manufacturing firms in Nairobi, Kenya. The information obtained will be used only for academic purposes and shall be treated confidentially. This questionnaire is to be completed by procurement officials or persons in comparable positions only.

SECTION 1: Background information.

- i. Company name:
- ii. Company address:
- iii. Sector:
- iv. Company location:
- v. Period of operation:
- vi. Total Number of employees:  ≈
- vii. Title of respondent:
- viii. Position responsibility:
- ix. Department:
- x. Duration of service:
  
- xi. Signature ..... Date: .....

## SECTION 2: Supplier Development Dimensions

Please indicate the extent to which you agree with the following statements by using a scale of 1 to 5 where 1= Strongly Disagree, 2 = Disagree, 3 = No Idea, 4 = Agree, 5 = Strongly Agree. Tick (√) which option best describes your opinion with reference to the topic.

Supplier development dimension	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
I do understand the supplier development concept					
In my opinion, supplier development is necessary in supply chain management					
When buying, we do supplier selection before issuing orders					
The management is keen on enhancing specific supplier attributes					
Company trains key suppliers on best management practices					
The company helps suppliers in production process standardization					
The company extends financial support to suppliers to enhance their production capacity					
The company communicates to the suppliers about performance and customer feedback					
The company assists supplier in acquiring certification by agencies					
The company gives recognition to outstanding supplier performance					
The company does occasional supplier audits to ensure suppliers maintain expected standards					

### SECTION 3: Impact on operational performance

Please indicate the extent to which you agree with the following statements by using a scale of 1 to 5 where 1= Strongly Disagree, 2 = Disagree, 3 = No Idea, 4 = Agree, 5 = Strongly Agree. Tick (√) which option best describes your opinion with reference to the topic.

#### Section 3.1 Supplier Training

Operational performance effect	Strongly agree	agree	No Idea	Disagree	Strongly disagree
Conducting training programs for key suppliers has reduced our product cost					
Conducting training programs for key suppliers has improved our product quality					
Conducting training programs for key suppliers has improved on our speed to market					
Conducting training programs for key suppliers has improved our operational flexibility					

#### Section 3.2 Product Standardization

Operational performance effect	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Product standardization has reduced our product cost					
Product standardization has improved our product quality					
Product standardization has improved on our speed to market					
Product standardization has improved our operational flexibility					

### Section 3.3 Supplier Financial Support

Operational performance effect	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Giving financial support to key suppliers has reduced our product cost					
Giving financial support to key suppliers has improved our product quality					
Giving financial support to key suppliers has improved on our speed to market					
Giving financial support to suppliers has improved our operational flexibility					

### Section 3.4 Supplier Communication

Operational performance effect	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Improved communication with key suppliers has reduced our product cost					
Improved communication with key suppliers has improved our product quality					
Improved communication with key suppliers has improved on our speed to market					
Improved communication with key suppliers has improved our operational flexibility					



### Section 3.5 Supplier Certification

Operational performance effect	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Facilitating quality certification for key suppliers has reduced our product cost					
Facilitating quality certification for key suppliers has improved our product quality					
Facilitating quality certification for key suppliers has improved on our speed to market					
Facilitating quality certification for key suppliers has improved our operational flexibility					

### Section 3.6 Supplier Recognition

Operational performance effect	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Rewarding suppliers' performance has reduced our product cost					
Rewarding suppliers' performance has improved our product quality					
Rewarding suppliers' performance has improved on our speed to market					
Rewarding suppliers' performance has improved our operational flexibility					

### Section 3.7 Supplier Audit

	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Operational performance effect					
Auditing key suppliers has reduced our product cost					
Auditing key suppliers has improved our product quality					
Auditing key suppliers has improved on our speed to market					
Auditing key suppliers has improved our operational flexibility					

### Section 4. Challenges in Supplier Development

	Strongly Agree	Agree	No Idea	Disagree	Strongly Disagree
Specific supplier development challenges					
Lack of supplier commitment is a major challenge in supplier development					
Insufficient supplier resources is a major challenge in supplier development					
Lack of trust is a major challenge in supplier development					
Poor alignment of firm cultures is a major challenge in supplier development					
Insufficient Inducements to the Supplier is a major challenge in supplier development					
Insufficient top management support is a major challenge in supplier development					

Thank you for participating in the questionnaire.

## APPENDIX II: SAMPLING FRAMEWORK

	<b>Sector</b>	<b># of firms</b>	<b>Percentage (%)</b>	<b>Target # in the sample</b>
1	Building, mining and construction	20	4	<b>2</b>
2	Chemical And Allied	70	12	<b>7</b>
3	Energy, Electricals And Electronics	34	6	<b>3</b>
4	Food And Beverage	71	13	<b>7</b>
5	Fresh Produce	3	1	<b>0</b>
6	Leather And Footwear	7	1	<b>1</b>
7	Metal And Allied	66	12	<b>7</b>
8	Motor vehicle and accessories	27	5	<b>3</b>
9	Paper And Board	63	11	<b>6</b>
10	Pharmaceutical And Medical Equipment	21	4	<b>2</b>
11	Plastic And Rubber	68	12	<b>7</b>
12	Services And Consultancy	61	11	<b>6</b>
13	Textile And Apparels	35	6	<b>3</b>
14	Timber, Wood And Furniture	17	3	<b>2</b>
	<b>Total</b>	<b>563</b>	<b>100</b>	<b>56</b>

## APPENDIX III: LIST OF 56 SAMPLE FIRMS

<b>1 Building, mining and construction</b>		<b>8 Motor vehicle and accessories</b>	
1	Bamburi Cement Limited	1	General Motors East Africa Limited
2	Central Glass Industries	2	Kenya Vehicle Manufacturers Limited
<b>2 Chemical And Allied</b>		3	Pipe Manufacturers Ltd
1	BOC Kenya Limited	<b>9 Paper And Board</b>	
2	Crown Berger Kenya Ltd	1	Paper House of Kenya Ltd
3	Henkel Kenya Ltd	2	Highland Paper Mills Ltd
4	Metoxide Africa Ltd	3	Kartasi Industries Limited
5	Polychem East Africa	4	Tetra Pak Ltd
6	Twiga Chemical Industries Limited	5	Twiga Stationers and Printers Ltd
7	Orbit Chemicals Industries Limited	6	Chandaria Industries Ltd
<b>3 Energy, Electricals And Electronics</b>		<b>10 Pharmaceutical And Medical Equipment</b>	
1	East African Cables Ltd	1	Glaxo Smith Kline Kenya Ltd
	Metsec Ltd		Pharmaceutical Manufacturing Co. (K)
2		2	Ltd
3	Power Technics Ltd	<b>11 Plastic And Rubber</b>	
<b>4 Food And Beverage</b>		1	Afro Plastics (K) Ltd
1	Unga Group Ltd	2	Bobmil Industries Ltd
2	Kapa Oil Refineries Limited	3	General Plastics Limited
3	Nestle Foods Kenya Ltd	4	Nairobi Plastics Ltd
4	Wrigley Company (E.A.) Ltd	5	Rubber Products Ltd
5	Alpine Coolers Limited	6	Sameer Africa Ltd
6	Farmers Choice Ltd	7	Plastics and Rubber Industries Ltd
7	Proctor and Allan (E.A.) Ltd	<b>12 Services And Consultancy</b>	
<b>5 Fresh Produce =0</b>		1	Deloitte
<b>6 Leather And Footwear</b>		2	Ernst and Young
	Bata Shoe Company (Kenya)		International Supply Chain
1	Ltd	3	Solutions Ltd
<b>7 Metal And Allied</b>		4	Kaizen Institute Africa
1	Insteel Limited	5	Siemens Ltd Kenya
2	Sheffield Steel Systems Ltd	6	Lean Energy Solutions Ltd
3	Steelmakers Ltd	<b>13 Textile And Apparels</b>	
4	Metal Crowns Ltd	1	Spin Knit Limited
5	Mabati Rolling Mills Limited	2	Ken-Knit (Kenya) Ltd
6	Doshi Enterprises Ltd	3	Sunflag Textile and Knitwear Mills Ltd
7	Devki Steel Mills Ltd	<b>14 Timber, Wood And Furniture</b>	
		1	Timsales ltd.
			Kenya Wood Limited