PERFORMANCE MEASUREMENT PRACTICES AND OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN KENYA

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DECLARATION

I declare that this is my original work and that it has not been presented to The University of Nairobi or any other institution of learning for whatever purpose.

Signature……

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Date…….

I certify that I have supervised this research proposal from the very beginning to the end and that this is the original work of this student.

Signature……..

Supervisor: Onserio Nyamwange

Date…….

ACKNOWLEDGEMENT

I thank the Almighty God for giving me sufficient grace, patience, wisdom and ability to undertake this Research Project. My sincere gratitude goes to my supervisor Onserio Nyamwange for devoting his time to guide me through the research.

DEDICATION

I dedicate this project to my father and mother Joseph K. Maina and Mariamu W. Athumani. They have offered me all the love, kindness and support I needed to come this far.

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ABBREVIATIONS AND ACRONYMS

GOK- Government of Kenya

GDP- Gross Domestic product

KAM- Kenya Association of Manufacturers

KIPPRA- Kenya Institute for Public policy Research and analysis

PMS- Performance Measurement Systems

MAPSKID- Master Plan for Kenya's Industrial Development

ABSTRACT

The aim of this study was to measure the relationship between operational performance measures and performance measurement practices. The study also aimed to measure the index/level of operational performance measures of manufacturing firms in Kenya. The population of the study was 750 manufacturing firms in Kenya and a sample size of 100 firms was chosen to be a representative of the entire population. The study used a structured questionnaire as an instrument of data collection. The study found out that manufacturing firms in Kenya have an operational performance measures index of 63.95% and it also revealed that there is a fair positive relationship between operational performance measures and performance measurement practices.

CHAPTER ONE: INTRODUCTION

1.1 Background

Performance measurement in organizations has been has undergone significant research from both academic researchers and professionals for the last three decades or more (Neely, 2000). The discipline has been improved and extended throughout this period, driven by continuous academic and industrial research. This extensive research on the topic has given body to a great amount of scientific papers and books, conferences and commercial software.

One of Kenya's main objectives is the achievement of vision 2030. The manufacturing sector is one of the key drivers to achievement of vision 2030, since it provides materials that are used in the development of the projects involved. It is also the main component in the growth of the economy and supports populations' human needs (GOK, 2006).The manufacturing sector contributes approximately 12% of the GDP income of Kenya every year (KIPPRA, 2015). It serves both local and regional Markets. It is therefore very important to ensure that quality standards are maintained at lowest possible costs in order to enhance trade relationships and increase income.

To ensure that the performance of manufacturing industries is at par with other global players, the government has organized an initiative known as the Master Plan for Kenya's Industrial development (MAPSKID) (GOK, 2006). The plan is expected to help minimize the challenges of counterfeit products, defective products into the market, high input and instead gain improved performance and global competitiveness by manufacturing firms in Kenya.

1.1.1 Performance Measurement Practices

Performance is said to be the ability to accomplish certain tasks. This is measured against the criteria of accuracy, speed, costs and levels of completeness (Lebas, 1995). Organizational performance measurement can be defined as an analysis of an organizations actual performance as compared to the preset goals and objectives (Moulin, 2012). The preset goals and objectives are mainly in terms of profitability, liquidity,

growth and stock market performance. Performance measurement practices have been defined as the main components to creating a performance measurement framework that is practical and sustainable and which will provide worthwhile management information about an organization. These practices include metrics, approaches, tools systems and processes used in performance measurement. Metrics include; management of the organization processes, clear roles and responsibilities, continuous learning and model success. Approaches include; Financial and non-financial approaches. The tools include Key performance indicators, balanced scorecard, self-evaluation and feedback.

Performance measurement is said to be the process of objective and systematic collection, analysis and use of information to determine the efficiency and effectiveness in products or processes delivery are and achievement of objectives (Matzer, 1997). By ensuring performance measurement people are able to change rather complex processes into simplified conceptual information for easy communication and action.

Manufacturing firms in Kenya have over time moved from the use of traditional to the use of modern approach to performance measurement. The modern approaches to performance measurement include; benchmarking, balanced scorecard, results framework among others (Rwoti, 2005). For the sake of this research, we will concentrate of the modern approaches stated.

The balance scorecard developed in the 1992 by Kaplan & Norton proposes use of four key perspectives to measure performance. They are; the financial perspective, customers perspective, internal business processes perspective and organizational learning perspective. Benchmarking is a measure of the quality of an organization's policies, outputs, governance and strategies compared with similar measurements of the best players in the industry (O'Brien, 2009).

1.1.2 Operational Performance

Operational performance is the backbone of organizational performance (Salem, 2003). Organizational performance is the capability of an organization to fulfill its mission through governance, excellence and dedication to meeting its goals and objectives.

Operational performance on the other hand is the performance of an organization against its set standards such as waste reduction, productivity, cycle time, environmental responsibility and regulatory compliance (O'Brien, 2009).

The operations of a firm should be efficient and effective. Effectiveness is the expanse to which customers' needs are fulfilled, while efficiency is defined as a measure of how economical firms' resources are employed. In order to accurately enhance accessibility and evaluation of operational performance, the correct measurement systems should be planned, developed and implemented. Performance measurement networks are hence developed in order to monitor and maintain operational control. Operational Control is the process that ensures an organization is able to pursue action with the aim of achieving the overall goals and objectives. Achievement of these goals is a manifestation of excellence in organizational performance (Hubbard, 2009).

1.1.3 Manufacturing Firms in Kenya

The manufacturing industry accounted for 12% GDP in 2013/2014 (GOK, 2015). Despite Kenya's manufacturing firms being viewed as small, they form the largest manufacturing industry in East Africa. The manufacturing companies are diverse. They include: Transformation and value addition of agricultural materials i.e. of coffee and tea, canning of fruit and meat, wheat, barley and cornmeal milling and refining of sugar. Production of electronics, assembly of motor vehicle and processing of soda ash are all parts of the sector. Assembly of computers was first done in 1987. Textiles, ceramics, cement, shoes, aluminum, steel, glass, wood, cork and plastics are other products manufactured in Kenya. Foreign investors own Twenty-five per cent of Kenya's manufacturing sector most being from The United Kingdom followed by the Americans (KAM, 2015).

A study undertaken in the formal manufacturing sector which focused on analyzing data collected between 2006-2007 survey of the formal manufacturing firms and workers indicated that there has been zero productivity growth over the previous 12 years to 2003, with slight growth of 1.5% thereon to 2007(World Bank, 2008). Among the major setbacks are Kenya's manufacturing machinery and equipment is not up to date, is mostly overvalued and is inefficiently used and the costs of doing business is very high.

The instability in the Kenyan currency, insecurity and political uncertainty led to a decline in investment levels (World Bank, 2008)

Some of the reasons are a macro level and they require several policy reforms by the government. Firms need to address inefficiencies that reduce the competitiveness in the awakening time of global liberalization. Manufacturing firms in Kenya therefore need to re-evaluate themselves to increase their global competitiveness. The use of operational performance measurement could guide Kenyan firms on how to increasing global competitiveness.

1.2. Statement of the Problem

As the environment becomes more turbulent and complex, manufacturing organizations tend to realize the importance of performance management as means of increasing market share (Johnson, Alexander, Spencer & Neitzel, 2004). The increasing competition and challenges in manufacturing industry globalization, adversely changing climatic patterns and narrowing margins between revenues and expenditures would be expected to force the manufacturing firms to embrace performance measurement practices to stay in business. The need for accountability of resources, effective communication and improved productivity would also be push factors to embracing performance measurement. However, manufacturing firms in Kenya are facing challenges in the practice of performance measurement (Rwoti, 2005). Adoption of the right approach to performance measurement may ultimately better the performance of a firm.

Neely (2000) conducted a survey aimed at understanding current performance measurement systems used in manufacturing firms and processes used and to determine the objectives challenges facing companies in performance measurement. Eighty seven percent indicated that they had performance measurements in place. Forty percent of those had been implemented and put into use. Five percent of those implemented were effective on the operational performance. This research however did list findings on why the impact of performance measurement was not being realized in operations of manufacturing firms.

Gosselin (2005) conducted a survey aimed at finding the relationship between measurement and performance among one hundred Canadian Manufacturing firms. The findings indicate that firms in Canada that adopted modern approach to performance measurement performed better than those that used traditional approach while those that used traditional approach performed better than those that did not measure performance. The study however did not consider other factors that could have contributed to the levels of organizations performance apart from measurement. These factors include; rewards and consequences, flexible supply chain systems, skilled labour, e-procurement and organizational training (Mauti, 2012). This study will therefore consider other factors that may contribute to performance other than measurement.

Rwoti (2005) undertook a survey on the systems of performance measurement on large scale manufacturing firms in Kenya. The study was aimed at determining the link between operational efficiency and performance measurement. Findings indicate that firms that had implemented performance measurement systems were more efficient and more profitable. The study did not however consider other factors that may have resulted to increased efficiency and profitability other than performance. These factors include lack of substitutes in the market, production costs, market demand, market size and pricing (Oakland, 2000). This study will therefore consider other factors that may to efficiency and profitability other than measurement.

Ratanya (2013) conducted a survey on the implementation of E- procurement of supply chain integration among large scale manufacturing firms in Kenya. The aim of the survey was to determine the link between e-procurement and supply chain efficiency. The outcome indicated that firms using e-procurement were more effective and efficient in serving customer needs. The study however, considered only a small section of manufacturing firms in Nairobi to represent Kenya. For qualitative studies, the main goal is to ‘reduce the chances of bias and failure. Use of a large sample size broadens the range of data and improves the quality of its analysis (Cooper & Schindler, 2008). This study used firms in Nairobi and its environs to represent manufacturing firms in Kenya and qualitative techniques to determine the optimum sample size.

The research was seeking to find an answer to the following questions: What are the extents to which Kenyan manufacturing firms have adopted performance measurement? What is the impact of performance measurement on manufacturing firms' operations? What are the factors which affect manufacturing firms in the implementation of performance measurement?

1.3 Research Objectives

The objectives of this study were to:

i. To measure the operational performance measures index/level by manufacturing firms in Kenya.
ii. To establish the relationship between operational performance measures index/level with each component of performance measurement practices.
iii. To identify the factors that affect implementation of performance measurement.

1.4 Value of the study

The study is aimed to be of value to manufacturing firms as they will be able to understand the importance of performance measurement in attaining operational efficiency and global competitiveness.

This study is important to scholars and researchers who are interested in undertaking further studies on performance measurement. They could use it as a source of literature review.

This study is important to the government. It may be used as reference when setting up performance measurement policies and quality standards to be met by manufacturing firms.

The Association of manufacturers (KAM) may also use this research to come up with problems causing firms to lack global competitiveness and solutions to these problems.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looks into the major issues affecting performance measurement. It begins with the theoretical framework, highlighting the theories on the study that have been put forward by various scholars. It also elaborates performance measurement, operational performance and challenges facing performance measurement.

2.2 Theoretical Framework

Theories form a foundation upon which a research is built. They entail a collection of related concepts, which will guide the researcher in determining what will be measured in drawing a relationship between variables. Theoretical framework establishes the importance of the topic by providing information needed to understand the study. Performance measurement practices has not been emphasized by academic researchers and other practitioners. Organizational performance has however always influenced the working and decisive actions of organizations. “If you cannot measure it, you cannot manage it” (Garvin 1993). This phrase has brought about the perception that accurately measuring performance is very important to the successful management of any organization.

2.2.1 The Goal Setting Theory

Locke (1968) suggested that goals and objectives which an employee establishes enhance their motivation for their performance. This is because employees go an extra mile to see that their goals are achieved and objectives are met. If these objectives are not achieved, they will either modify to make them more achievable or improve their performance. In case they choose to improve their performance, it will result in achievement of performance measurement practices aims (Salaman, 2005).

Performance is improved by specific and ambitious goals in comparison to easy or general goals. If an employee accepts a set goal, has the capability to attain it and is not disoriented by conflicting goals, the expected outcome is a positive linear relationship between goals and performance (Locke 1968). The theory is significant to this study because it explains the relationship between individual goals and organizational

performance. The study will therefore consider the measurement of individual goals as a performance measurement practice.

2.2.2 Agency Theory

The agency theory was developed by Ross and Barry (1970). It explains on how to easily organize a two-party relationship in which one of the parties (the principal) defines the duties description in which the second party (the agent) performs.

The agent is assumed to have self-interest, have bounded rationality and ensure risk aversion, while the organization is assumed to undergo a goal conflict among the participants and between the information asymmetry. This establishes a link between agency theory to performance measurement practices. The principal must implement measures that ensure the agents interests do not conflict the organizational goals whereas the agent must also come up with measurement systems to ensure that the other participants adhere to organizational goals (Eistenhardt, 1985).

2.3 Performance Measurement

Performance measurement is the cohesive and well analyzed systematic approach that improves organizational performance, with aims of achieving strategic objectives and organization's vision, missions and values (Salem 2003). Performance measurement practices started in the late 1970s due to inaccuracies of using traditional backward looking accounting systems. Manufacturing firms started the use financial measures to evaluate performance (Gomes, 2004).Such measures typically assessed current performance against previous periods. They then realized that focusing entirely on financial related measures was not effective enough to maintain performance and competitiveness in the global market. This led to the establishment of emphasis on non-financial aspects of the organization which led to development of integrated performance measurement systems.

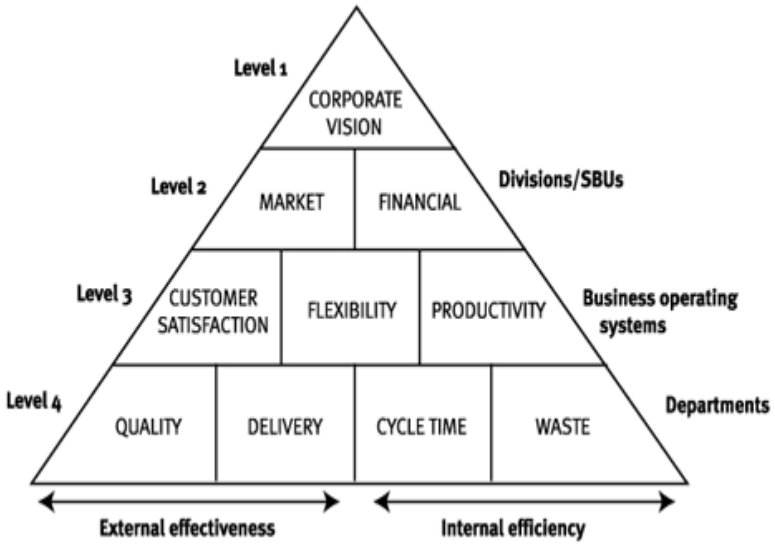
The study will seek to find out how performance measurement practices can be used to help managers control the operations of their organizations. It will also seek to explain

the overall value of performance measurement to an organization. Some Modern performance measurement systems include:

2.3.1 The Performance Pyramid

Lynch & Cross (1991) gave rise to the Performance Pyramid. They suggest that there are a several measures apart from the traditional financial approach of measuring performance. This measures include; profitability, flow of cash and return on capital utilized. The pyramid includes other measures such as the fulfillment of customer needs, flexibility in operations and organizations productivity as driving forces upon which measures should be based.

Figure 2.1 Performance Pyramid



Source: (Lynch and Cross, 1989)

The study seeks to concentrate on modern performance measurement. The performance pyramid incorporates both financial performance indicators and non-financial ones. It also links performance with day to day operations.

2.3.2 Balanced Scorecard Approach

Kaplan & Norton (1992) developed the balance scorecard. Their recommendations indicated that managers should emphasize the use from four core perspectives: The customer perspective. This is how customers see and rate an organizations product.

Managers should be able to know if the customers' needs are being met. The internal business perspective. Managers must ensure that all operations are efficient to enable attain customer satisfaction. The innovation and learning perspective. An organization must be continuously improving. There must be the ability to learn, innovate and improve its products and processes. The financial perspective. This measure focuses on how well the organization is performing in terms of profitability and market share. An organization must be able maintain and increase both its profits and market share.

Balance scorecard being a measure that takes into account various stakeholders and measures operational efficiency, I propose to use it for my study as a measure of operational performance.

2.4 Operational Performance

Operational performance determines organizational performance. The operations in a manufacturing organization should be efficient and effective in order to achieve organizational goals. Effectiveness is the expanse to which customers' needs are fulfilled whereas efficiency is a measure of economical the organizations resources are utilized. In order to enable the accurate assessment and evaluation operational performance, the correct measurement approaches must be designed, implemented and well maintained by the users of the particular process. They may identify necessity of measuring the processes' effectiveness, its efficiency, its quality impact and overall productivity (Oakland, 2000). A systematic performance measurement system should be in place in order to achieve operational excellence in the manufacturing industry.

2.5 Performance Measurement Practices

Practices are the established processes which a company has to put in place to support the way in which an organization operates and improve its efficiency and effectiveness Performance measurement practices are the integrated, systematic processes used to improve the organizations efficiency and effectiveness in undertaking its operations (Voss, 1995).Performance measurement is a critical element in management of a firms operations. It is important to know processes and approaches an organization should undertake in order to attain operational efficiency and effectiveness.

Performance measurement practices cover numerous areas including; Good performance information, establishing performance targets, selecting proper feedback systems, addressing each performance measure as important and proper planning (Voss, 1995).
Good performance measurement information equips managers with tools for management for better results. Better results management goes includes effective management of the entire workforce in an organization. The workforce should fully be made aware of the organizations mission, its goals, and objectives. They should also be familiar with the performance data that will be used to measure their results towards achieving the desired objectives (Gazo 2007).

Establishing performance targets is whereby; managers need to identify what has been the past performance at individual levels and organizational level. The managers then identify the gaps between the past and expected performance. A corrective action is taken and then expected realistic goals are set (Voss, 1995).

Customers are key to the success of every performance organization (Oakland 2000). Customers should therefore be incorporated in the performance measurement systems of every organization. This is by use of feedback systems. These feedback systems include; conducting surveys, having an open feedback and also easy return ability.

2.6 Factors Affecting Performance Measurement

Along with the benefits of performance measurement comes various challenges. The returns on performance measurement are uncertain and very difficult to acknowledge in the short-term. Therefore it is difficult to account for the benefits of performance measurement. Sometimes performance measurement may give negative results hence making the whole process very risky to undertake (Fellar, 2007). Different measurable outcomes such as productivity, employment, competitiveness and growth are sometimes not compatible with each other hence selection of a measure can offer specious precision. There may be trade-offs among measures such that greater accuracy in one generates uncertainty in the other (Sarewitz, 2007).Establishing the right metrics to use in performance measurement is also a challenge since the strategic business plan of the organization needs to be tied. Lack of effective use of limited budgets on performance

measurement leads to its failure. The final limitation is that to date there is limited evidence of the contributions that performance measurement has made to improve managerial decision making.

2.7 Conceptual Framework

A conceptual framework is basically the representation of a particular study or survey topic that drives the investigation being reported based on the problem statement (McGaghie, 2001). Organizations that are successful use a conceptual method of implementing a consistent and unremitting focus on identifying, adjusting and adopting performance measurement (Gazo, 2007).

Figure 2.2 Conceptual Framework

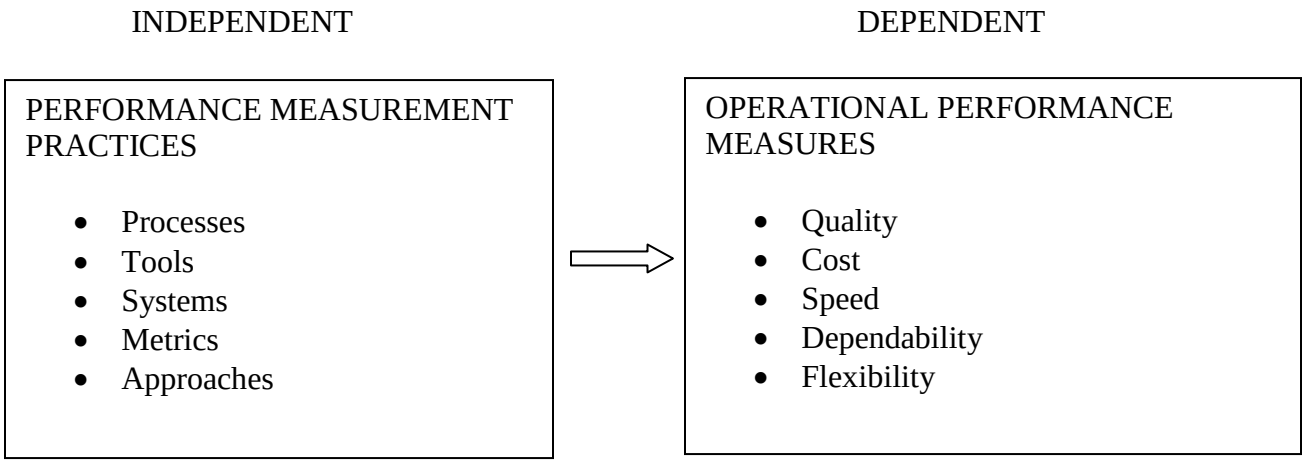


Table 2.1 Empirical Studies

Author	Study	Findings	Gap
J.E. Carr, M. Hasan, (2008)	Performance measurement systems in manufacturing companies in New Zealand	Manufacturers in New Zealand are learning and putting into place modern performance measurement networks. The use of Non-Financial measures is more dominant than the use of financial measures. Performance measurement systems are not being reviewed and modified as often as necessary.	The study does not explain the benefits of implementing performance measurement systems.
Maurice Gosselin, (2005)	Productivity and Performance Measurement in the Manufacturing Industry	Manufacturing firms continue to use financial measures entirely despite the expert's advice that emphasizes implementation of non-financial measures. It clearly demonstrates the need to develop a theory that explains the importance of performance measurement in organizations. The study shows that there is a positive relationships between the measures employed and other factors e.g. strategy, decentralization	The study fails to clearly explain why non- financial measures are considered more effective than financial measures of performance.
S.X Zeng (2013)	The Competitive priorities used in the manufacturing industry.	The levels of Technology, the control of costs and consciousness of the manufacturers brand are the most important factors affecting the competitiveness of manufacturing firms.	The study does not clearly explain what organizations should do to attain technological levels, control of cost and brand consciousness.
Fareed Muhammad, (2012)	Performance Management systems and Job performance of employees	Most organizations have adopted performance management systems as a way of employee evaluation and retention. Organizations with successfully implemented management systems has more productive employees.	The study does not clearly elaborate on the link between performance management and increased employee productivity.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, we look at the research design, study population, sample size, data collection and its analysis.

3.2 The Research Design

The study embraced descriptive research. A descriptive study is the research design type that with a major objective on accurate description of the subject situation, population or to estimate proportions of population that have certain characteristics (Malhotra, 1996). Descriptive research was the best design for the study because it enabled the researcher to use quantitative techniques of analyzing data in order to produce reliable results.

3.3 Target Population

The population of the study was 750 manufacturing firms in Kenya. However, the accessible population was 450 manufacturing firms. These are the manufacturing firms in Nairobi and its environs which included Ruiru, Thika, Limuru, Kiambu, Nakuru and Machakos as listed by KAM. Nairobi was considered the best area to carry out the study because it has the highest number of manufacturing firms in Kenya. It was therefore considered to be a good representation of all the manufacturing firms in Kenya.

3.4 Sampling

Stratified Sampling method was adopted in this study. This is a sampling technique where the researcher is required to divide the entire population into different subgroups of strata and then randomly conduct a selection of the samples in each of the stratum. Stratified sampling was selected because it helps to ensure that the sample accurately reflects the entire population. This method was also used by Rwoti (2005) and Mauti (2012) who were both conducting a study on manufacturing firms in Kenya. In selection of sample size the Cooper and Schindler (2008) formula which was used by Mauti (2012) was used .This is whereby 10% of the population is taken as the sample size, hence 46 respondents. However, guided by Rwoti (2005) and Mauti (2012), not all intended respondents responded to the study therefore an extra 2.5% will be provided. Their studies involved 57 manufacturing firms. However, Mbeche (2005) and Nyamwange

(2005) conducted a studies on manufacturing firms in Kenya and used a sample of 100 firms that was considered large enough to avoid bias; this study therefore used 100 manufacturing firms as sample size.

Table 3.1: Sampling Design

Sector	**Number of Firms**	**Percentage in Industry**	**Questionnaires To be distributed**
Building	**6**	**1.3**	**2**
Chemical	**62**	**13.6**	**13**
Energy	**42**	**9.2**	**9**
Food, Beverages	**100**	**22**	**21**
Leather	**8**	**1.8**	**2**
Metal and Allied	**38**	**8.4**	**9**
Motor Vehicle	**17**	**3.7**	**4**
Paper products	**48**	**10.5**	**11**
Pharmaceutical	**20**	**4.4**	**4**
Plastics and Rubber	**54**	**11.9**	**12**
Textile and Apparels	**38**	**8.4**	**8**
Wood and Furniture	**22**	**4.8**	**5**
Total	**455**	**100**	**100**

Source: Kenya Manufactures and Exporters directory 2016

3.5 Data Collection

Primary data was used as the studies as a source of data. The data was collected using a structured questionnaire shown in appendix I that used a Likert scale to get data from the respondents. The questionnaire was divided into three sections i.e. sections A, B and C. Section A consisted of questions on the general profile of manufacturing firm; Section B consisted of questions on the extent of performance measurement adoption among manufacturing firms in terms of quality, cost, speed, dependability and flexibility. Section C consisted of questions on the extent to which performance measurement

practices are being adopted or implemented by manufacturing firms in terms of processes, tools, systems, metrics and the use of modern performance approaches and Section D consisted of questions on factors that affects performance measurement. The questionnaires were dispensed using the drop-and-pick later method as well through electronic mail.

3.6 Data Analysis

Data collected was cleaned for purpose of possible errors and omissions by the respondents and the coded in order to ease its analysis. The data collected was analyzed by using Statistical Package for Social Sciences (SPSS) version 24.

3.6.1Analytical Model

The study was guided by a linear regression function which explains the operational performance measures index as a function of components of performance measurement practices which include processes, tools, systems, metrics and approaches. The regression model adopted by the study is given below:

$$\mathbf{Y_x = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon}$$

Where:

Y = Operational performance measures index/level by manufacturing firm X. It was measured as the summation of scores awarded to each component of operational performance measures. The maximum score to be achieved by each component was 5 points and therefore the operational performance index/level of manufacturing firm X was obtained by dividing the summation of each component of operational performance measures by 25 (i.e. 5 which is the maximum score for each component multiplied by 5 components of operational performance measures),

α = Intercept,

X_1 = Processes measured by dividing the assigned score by 5 (maximum score),

X_2 = Tools measured by dividing the assigned score by 5 (maximum score),

X_3 = Systems measured by dividing the assigned score by 5 (maximum score),

X_4 = Metrics measured by dividing the assigned score by 5 (maximum score),

X_5 = Approaches measured by dividing the assigned score by 5 (maximum score),

β_1 …… β_5 = Parameters of the model,

ε = Standard Error.

3.6.2 Inferential Statistics

The test of significance of the study was performed at 95% confidence level. Variance (ANOVA) analysis and F Statistic were used to determine significance of the regression model. Correlation analysis by use of Pearson Correlation was undertaken to identify the kind of relationship that exists between operational performance measures and performance measurement practices. Coefficient of determination (R2) was also used to measure how much variation in operational performance measures is explained by performance measurement practices.

Table 3.2 Summary of Data Analysis Methods

OBJECTIVE	SECTION OF THE QUESTION NAIRE	ANALYSIS
To measure the operational performance measures index/level by manufacturing firms in Kenya.	B	Summation of operational performance measures index/level of all the respondents was used as a measure
To establish the relationship between operational performance measures index/level with each component of performance measurement practices	C	Regression analysis was used to explain the kind of relationship that exists between these variables.
To identify the factors that affect implementation of performance measurement.	D	Content analysis of respondents' views was examined and a conclusion was arrived at on the objective in question.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section looks at the response rate of the study, data validity, descriptive statistics, correlation analysis, regression analysis and the discussion of research findings.

4.2 Response Rate

The initial sample size of the study was 100 manufacturing firms in Kenya; questionnaires were administered to all these manufacturing firms. Out of 100 sampled manufacturing firms 75 of them responded to the questionnaires administered to them. This means that the response rate of the study was 75% and from this it can be concluded that the obtained data was adequate enough to be used as a basis of forming reliable findings of the study.

4.3 Data Validity

The data obtained was analyzed at 95% confidence level and the significance F change was not more than 0.025. This means that the results obtained from the study were reliable.

4.4 Descriptive Statistics

The descriptive statistics for the study are shown in tables 4.1 and 4.2 below

Table 4.1 Descriptive Statistics

	Mean	Std. Deviation
Operational Performance Measures Index	.6395	.27973
Processes	.533	.2910
Tools	.562	.2448
Systems	.603	.2336
Metrics	.557	.2261
Approaches	.659	.2542

Table 4.2 Descriptive Statistics

	Skewness		Kurtosis
	Statistic	Std. Error	Statistic
Operational Performance Measures Index	-.305	.277	-1.426
Processes	.254	.277	-1.311
Tools	.281	.279	-.767
Systems	.026	.277	-.916
Metrics	-.026	.277	-.778
Approaches	-.089	.277	-1.199

From table 4.1 the mean for operational performance measures index is 0.6395 this means that the operational performance measures index by manufacturing firms in Kenya is 63.95%. The mean for processes, tools, systems and metrics are 0.533, 0.562, 0.603 and 0.557 respectively which means that manufacturing firms in Kenya uses these performance measurement practices to a moderate extent. The variance for all the variables ranges from approximately 0.05 to 0.08; this means that the accuracy of the results is fairly reliable because the variance from the mean ranges within acceptable limits also standard deviation for all the variables lies within a range of 0.025, the means that the results are accurate because the dispersion from the mean is fairly low. These findings are in conformity to the study findings of Muhammad, (2012). His study found an operational performance measure index of 64%. Hassan, (2008) who conducted a similar study in New Zealand also came up with a performance measurement index of 65.4% which is similar to the study findings.

From table 4.2 operational performance index, metrics and approaches have a negative skewness meaning that the data set are skewed towards the left side of a normal

distribution. Processes tools and systems have a positive skewness and this means that the data set are skewed towards right side of a normal distribution. Kurtosis for all the variables is 0.5 this indicates high positive kurtosis which means that the data set is heavy tailed to a normal distribution.

4.5 Correlation Analysis

Tables 4.3 and 4.4 show the kind of relationship that exists between the variables of the study.

Table 4.3 Correlation Analysis

		Operational Performance Measures Index	Processes	Tools
Operational Performance Measures Index	Pearson Correlation	1	.504**	.525**
	Sig. (2-tailed)		.000	.000
	N	75	75	74
Processes	Pearson Correlation	.504**	1	.691**
	Sig. (2-tailed)	.000		.000
	N	75	75	74
Tools	Pearson Correlation	.525**	.691**	1
	Sig. (2-tailed)	.000	.000	
	N	74	74	74

Correlation is significant at the 0.01 level (2-tailed).

Table 4.4 Correlation Analysis

		Systems	Metrics	Approaches
Systems	Pearson Correlation	1	.585**	.589**
	Sig. (2-tailed)		.000	.000
	N	75	75	75
Metrics	Pearson Correlation	.585**	1	.655**
	Sig. (2-tailed)	.000		.000
	N	75	75	75
Approaches	Pearson Correlation	.589**	.655**	1
	Sig. (2-tailed)	.000	.000	
	N	75	75	75

Correlation is significant at the 0.01 level (2-tailed).

Operational performance measures index (dependent variable) has a fair positive association/relationship of 0.5 with processes, tools, systems, metrics and approaches (independent variables). This means that the greater the extent of performance measurement practices the high the level or index of operational performance measures. Also results from the study shows that there is multicollinearity among the independent variables. This is evidenced by a 0.01 correlation significance level (2 – tailed) which means that increases or decreases in one independent variable do significantly relate to increases or decreases in other independent variables.

4.6 Regression Analysis

A regression analysis was conducted to indentify the relationship between operational performance measures and performance measurement practices.

Table 4.5 shows a model summary for the study

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651[a]	.424	.382	.21949

a. Predictors: (Constant), Approaches, Tools, Metrics, Systems, Processes

From table 4.5 R Square is 0.424; this means that a variation of 0.424 of operations performance measures index is explained by performance measurement practices which is made up of processes, tools systems, metrics and approaches.

Table 4.6 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.411	5	.482	10.008	.000[b]
	Residual	3.276	68	.048		
	Total	5.687	73			

a. Dependent Variable: Operational Performance Measures Index

b. Predictors: (Constant), Approaches, Tools, Metrics, Systems, Processes

Table 4.6 shows that the regression model has a variance of 0.482 and F of 10.008. This means that the data of the study fits the regression model.

Table 4.7 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	.388	.060	.495
Processes	.140	.126	.146
Tools	.323	.158	.283
Systems	-.135	.156	-.113
Metrics	.135	.158	.109
Approaches	.391	.146	.356

Dependent Variable: Operational Performance Measures Index

The regression equation for the study model as provided by coefficients table above was as follows:

$$\mathbf{Y = 0.388 + 0.14X_1 + 0.323X_2 - 0.135X_3 + 0.135X_4 + 0.391X_5 + 0.21949}$$

4.7 Research Findings

Results from the study revealed that operational performance measures index by manufacturing firms in Kenya stands at 63.95%. This level is explained by the fact that Kenya is among the fastest growing economies which is characterized by such margins of operational performance measures index. This finding resonates well with the finding of the studies by Zeng, (2013) and Muhammad, (2012).

The study also found out that a positive relationship between operational performance measures index and components of performance measurement practices exists. This is in line with the preposition of the goal seeking theory and the agency theory as well as to a study by Hasan, (2008). The study found out that lack of proper training on performance measurement was the main challenge that inhibits effective performance measurement by manufacturing firms in Kenya. Lack of well-articulated vision among the manufacturing

firms in Kenya was also found to be a challenge that negatively affects performance measurement.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section looks at the summary of the study its findings, conclusion of the study, recommendations, limitations of the study and suggestions for further studies.

5.2 Summary of Findings

The study found out that operational performance measures index by manufacturing firms in Kenya stands at 63.95%. It also found out that a positive association between operational performance measures index and components of performance measurement practices such as processes, tools, systems, metrics and approaches exists. Finally the results of the study revealed that lack of proper training and lack of well-articulated vision among the manufacturing firms are two challenges that inhibits effective operational performance measures.

5.3 Conclusions

The study affirms that the manufacturing firms in Kenya have widely implemented performance measurement practices to improve operational performance. Performance measurement practices have a positive effect on operational performance. Study findings evidenced that quality, cost, speed, dependability and flexibility were positively impacted by performance measurement practices implementation.

5.4 Recommendations

From the findings revealed by the study I recommend to the operational managers of manufacturing firms in Kenya to increase the adoption or use of quality, cost, speed, dependability and flexibility as operational performance measures; this will increase the current operational performance measures index from 63.95% to a higher rate thereby enhancing effectiveness in operational performance. Managers of manufacturing firms in Kenya should put more emphasis on processes, tools, systems, metrics and approaches as components of performance measurement practices in order to increase the operational performance measures index. This is supported by the positive relationship that exists

between operational performance measures index and components of performance measurement practices revealed by the study.

5.5 Limitations of the Study

The study used questionnaire as a tool for data collection; this means that reliability of study results entirely depend on how effectively the tool was designed. Also some respondents might have developed biasness and in turn they might have given biased data which cannot be fully relied on to provide valid findings. Lastly the response rate from the sample size might not have been sufficient to be used in drawing conclusions relating to the entire population of manufacturing companies in Kenya.

5.6 Suggestions for Further Research

The study revealed that multicollinearity among independent variables i.e. processes, tools, systems, metrics and approaches as components of performance measurement practices exists and therefore further research needs to be undertaken in order to provide explanations behind this multicollinearity.

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Appendix I: Questionnaire

Introduction

This is a questionnaire for collection of data on the extent of adaptation of performance measurement by manufacturing firms in Kenya and its effects on operational performance. The data collected will be used for academic purposes only. Strict confidentiality will be observed.

SECTION A: General Information

Tick where appropriate.

1. What is your age bracket?

- ☐ Below 20
- ☐ 20 to 30
- ☐ 31 to 40
- ☐ 41 to 50
- ☐ Above 50

2.What is your position in this organization? ……..

3. Under which sector does this organization fall?

- ☐ Building
- ☐ Chemicals
- ☐ Energy
- ☐ Food and Beverages
- ☐ Leather
- ☐ Metal and allied
- ☐ Motor
- ☐ Paper
- ☐ Pharmaceuticals
- ☐ Plastics
- ☐ Textiles
- ☐ Wood and Furniture
- ☐ Other

4. How many employees work for this organization?

☐ Less than 100

☐ 100-200

☐ 201-300

☐ More than 300

5. What has been the trend of the organizations total revenue turnover for the past 5 years?

☐ Exponential

☐ Incremental

☐ Declining

☐ Varying increase and decrease

☐ I do not know

SECTION B: Operational Performance Measures

In a scale of 1 – 5, kindly indicate the extent to which your organization uses the following as operational performance measures. Use 1 = no extent at all; 2 = small extent; 3 = moderate extent; 4 = large extent 5 = very large extent

Operational performance measures	**1**	**2**	**3**	**4**	**5**
Quality					
Cost					
Speed					
Dependability					
Flexibility					

SECTION C: Performance Measurement Practices

Kindly indicate the extent to which the following performance measurement practices are being used in your organization. Use the scale of 5 = very large extent, 4 = large extent, 3 = moderate extent, 2= small extent and 1 = no extent at all

Performance Measurement Practices	**1**	**2**	**3**	**4**	**5**
Processes i.e. the flow of activities within the organization					
Tools i.e. Key performance indicators, performance appraisals and mission & vision statement					
Systems i.e. the use of ICT infrastructure within the organization					
Metrics i.e. employee satisfaction, productivity, cash flow and profitability					
Use of modern performance approaches i.e. the use of balanced scorecard					

SECTION D: Factors Affecting Performance Measurement

Kindly state the factors which you think affect performance measurement in your organization:

i. ……

ii. ……

iii. ……

iv. ……

v. ……

Appendix II: Manufacturing Firms In Kenya

Energy Sector
A.I Records (Kenya) Ltd Modulec Engineering Systems Ltd
Kenwestfal Works Ltd
Amedo Centre Kenya Ltd Mustek East Africa Kenya Power & Lighting Co. Ltd
Assa Abloy East Africa Ltd Nationwide Electrical Industries
Kenya Scale Co. Ltd/ Avery Kenya Ltd
Aucma Digital Technology Kenya Ltd
Nationwide Electrical Industries Ltd
Kenya Shell Ltd
Avery (East Africa) Ltd Optimum Lubricants Ltd Libya Oil Kenya Limited
Baumann Engineering Limited PCTL Automation Ltd Power Technics Ltd
Centurion Systems Limited Pentagon Agencies Reliable Electricals Engineers Ltd
Digitech East Africa Limited Power Engineering International Ltd
Sanyo Armo (Kenya) Ltd
Manufacturers & Suppliers (K) Ltd
Eveready East Africa Limited Socabelec East Africa
Marshall Fowler (Engineers) Ltd
Frigorex East Africa Ltd Sollatek Electronics (Kenya) Limited
Mecer East Africa Ltd Holman Brothers (E.A.) Ltd Specialised Power Systems
Metlcx Industries Ltd IberaAfrica Power (EA) Ltd Synergy-Pro Ltd
International Energy Technik Ltd
Tea Vac Machinery Limited
East African Cables Ltd Kenwest Cables Ltd Virtual City Ltd
Chemical Sector
Anffi Kenya Ltd Maroo Polymers Ltd Imaging Solutions (K) Ltd
Basco Product (K) Ltd Match Masters Ltd Interconsumer Products Ltd
Bayer East Africa Ltd United Chemical Industries Ltd
Odex Chemicals Ltd
Continental Products Ltd Oasis Ltd Osho Chemicals Industries Ltd

Cooper K- Brands Ltd Rumorth EA Ltd PolyChem East Africa Ltd
Cooper Kenya Limited Rumorlh East Africa Ltd Procter & Gamble East Africa Ltd
Beiersdorf East Africa td Sadolin Paints (E.A.) Ltd PZ Cussons Ltd
Blue Ring Products Ltd Sara Lee Kenya Limited Rayal Trading Co. Ltd
BOC Kenya Limited Saroc Ltd Reckitt Benckiser (E.A) Ltd
Buyline Industries Limited Super Foam Ltd Revolution Stores Co. Ltd
Carbacid (C02) Limited Crown Berger Kenya Ltd Soilex Chemical Ltd
Chemicals & Solvents E.A. Ltd Crown Gases Ltd Strategic Industries Limited
Chemicals and Solvents E.A. Ltd
Decase Chemical (Ltd) Supa Brite Ltd
Coates Brothers (E.A.) Limited Deluxe Inks Ltd Unilever Kenya Ltd
Coil Products (K) Limited Desbro Kenya Limited Murphy Chemical E.A Ltd
Colgate Palmolive (E.A) Ltd E. Africa Heavy Chemicals (1999) Ltd
Syngenta East Africa Ltd
Elex Products Ltd Synresins Ltd
Kel Chemicals Limited European Perfumes & Cosmetics Ltd
Tri-Clover Industries (K) Ltd
Kemia International Ltd Galaxy Paints & Coating Co. Ltd
Twiga Chemical Industries Limited
Ken Nat Ink & Chemical Ltd Grand Paints Ltd Vitafoam Products Limited
Magadi Soda Company Ltd Henkel Kenya Ltd
Food Sector
Premier Flour Mills Ltd
Agriner Agricultural Development Limited
Aquamist Ltd Premier Food Industries Limited
Belfast Millers Ltd Brookside Dairy Ltd Proctor & Allan (E.A.) Ltd
Bidco Oil Refineries Ltd Candy Kenya Ltd Promasidor (Kenya) Ltd
Bio Foods Products Limited Capwelll Industries Ltd Trufoods Ltd
Breakfast Cereal Company(K) Ltd

Carlton Products (EA) Ltd UDV Kenya Ltd
British American Tobacco Kenya Ltd
Chirag Kenya Limited Unga Group Ltd
Broadway Bakery Ltd E & A Industries Ltd Usafi Services Ltd
C. Czarnikow Sugar (EA) Ltd Kakuzi Ltd Uzuri foods Ltd
Cadbury Kenya Ltd Erdemann Co. (K) Ltd ValuePak Foods Ltd
Centrofood Industries Ltd Excel Chemical Ltd W.E. Tilley (Muthaiga) Ltd
Coca cola East Africa Ltd Kenya Wine Agency Limited Kevian Kenya Ltd
Confec Industries (E.A) Ltd Highlands Canner Ltd Koba Waters Ltd
Corn Products Kenya Ltd Super Bakery Ltd Kwality Candies & Sweets Ltd
Crown Foods Ltd Sunny Processor Ltd Lari Dairies Alliance Ltd
Cut Tobacco (K) Ltd Spin Knit Dairy Ltd London Distillers (K) Ltd
Deepa Industries Ltd Highlands Mineral Water Co. Ltd
Mafuko Industries Ltd
Del Monte Kenya Ltd Homeoil Manji Food Industries Ltd
East African Breweries Ltd Insta Products (EPZ) Ltd Melvin Marsh International
East African Sea Food Ltd Jambo Biscuits (K) Ltd Kenya Tea Development
Eastern Produce Kenya Ltd Jetlak Foods Ltd Mini Bakeries (Nbi) Ltd
Farmers Choice Ltd Karirana Estate Ltd Miritini Kenya Ltd
Frigoken Ltd Kenafric Industries Limited Mount Kenya Bottlers Ltd
Giloil Company Limited Kenblest Limited Nairobi Bottlers Ltd
Glacier Products Ltd Kenya Breweries Ltd Nairobi Flour Mills Ltd
Global Allied Industries Ltd Kenya Nut Company Ltd NAS Airport Services Ltd
Global Beverages Ltd Kenya Sweets Ltd Rafiki Millers Ltd
Global Fresh Ltd Nestle Kenya Ltd Razco Ltd
Gonas Best Ltd Nicola Farms Ltd Re-Suns Spices Limited
Hail & Cotton Distillers Ltd Palmhouse Dairies Ltd Smash Industries Ltd
Al-Mahra Industries Ltd Patco Industries Limited Softa Bottling Co. Ltd
Alliance One Tobacco Kenya Ltd
Pearl Industries Ltd Spice World Ltd

Alpha Fine Foods Ltd Pembe Flour Mills Ltd Wrigley Company (E.A.) Ltd
Alpine Coolers Ltd
Plastics and Rubber
Betatrad (K) Ltd Prestige Packaging Ltd Haco Industries Kenya Ltd
Blowplast Ltd Prosel Ltd Hi-Plast Ltd
Bobmil Industries Ltd Qplast Industries Jamlam Industries Ltd
Complast Industries Limited Sumaria Industries Ltd Kamba Manufacturing (1986) Ltd
Kenpoly Manufacturers Ltd Super Manufacturers Ltd Keci Rubber Industries
Kentainers Ltd Techpak Industries Ltd Nairobi Plastics Industries
King Plastic Industries Ltd Treadsetters Tyres Ltd Nav Plastics Limited
Kingway Tyres & Automart Ltd
Uni-Plastcis Ltd Ombi Rubber
L.G. Harris & Co. Ltd Wonderpac Industries Ltd Packaging Masters Limited
Laneeb Plastics Industries Ltd ACME Containers Ltd Plastic Electricons
Metro Plastics Kenya Limited Afro Plastics (K) Ltd Raffia Bags (K) Ltd
Ombi Rubber Rollers Ltd Alankar Industries Ltd Rubber Products Ltd
Packaging Industries Ltd Dune Packaging Ltd Safepak Limited
Plastics & Rubber Industries Ltd
Elgitread (Kenya) Ltd Sameer Africa Ltd
Polyblend Limited Elgon Kenya Ltd Sanpac Africa Ltd
Polyflex Industries Ltd Eslon Plastics of Kenya Ltd Silpack Industries Limited
Polythene Industries Ltd Five Star Industries Ltd Solvochem East Africa Ltd
Premier Industries Ltd General Plastics Limited Springbox Kenya Ltd
Building sector
Central Glass Industries Ltd Kenbro Industries Ltd Manson Hart Kenya Ltd
Karsan Murji & Company Limited
Kenya Builders & Concrete Ltd
Mombasa Cement Ltd
Paper Sector
Ajit Clothing Factory Ltd Paper House of Kenya Ltd General Printers Limited

Associated Papers & Stationery Ltd
Paperbags Limited Graphics & Allied Ltd
Autolitho Ltd Primex Printers Ltd Guaca Stationers Ltd
Bag and Envelope Converters Ltd
Print Exchange Ltd Icons Printers Ltd
Bags & Balers Manufacturers (K) Ltd
Printpak Multi Packaging Ltd Interlabels Africa Ltd
Brand Printers Printwell Industries Ltd Jomo Kenyatta Foundation
Business Forms & Systems Ltd Prudential Printers Ltd Kartasi Industries Ltd
Carton Manufacturers Ltd Punchlines Ltd Kenafric Diaries Manufacturers Ltd
Cempack Ltd Conventual Franciscan Friers-
Kolbe Press
Kitabu Industries Ltd
Chandaria Industries Limited Creative Print House Kul Graphics Ltd
Colour Labels Ltd D.L. Patel Press (Kenya) Limited
Label Converters
Colour Packaging Ltd Dodhia Packaging Limited Modern Lithographic (K) Ltd
Colour Print Ltd East Africa Packaging Industries Ltd
Pan African Paper Mills (EA) Limited
Kenya Stationers Ltd Elite Offset Ltd Ramco Printing Works Ltd
Kirn-Fay East Africa Ltd Ellams Products Ltd Regal Press Kenya Ltd
Paper Converters (Kenya) Ltd
English Press Limited SIG Combibloc Obeikan Kenya
Textile Sector
Africa Apparels EPZ Ltd Kenya Trading EPZ Ltd Spinners & Spinners Ltd
Fulchand Manek & Bros Ltd Kikoy Co. Ltd Storm Apparel Manufacturers Co. Ltd
Image Apparels Ltd Le-Stud Limited Straightline Enterprises Ltd
Alltex EPZ Ltd Metro Impex Ltd Sunflag Textile & Knitwear Mills Ltd
Alpha Knits Limited Midco Textiles (EA) Ltd Tarpo Industries Limited
Apex Appaels (EPZ) Ltd Mirage Fashionwear EPZ Ltd Teita Estate Ltd

Baraka Apparels (EPZ) Ltd MRC Nairobi (EPZ) Ltd Thika Cloth Mills Ltd
Bhupco Textile Mills Limited Ngecha Industries Ltd United Aryan (EPZ) Ltd
Blue Plus Limited Premier Knitwear Ltd Upan Wasana (EPZ) Ltd
Bogani Industries Ltd Protex Kenya (EPZ) Ltd Vaja Manufacturers Limited
Brother Shirts Factory Ltd Riziki Manufacturers Ltd Yoohan Kenya EPZ Company Ltd
Embalishments Ltd Rolex Garments EPZ Ltd YU-UN Kenya EPZ Company Ltd
J.A.R Kenya (EPZ) Ltd Silver Star Manufacturers Ltd
Timber Sector
Economic Flousing Group Ltd Transpaper Kenya Ltd Wood Makers Kenya Ltd
Eldema (Kenya) Limited Twiga Stationers & Printers Woodtex Kenya Ltd
Fine Wood Works Ltd Uchumi Quick Suppliers Ltd United Bags Manufacturers Ltd
Furniture International Limited Rosewood Office Systems Ltd Statpack Industries Ltd
Hwan Sung Industries (K) Ltd Shah Timber Mart Ltd Taws Limited
Kenya Wood Ltd Shamco Industries Ltd Tetra Pak Ltd
Newline Ltd Slumberland Kenya Limited
PG Bison Ltd Timsales Ltd
Motor Vehicle Assembly and Accessories
Auto Ancillaries Ltd General Motor East Africa Limited
Megh Cushion industries Ltd
Varsani Brakelining Ltd Impala Glass Industries Ltd Mutsimoto Motor Company Ltd
Bhachu Industries Ltd Kenya Grange Vehicle Industries Ltd
Pipe Manufacturers Ltd
Chui Auto Spring Industries Ltd
Kenya Vehicle Manufacturers Limited
Sohansons Ltd
Toyota East Africa Ltd Labh Singh Harnam Singh Ltd Theevan Enterprises Ltd
Unifilters Kenya Ltd Mann Manufacturing Co. Ltd
Metal and Allied
Allied Metal Services Ltd Morris & Co. Limited Khetshi Dharamshi & Co. Ltd
Alloy Street Castings Ltd Nails & Steel Products Ltd Nampak Kenya Ltd

Apex Street Ltd Rolling Mill Division
Orbit Engineering Ltd Napro Industries Limited
ASL Ltd Rolmil Kenya Ltd Specialized Engineer Co. (EA) Ltd
ASP Company Ltd Sandvik Kenya Ltd Steel Structures Limited
East Africa Foundry Works (K) Ltd
Sheffield Steel Systems Ltd Steelmakers Ltd
Elite Tools Ltd Booth Extrusions Limited Steelwool (Africa) Ltd
City Engineering Works Ltd Tononoka Steel Ltd
General Aluminum Fabricators Ltd
Crystal Industries Ltd Welding Alloys Ltd
Gopitech (Kenya) Ltd Davis & Shirtliff Ltd Wire Products Limited
Heavy Engineering Ltd Devki Steel Mills Ltd Viking Industries Ltd
Insteel Limited East Africa Spectre Limited Warren Enterprises Ltd
Metal Crown Limited Kens Metal Industries Ltd
Pharmaceutical and Medical Equipment
Alpha Medical Manufacturers Ltd
Madivet Products Ltd KAM Industries Ltd
Beta Healthcare International Limited
Novelty Manufacturing Ltd KAM Pharmacy Limited
Biodeal Laboratories Ltd Oss. Chemie (K) Pharmaceutical Manufacturing Co.
Bulks Medical Ltd Dawa Limited Regals Pharmaceuticals
Cosmos Limited Elys Chemical Industries Universal Corporation Limited
Laboratory & Allied Limited Gesto Pharmaceutical Ltd Pharm Access Africa Ltd
Manhar Brothers (K) Ltd Glaxo Smith Kline Kenya Ltd
Leather Products and Footwear
Alpharama Ltd C & P Shoe Industries Ltd East Africa Tanners (K) Ltd
Bata Shoe Co. (K) Ltd CP Shoes Leather Industries of Kenya Limited
New Market Leather Factory Ltd
Dogbones Ltd

Source: Kenya Association of Manufacturers (KAM) August, 2016

Appendix III: Letter of Introduction

To whoever it may concern,

August, 2016

Dear Sir/ Madam,

RE: REQUEST FOR UNDERTAKING RESEARCH AT YOUR ESTABLISHMENT ON PERFORMANCE MEASUREMENT PRACTICES AND OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN KENYA

I am a postgraduate student at the University of Nairobi pursuing a degree of Master of Business Administration. In order to fulfil the degree requirement, I am undertaking a management research project on performance measurement practices and operational performance of manufacturing firms in Kenya.

I kindly request you to authorise me to conduct interviews in your establishment with your key staff and gather the required information. I assure you that this information will be treated in strict confidence and will be used purely for academic purposes and your name will not be mentioned in the report. A copy of the final project shall be availed to you upon request.

Your co-operation will be highly appreciated and thank you in advance.

Yours faithfully,

Saumu Kamau

University of Nairobi.