DETERMINANTS OF FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS IN KENYA

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Determinants of Financial Performance Of

Manufacturing Firms in Kenya

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DECLARATION

This thesis is my original work and has not been presented for any degree in any other University.

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DEDICATION

This thesis is dedicated to my dear husband Lawrence, sons Dennis and Edwin, daughters Mary, Dorcas and Ann. God bless you all.

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LIST OF ACRONYMS AND ABBREVIATIONS

AF	-	Access to finance
ANOVA	-	Analysis of variance
BIS	-	Bank for international settlement
CS	-	Capital structure
CSD	-	Centre for Self Development
CSR	-	Corporate Social Responsibility
DFI	-	Development Finance Institutions
EIBT	-	Earnings before interest and taxes
EPS	-	Earnings per share
FDI	-	Foreign direct investment
GDP	-	Gross domestic product
GEM	-	Global Entrepreneurial Monitor
GP	-	Gross profit
GOK	-	Government of Kenya
KAM	-	Kenya association of manufacturers
KWFT	-	Kenya Women Finance Trust

ICPAK	-	Institute of public certified public accountants Kenya
KMO	-	Kaiser-Meyer-Olkin
NIM	-	Net Interest Margin
MFI	-	Micro Finance Institutions
MM	-	Modigilian and Miller
MSE	-	Micro and Small Enterprises
NGO	-	Non-governmental Organization
NP	-	Net profit
NIM	-	Net interest margin
NSE	-	Nairobi Securities Exchange
PE	-	Price Earnings Ratio
ROA	-	Return on assets
ROC	-	Return on Capital
ROE	-	Return on equity
ROI	-	Return on investment
ROS	-	Return on Sales
ROSCA	-	Rotating Credit and Savings Association

SACCO	-	Savings and Credit Co-operatives
SME	-	Small and Medium Enterprises
SPSS	-	Statistical Package for Social Scientists
UK	-	United Kingdom
UNCDF	-	United Nations Capital Development Fund
UNDP	-	United Nations Development Programme
UNIFEM	-	United Nations Fund for Women
VIF	-	Variance Inflation Factor

DEFINITION OF TERMINOLOGIES

Access to finance	The availability of supply of quality financial services reasonable costs (Omar, 2017).
Capital structure	Mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise (Pandey, 2014).
Cost of capital	Minimum required rate of return on funds committed to the enterprise (Mclaney, 2015).
Financial performance	Measurement for what has been achieved by a company (Yassin & Ahmed, 2014).
Financial market	is the mechanism that allows people to easily buy and sell financial securities such as stocks, bonds and commodities such as precious metals and agricultural commodities (Yassin & Ahmed, 2014).
Fiscal tax incentives	Fiscal tax incentive is a deduction, exclusion or exemption from tax liability offered as an enticement to engage in a specified investment activity.
Investment	is putting money into something with an expectation of gain (Iyiola, Munirat, & Nwofu, 2013).
Manufacturing firms	Manufacturing corporations include companies that obtain certain product as inputs and processes these inputs to a value additional final product for sale (Kung'u,2015)

Multistage sampling Multistage sampling technique is a probability sampling echnique where sampling is carried out in several stages. The sample size gets reduced at each stage.

ABSTRACT

The general objective of the study was to assess the determinants of financial performance on manufacturing firms in Kenya. The objective of this study was to examine the determinants of financial performance of manufacturing firms in Kenya and was guided by the following specific objectives: Examine the effect of access to finance on financial performance of manufacturing firms in Kenya; Evaluate the effect of capital structure on financial performance of manufacturing firms in Kenya; Analyse the effect of cost of capital on financial performance of manufacturing firms in Kenya; Assess the effect of fiscal tax incentives on financial performance of manufacturing firms in Kenya and establish the effect of investment practice on financial performance of manufacturing firms in Kenya. The target population of the study being 741 manufacturing firms in Keya and a sample of 252 firms taken to be a representative of all manufacturing firms in Kenya. In order to collect data from the sampled respondents, cluster sampling was used to classify each of the twelve sub sectors into individual stratas. Simple random sampling procedure was then used to select the sample in order to ensure each and every firm in the target population was represented. The study adopted a survey design that was descriptive in collecting data. A structured questionnaire was distributed targeting manufacturing firms in Kenya. Statistical analysis was done using correlation and multiple regression model in order to establish the linear relationships between one or more variables and to test the significance of the relationships between the dependent and independent variables. The data analysis was done using Statistical Package for Social Scientists (SPSS) version 24 to facilitate computation of descriptive statistics, multiple regression and Pearson correlation to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable. Inferential statistics such as Pearson's correlation, ANOVA and multiple regression analysis were used for further analysis. The key findings were that determinants of financial performance individually had a positive influence on the financial performance of manufacturing firms. The overall results indicated that there was a significant linear relationship between access to finance and manufacturing firm's financial performance. The results indicated a moderately significant linear relationship between capital structure and manufacturing firm's performance. There was a significant positive relationship between cost of capital and manufacturing firm's financial performance. There was a significant positive relationship between fiscal tax incentives and manufacturing firm's financial performance. There was also a significant positive relationship between investment practice and manufacturing firm's financial performance. After each determinant was tested individually it had showed a positive significance. Similarly, when all the determinants of financial performance were tested altogether it was established that they had a low significance. Managers who were consulted about these results attributed the low explanatory power of variables to stiff

competition, quality of the product and government policies. The key recommendations are that managers need to adopt the determinants of financial performance according to their firm requirements in order to improve performance. The study assists policy makers in coming up with better policies on improvement of financial performance.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Performance is used as a measure to dictate organizational growth and development. The performance of an organization shows the level of improvement made by a firm within a period of time that is, firm performance serves as a barometer that measures the success of the company, hence used as a bench mark for investors to invest their funds (Kariithi, 2017). Performance is a complex phenomenon and this has consequently increased the studying of firm performance and its determinants globally. It is the objective of every profit-oriented organization to attain financial performance, which is seen as the metric for assessing the effectiveness of management. Kariithi (2017) posit that the ability of the organization to align the people and resources to tasks that are strategic for attaining organizational performance, in moral and ethical ways that ultimately leads to sustainable competitive advantage. In measuring organizational performance, managers use financial performance and non-financial performance to assess their ability and that of the whole organization in moving the business towards financial performance. Both measurements have been confirmed as significant in illustrating companies' wellbeing (Okelo, 2015)

Therefore, the focus of this study is on financial performance aspects with strong emphasis on the factors that are directly related to survey data and financial reports of the organization. Taking into consideration that measuring firm performance is rather challenging, and there is no consensus among scholars and business practitioners on the metrics to be used in tracking the efficiency and effectiveness of individuals towards the organizational goals. In this study, return on assets and return on equity are relied upon

to assess financial performance with the link to organizational factors. Furthermore, links between organizational factors of access to finance, capital structure, cost of capital, fiscal tax incentives, investment practice and financial performance of firms are conceptualized.

It is important to understand how capital structure influences financial performance of manufacturing firms. Capital structure influences both profitability and riskiness of the firm. The greater the gearing a firm exhibits, the higher the potential for failure if cashflows fall short of those necessary to service debts (Okelo, 2015). Capital structure decisions attracts numerous interests in corporate finance from many scholars and researchers, mainly to prove or disapprove the earlier theoretical backgrounds such as the pecking order, Modigliani and Miller propositions and the static trade-off theories and their relationship with firms' performance. Pouraghajan & Malekian (2013) argues that there is a strong negative and significant relationship between debt ratio and performance of firms, that is, companies that have a high debt ratio will have a negative impact on firm performance and value. Okiro (2014) in a study of corporate governance, capital structure and performance of firms listed at the East African community securities exchange found a significant relationship between capital structure and financial performance. Ahmad (2012) documents that firms that are profitable and therefore generate high earnings are expected to use less debt capital than those who do generate low earnings.

Financial access is an important determinant of the performance of enterprises as it provides them working capital, fosters greater firm innovation and dynamism, enhances entrepreneurship, promotes more efficient asset allocation and enhances the firm's ability to exploit growth opportunities (Njeru, 2012). Firms with access to funding are able to build up inventories to avoid stocking out during crises, while the availability of credit increases the growth potential of the surviving firms during periods of macroeconomic instability (Atieno, 2014). Access to external resources allows for

flexibility in resource allocation and reduces the impact of cash flow problems on firm activity. Bunyasi, Namusonge and Bwisa (2014), argues that the government should build capacity of the financial institutions to enhance firm's access to finances.

Manufacturing is a challenging undertaking that requires a lot of financial resources for acquisition of raw materials, investment in technology and distribution thus the inability of manufacturing firms to access finance would greatly exacerbate their current quality and market expansion problems thereby negatively affecting their competitiveness and that of the country (Rotich, 2016). Javed and Akhta (2012) postulates that access to finance is a key determinant of a firms' ability to develop, operate and attain profitability. Lack of access to land, utility, installation and import procedures act as constraints to manufacturing firm's growth and profitability. Other constraints such as poor financial management skills and lack of required collateral make it difficult for the firms to access finance (Ayallo, 2012).

Cost of capital is primarily a risk measure, but it is also related to firm value and can be considered a key determinant of firm's value other than accounting performance measures. Value is created when the firm is able to enjoy a cheaper source of capital. Given a rate of interest or cost of capital, an investor would choose a project whose internal rate of return exceeded the cost of capital. If investments were expected to earn a return below their cost of capital, investors would have a superior alternative for their funds. They could find other projects with the same expected return but lower risk, or projects with the same risk, but a higher expected return. In addition, the cost of capital is very important for a firm in order to assess future investment opportunities and to reevaluate existing investments (Okiro, 2014). The cost of equity for a firm is affected by several factors, some of which are related to characteristics of the firm itself, while others stem from the macroeconomic environment in which it operates. A study by Ahmad (2012), found that greater firm size and greater liquidity of a firm's stock are associated with a lower cost of capital.

Kenya offers various types of fiscal tax incentives as provided for in the Income Tax Act CAP 470, The VAT Act CAP 476 and the EPZs Act CAP 517. These incentives are mainly fiscal incentives and they determine the fiscal policy adopted to affect macroeconomic activity in a country (UNCTAD, 2016). Fiscal tax incentives are mainly offered to encourage some favored economic activities by increasing the after-tax rate of return on the investments and to compete favorably with other countries offering the same.

Fiscal tax incentive is a deduction, exclusion or exemption from tax liability offered as an enticement to engage in a specified investment activity (Njuru, 2015). The most dominant fiscal tax incentives in Kenya take the form of investment allowances, tax credit, special economic zones, reduced tax rates and tax exemption. Specific fiscal tax incentives offered include capital allowances, capital market incentives, EPZ benefits and tax remissions for exports. For fiscal tax incentive to be justifiable, the benefits derived from any tax incentives should be significantly higher than the cost of administering them.

The law, under the income tax Act provides for various investment allowances. These incentives are mainly intended to encourage investments in the country and since the year 2010, the government even sought to encourage investments outside the main cities by giving higher incentives to enterprises setting up businesses in such areas (Wawire, 2015). The main goal is to increase investment and improve economic standards. Investment Deduction is given to companies upon construction of a building and on the purchase and installation of new machinery used for the purposes of manufacture or for the following ancillary purposes: generation, transformation and distribution of electricity; clean-up and disposal of effluents and other waste products; reduction of environmental damage; water supply or disposal; and workshop machinery for the maintenance of the machinery. Currently companies claim investment deduction at

100% and those who invest outside the three cities in Kenya claim at 150%, (ITA, 2016).

Investment decisions are influenced by the firm specific factors, such as financial position of the firm and macro-economic conditions of the economy. Companies must earn a good return from their investments that will enable the board of directors make a good dividend payout. Profitability refers to a company's ability to generate an adequate return on invested capital (Kungu, 2015). Investment decision of a firm is defined to include not only those investments that create revenues and profit, but also those that save money by reducing expenditure. Manufacturing is a force multiplier and investment in manufacturing yields four times the effect on GDP growth (Rissa, 2014). Okiro (2014) postulates that managers should invest in profitable ventures that will be of benefit to the shareholders. If they decide to invest in non-profitable projects and they are unable to pay the interest due to debt holders, the debt holders can force the firm to liquidation and managers will lose their decision rights or possibly their employment.

1.1.1 Global Perspective of Determinants and Financial Performance

Manufacturing corporations include companies that obtain certain product as inputs and processes (transforms) these inputs to a value additional final product for sale. Supported information from 2017 Kenya Association of Manufacturers (KAM). The manufacturing industries sector is one of the most important economic sectors, because of its role and high impact in the development of the economy at the local and global level. Globally manufacturing output continues to grow by about 2.7 per cent annually in advanced economies and 7.4 percent in large developing economies. The manufacturing sector in the developed nations is large and contributes significantly to economic development, innovation and productivity. The sector cannot be ignored in the process of economic development in any state as it remains one of the most powerful engines for economic growth (Khalifa & Shafii, 2013). Economies such as China, India

and Indonesia have risen to the top ranks of global manufacturing. The sector generates 70 percent of exports in major manufacturing in both advanced and emerging markets.

The development of global value chains has facilitated the rapid integration of emerging regions into the global economy. For example China, India and Brazil have recorded very high growth rates of manufactured exports. These are leading countries and highly competitive exporters: India in software and IT-enabled services, China in skill-intensive manufacturers and Brazil in agricultural products (Mwangi, 2016). Fuentes and Ferreira (2017) carried out a study on the effect of capital intensity and foreign direct investment (FDI) on multinational manufacturing firm's financial performance. They found a positive effect between capital intensity and financial performance of multinational manufacturing firms.

Manufacturing sector acts as a catalyst to transform the economic structure of countries from simple, slow growing and low value activities to more vibrant and productive economies (Kungu, 2015). Despite the decline in manufacturing sector in the west, in UK, the sector was third largest in 2015 after business services and wholesale/retail in terms of share of UK GDP. Manufacturing sector generated one hundred billion pounds in gross value added. This represents more than 12% of the UK economy. It employed 2.8 million people, representing over 8% of total UK employment (BIS, 2014). In Ireland, the sector accounts for 46% of its GDP, 29% of total employment and 80% of its exports.

1.1.2 Regional Perspective of Determinants and Financial Performance

In Africa, manufacturing sector is equally important. In South Africa, the sector accounts for an average of 17.4% of its GDP, 9% employment and 40% of its total exports. As nations achieve higher levels of economic growth, manufacturing sector seems to contribute more to the GDP, employment levels, innovation and trade (Kungu,

2015). The manufacturing sector plays a big role in national income of African countries. The sector contributes to the progress of the African economies, increased rate of economic growth, diversified production, reduced imports, and expanded the economic infrastructure (Rotich & Namusonge, 2016). The share of the manufacturing sector in total employment and per capita manufacturing value added are rough indicators of industry's contributions in the social, economic and environmental dimensions of African countries. The economic role of industry in sustainable development presents per capita manufacturing value added as a general indicator of industrial development in the economic perspective. One important contribution of industry to the social component in sustainable development is creation of employment (Rissa, 2014).

1.1.3 Local Perspective of Determinants and Financial Performance

In Kenyan Manufacturing firms have become an important contributor to the economy. The sector contributes to the national objective of creating employment opportunities and generating income for the economy (Njoroge, 2014). The sector leads in foreign exchange earning accounting for 34% of the total earnings (Kenya Association Manufacturers (KAM, 2014). The KAM is a membership organization whose role is to provide leadership and services aimed at enhancing the development of a competitive manufacturing sector in Kenya. In Kenya the manufacturing sector is expected to remain a vibrant and strong contributor to sustained recovery and growth of the Kenyan economy (Kungu, 2015). Majority of manufacturing firms in Kenya, employ up to 100 workers (GOK, 2015).

The manufacturing sector remains the largest source of employment opportunities, accounting for about 20% of the total employment or 2,105,000 persons in 2013 (GOK, 2014). As an important sector in the overall economic growth, manufacturing sector requires an in depth analysis at industry as well as firm level. This sector occupies an

increasing importance in the development plans in developing countries which seeks to break the cycle industrial underdevelopment have in order to achieve economic development. Manufacturing sector today has become the main means for developing countries to benefit from globalization and bridge the income gap with the industrialized world (Amakom, 2015).

Kenya Vision 2030 is the country's development blueprint aimed at transforming Kenya into a newly industrialized middle income country providing a high quality of life to all citizens by the year 2030. The strategy aims to realize the objective through creating a vibrant and globally competitive financial sector promoting high-levels of savings and financing for Kenya's investment needs (Aroni & Namusonge, 2014). The vision 2030 identified the manufacturing sector as one of the key drivers for realizing a sustained annual GDP growth of 10 per cent. This has impacted positively on other millennium development goals such as health, education and infrastructure development. Kungu, (2014) postulates that manufacturing sector has high potential in employment creation and poverty alleviation. Kenya aims to become the provider of choice for basic manufactured goods in Eastern and Central Africa. This will be achieved through improved efficiency and competitiveness at firm levels.

Kenya also aims to strategically increase the level of value addition in niche exports by additional processing of local agriculture products. The manufacturing sector contributed 8.9 per cent of GDP and provided 12.4 per cent of employment in the formal sector in 2013 (Kenya Economic Report, 2014). Although this seems to be a good performance, it is below the 10 per cent contribution target per annum anticipated in the Kenya's vision 2030. The major problem attributed to this is unfair competition emanating from illicit and illegal trade (Kenya manufacturing survey, 2014).

Investors measure overall company performance in order to be able to make the right investment decisions. The financial performance measures have a variety of users but

they are assumed to be of primary interest to shareholders as they entrust their money to company managers who are responsible for the application of capital but may have no incentives to increase shareholders value (Njeru, 2015). Additionally, agency theory argues that unless managers are monitored constantly they act in self-interest, which might be at variance with interests of shareholders. But this variance can be reduced through the added costs of monitoring or designing appropriate incentive structures. In order to achieve goal congruence, managers' compensation is often linked with the performance of the responsibility centers and also with overall company performance (Uzel, 2015).

Moreover, for the case of Kenya it is valid to note that members want to earn a dividend and how much dividends manufacturing firms can pay is a function of how well assets have been deployed to generate revenue, and how well cost elements have been managed. Further, applying the profit maximization approach to modeling financial performance would not negate the principal of maximizing member's profitability benefit (Rotich, 2016). Since in this study the objective is to identify the determinants of financial performance of manufacturing in Kenya, two issues have to be addressed. These are how to measure financial performance and then how to attribute financial performance to variables posited to be the determinants of performance. Traditionally, analysis of financial statements using ratio analysis is the most common method employed in measuring financial performance of business entities. For instance, Okelo (2015) notes that return on equity (ROE) ratio is one of the most important relationship in financial analysis. Additionally Ogindo (2015), observes that profitability indicators such as return on equity (ROE) and return on assets (ROA) tend to summarize performance in all areas of the company. If portfolio quality is poor or efficiency is low, this will tend to be reflected in these ratios. Gupta, (2012) uses both ROE and ROA to measure profitability.

Kiaritha, (2014) argues that regression analysis is the most common methodology of relating the measures of financial performance to variables posited to be the determinants of financial performance. Other common multivariate tools used to establish relationship between performance and firms or environmental variables include descriptive statistics (includes tables of means, t-tests, tests of proportions, chi-square), correlation, analysis of variance and other multivariate methods (discriminant, cluster and factor analysis, canonical correlation). Investors measure overall company performance in order to be able to make right investment decisions. The financial performance measures are assumed to be of primary interest to shareholders as they entrust their money to managers who are responsible for the application of capital but may have no incentives to increase shareholders value (Ongore & Kusa). Okelo (2015) observes that the goal of management should be to maximize the market value of the company's shareholder equity through investments in an environment where outcomes are uncertain. A proper balance between risk and return should be maintained to maximize the value of a firm's shares (Njoroge, 2010).

1.2 Statement of the Problem

In Kenya, manufacturing sector is the second most important sector after agriculture. It is important in terms of contribution to gross domestic product, employment and foreign exchange earnings. The rapid growth of the manufacturing sector in most developing countries like Kenya has a number of implications for activities in this sector to implement reforms necessary to strengthen such sectors (Rotich & Namusonge 2016). Such improvements may include steps such as privatization, trade development, regulatory and competitive framework reviews and industrial productivity and tax reforms. Akhabonje and Namusonge (2016) argued that there is a positive effect between capital intensity and financial performance of enterpises in Kitale town.

The manufacturing sector in Kenya is large and contributes significantly to economic development, innovation and productivity. However many manufacturing firms have relocated or restructured their operations opting to serve the local market through importing from low-cost manufacturing areas such as Egypt, South Africa and India therefore resulting in job losses (Kariithi & Kihara, 2016). This is an indication that many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment (GoK, 2017). Therefore the manufacturing sector has been struggling to thrive and some key firms in the sector have closed operations due to unfavorable working conditions (Kungu, 2015). For example Sameer East Africa closed its Yana Tyres manufacturing factory in Nairobi, citing increased competition from cheaper imports. Other manufacturers who have shut down operations include Proctor and Gamble and everyday East Africa. Statistics from World Bank show that manufacturers operating in Kenya registered stagnation and declining profits for the last five years due to a turbulent operating environment (World Bank, 2017). Manufacturing sector in Kenya contributed barely 13.6 per cent to the GDP in the year 2016 indicating a decline from the previous year 2015 where it had reported a 5.6 per cent growth (KNBS, 2017).

There is need to understand the determinants of financial performance of manufacturing firms. High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large (Kung'u, 2015). Kiaritha (2016) found a positive relationship between financial performance and access to finance. Bunyasi, Namusonge and Bwisa (2014), argued that access to entrepreneurial finance has a positive influence on the performance of SMEs. Kinyanjui (2015) found a positive relationship between access to financial resources and firm performance. Additionally Nanagaki and Namusonge (2014) argues that there is a positive relationship between access to finance and performance of enterprises.

Additionally, Gupta, Srivasta and Sharma (2015) postulates that companies that have high profitability and good performance have less debt. Ummar, Tanveer and Aslam (2014) in their study on the impact of capital structure on financial performance in Pakistan concluded that capital structure choice is an important determinant of financial performance of firms. Javed and Akhta (2016) found a positive relationship between leverage, financial performance, and growth. Okelo (2016) argues that capital structure affects financial performance of firms. Earlier work on performance in Kenya only focused on business performance of small and medium enterprises (Namusonge, 2017). Otieno (2017) postulates that investment strategies influences the performance of Kenya's manufacturing firms. Wawire (2015) postulates that taxation was negatively related to financial performance as it increases the cost of running business. Mwangi (2016) argues that equity financing was positively related to financial performance. Lack of enough studies targeting financial performance in the manufacturing sector necessitated the carrying out of this study. The study aimed at establishing the determinants of financial performance of manufacturing firms in Kenya.

Measures of firm performance would be a combination of both financial and non-financial measures. Financial measures can be represented by profit, revenue, returns on investment (ROI), returns on equity (ROE) and earnings per share (EPS) (Omar, 2017). They have the advantage of being objective, simple and easy to understand. However, they have the drawback of being not easily available and being historical, therefore offering only lagged information. They can also be subject to manipulations and incompleteness (Ng'ang'a, 2017). Non-financial measures include number of employees, revenue growth, revenue per employee, market share, customers' satisfaction, employees' satisfaction. The non-financial measures have the disadvantage of being subjective (Njeru, 2015). Owing to the limitations of the financial and non-financial measures, the study employed a hybrid approach combining both financial and non-financial measures of performance.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to establish the determinants of financial performance of manufacturing firms in Kenya.

1.3.2 Specific Objectives

The following were specific objectives of the study:

1. To determine the effect of access to finance on financial performance among manufacturing firms in Kenya.
2. To evaluate the effect of capital structure on financial performance among manufacturing firms in Kenya.
3. To analyses the effect of cost of capital on financial performance among manufacturing firms in Kenya.
4. To assess the effect of fiscal tax incentives on financial performance among manufacturing firms in Kenya.
5. To establish the effect of investment practice on financial performance among manufacturing firms in Kenya.

1.4 Research Hypotheses

The researcher tested the following null hypothesis:

H01: Access to finance does not significantly affect financial performance among manufacturing firms in Kenya.

H02: Capital structure does not significantly affect financial performance among manufacturing firms in Kenya.

$H0_3$: Cost of capital does not significantly affect financial performance among manufacturing firms in Kenya.

H04: Fiscal **t**ax incentives does not significantly affect financial performance among manufacturing firms in Kenya.

H05: Investment practice does not significantly affect financial performance among manufacturing firms in Kenya.

1.5 Significance of the Study

The significance of this study was to establish the effects of determinants on financial performance among manufacturing firms in Kenya.

1.5.1 Policy Makers

The establishment of new structures of governance at county level might be geared towards making policies that will have positive impact on manufacturing firms in Kenya. Such contributions will help policy makers focus on the areas that will bring support to those firms such as easy access to capital, conducive investment climate and increased leverage to the institutions. The findings could be supportive in structuring appropriate manufacturing strategies and formulate policies to improve the manufacturing sector.

1.5.2 Researchers

Literature from this study will also be of benefit to the researchers who would want to understand determinants of financial performance for manufacturing firms in Kenya. The findings and recommendations from the study will benefit researchers and guide them into further areas of research. The study adds to the existing body of knowledge in the area of financial performance in general. It has also contributed to the academic literature in the manufacturing sector in Kenya.

1.5.3 Investors

Other stakeholders such as the government would be interested in supporting manufacturing firms as way of eradicating poverty in the country and stimulating economic development. The findings of this study will contribute towards a better understanding of financial performance in manufacturing sector firms in Kenya. The government will identify key variables that influence financial performance to facilitate and strengthen the manufacturing sector to meet the challenges of the new millennium.

1.6 Scope of the Study

The study focused on determinants of financial performance such as capital structure, fiscal tax incentives, investment practice and access to finance and their effect on manufacturing firms. The geographical scope included manufacturing firms in Nairobi and Mombasa. The manufacturing sector is vital for economic growth of this economy. It is therefore imperative to have a better understanding of determinants of financial performance to enhance growth of the sector. The study covered only manufacturing firms in Kenya. The non-manufacturing firms were excluded from the study. Small and medium enterprises were also excluded from the study as most of them have stagnated growth and were not appropriate for the purpose of this study. This study focused on determinants of financial performance of manufacturing firms in Kenya. Therefore, the study was a good representation of the manufacturing sector. The study was relevant in the aspects of determinants of financial performance of manufacturing firms in Kenya.

The study was limited to manufacturing firms registered with KAM due to the fact that the firms are spread all over Kenya and it was not possible to obtain data of manufacturing firms not registered with KAM. Manufacturing firms are drawn from many categories thus providing a diversified population relevant for comparative analysis. The position adopted for the purpose of this study was that verifying effects of

determinants of financial performance on a sample from a country which is still developing like Kenya can yield results as reliable as studies based on data from developed countries. At the same time, the results add to understanding of determinants of financial performance. Consequently, Kenyan companies can understand the determinants of financial performance of manufacturing firms.

Additionally, the manufacturing sector remains the largest source of employment opportunities, accounting for about 20% of the total employment. The sector contributes to the progress of the African economies, increased rate of economic growth, diversified production, reduced imports, and expanded the economic infrastructure (Rotich & Namusonge, 2016). Previous studies, for example, by Njeru (2015), Namusonge (2017), and Nyangoma, (2014) have mostly concentrated on issues of small and medium enterprises.

1.8 Limitations of the study

The researcher faced several limitations as some respondents were reluctant to provide the information due to fears that the information they provided could be used against them or bear some adverse effects on the manufacturing firms and therefore they did not wish to participate in the study. This limitation was overcome by the introductory letter from the University reassuring them that the information was strictly for academic purpose and would be treated with confidentiality.

The researcher also had a research permit from National Commission for Science, Technology and Innovation to facilitate the exercise. Another limitation was the delayed response to the questionnaires by some respondents and even some lost them in the process. To mitigate this limitation, the researcher frequently provided additional questionnaires. Lastly, the extensive coverage of the sampled manufacturing firms which covered essentially the entire country necessitated that the researcher makes

elaborate logistic arrangements to cover all of them to guarantee an acceptable response rate.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This section reviewed a detailed account of the various literature in financial performance. The chapter reviewed the theoretical framework for determinants of financial performance which include access to finance, capital structure, cost of capita, tax incentives and investment practice. These independent variables were linked to the dependent variable through a conceptual framework. Research gaps were identified and a summary of the chapter was given.

2.2 Theoretical Framework

Theoretical literature provides several motivations for their well-documented evidence. Theories on financial performance of firms and on factors influencing financial performance were reviewed. The theories that were used in the study include capital structure theory, trade-off theory and pecking order theory.

2.2.1 Modigliani-Miller Theory

The Modigliani-Miller theory proposed by Franco Modigliani and Merton Miller, (1958), forms the basis for modern thinking on capital structure. It disregards many important factors in the capital structure decision. The theorem specifies the financial decisions by firms that are irrelevant to the firm's value. The theorem states that, in a perfect market, how a firm is financed is irrelevant to its value. The result provides the base with which to examine real world reasons why capital structure is relevant.

Modigliani and miller considered a perfect capital market with no transaction or bankruptcy costs and with perfect information. The theory assumed that firms and

individuals can borrow at the same interest rate, no taxes and investment decisions aren't affected by financing decisions. Modigliani and Miller made two findings under these conditions.

Their first proposition was that the value of a company is independent of its capital structure. Their second proposition states that the cost of equity for a leveraged firm is equal to the cost of equity for an unleveraged firm, plus an added premium for financial risk. That is, as leverage increases, while the burden of individual risks is shifted between different investor classes, total risk is conserved and hence no extra value created. Their analysis was extended to include the effect of taxes and risky debt. Under a classical tax system, the tax deductibility of interest makes debt financing valuable, that is, the cost of capital decreases as the proportion of debt in the capital structure increases. The optimal structure then would be to have virtually no equity at all.

Modigliani and Miller in their second "irrelevance" proposition indicate that given a firm's investment policy, the dividend pay-out it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders (Okelo, 2015). In other words, in perfect markets, neither capital structure choices nor dividend policy decisions matter. Studies have shown the use of certain factors in determining the financial leverage of the firm, hence the financial performance. Kumar (2014) points out that numerous documented researches showing a fall in equity prices just before the announcement of new equity issue and in the few years that follow hence validating the M & M leverage "irrelevance" theory.

In practice, company tax system and personal tax system interact in complex ways. Okelo (2015) suggested that the presence of taxes on personal income may reduce the tax advantage associated with debt financing. This is because firms could save corporate taxes by raising the debt to equity ratio, but investors would pay additional personal tax and, therefore, require higher returns to compensate for such a tax and the higher

associated risks. MM proposition was therefore modified in 1977 to incorporate personal taxes but with the same argument that capital structure indeed matters. Mwangi (2015), also posit that a typical firm could double tax benefits by issuing debt until the marginal tax benefit begins to decline. It is not therefore possible for a firm to have a 100% debt financing.

In conclusion, MM demonstrates that if capital structure does in fact matter, then taxes and default risk could explain why it matters (Aroni, 2015). The fundamental MM message is that any combination of finance sources is as good as another. No matter how many sources of finance are used, the resulting capital structure is just another way of dividing the net cash flow between the people who have contributed the capital that sustains the company's operations (Myers, 2001). MM theory is therefore adopted in this study because a company's financial performance is affected by the capital structure it employs.

2.2.2 Trade-off Theory

Trade-off theory suggested by Jensen and Meckling allows bankruptcy cost to exist (Okelo, 2015). The theory looks at the tradeoff between tax benefit of debt and the costs of bankruptcy. It argues that firms will use debt as much as possible but watch out for any disadvantage that may arise as a result of a bankruptcy. It states that there is an advantage to financing with debt, that is the tax benefits of debt and that there is a cost of financing with debt that is the bankruptcy costs and the financial distress costs of debt (Mwangi, 2015). The marginal benefit of debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing (Migiro, 2013). Okelo (2015) believes that debts payment decreases cash flows available for managers. But, on the other hand, he states that this decrease will reduce the opportunities of profitable investing. Thus, companies with less debt have more

opportunities for investment and in comparison with other active firms in industry, have more liquidity. Additional costs of debt include potential bankruptcy costs and agency costs associated with the monitoring of investments by bondholders.

In practice however, firms do not operate with a 100% debt financing due to distress, bankruptcy and agency costs hence the need to match the costs and benefits. Moreover, the theory predicts that there is a positive effect of the tax rate and leverage due to allowable financial expenses against taxable income, it does not specify the effect of tax rate and leverage (Mwangi, 2015). Trade-off theory is adopted in this study because costs and benefits of alternate financial sources are "traded off" until the marginal cost of equity equals the marginal cost of debt, yielding the optimal capital structure, and maximizing the value of the firm.

Mwangi (2015) postulates that the theory was first suggested by Donaldson in 1961 and further developed by Myers and Majluf in 1984. It argues that firms have a preferred hierarchy for financing decisions with the highest preference being to use internal financing before resorting to any form of external funds. This is because internal funds incur no flotation costs and require no additional disclosure of financial information that may lead to a possible loss of competitive advantage in the market. Thus, issuing new shares may harm existing shareholders through value transfer from old to new shareholders.

Managers will prefer financing new investments by internal sources (i.e. retained earnings) first, if this source is not enough then managers seeks for external sources from debt as second and equity as last. Thus, according to the pecking order theory firms that are profitable and, therefore, generate high earnings to be retained are expected to use less debt in their capital structure than those do not generate high earnings, since they are able to finance their investment opportunities with retained earnings. Pecking Order theory states that companies prioritize their sources of financing from internal

financing to equity. Therefore internal financing is used first then when that is depleted, debt is issued and when it is no longer sensible to issue any more debt, equity is issued.

The theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required. The theory however assumes that firm's managers know more about the company's current earnings and future growth opportunities than outside investors and they will act in the best interests of the company's existing shareholders (Sheikh & Wang, 2013). There is a strong desire to keep such information proprietary as the use of internal funds precludes managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them (Mwangi, 2015). In safeguarding the interest of the existing shareholders, managers may even forgo a positive return project if it would require the issue of new equity, since this would give much of the project's value to new shareholders.

Aroni (2015) argues that equity is a less preferred means to raise capital because when managers issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over-valuation. As a result, investors will place a lower value to the new equity issuance. Okelo (2015), postulates that high tax rate firms use debt more than low tax rate firms in order to take advantage of tax shields on interest payments. Pecking order theory is therefore adopted in this study because the form of financing sources a firm chooses can act as a signal of its ability to access finance and consequently financial performance.

2.2.4 Agency Theory

Agency relationship is one in which one or more persons (the principal) engages another person (the agent) to perform some service on their behalf which involves delegating

some decision making authority to the agent. Okelo (2015) postulates that an optimal capital structure is attainable by reducing the costs resulting from the conflicts between the managers, owners and debt holders. Therefore, the optimal financial structure results from a compromise between various funding options (own funds or loans) that allow the reconciliation of conflicts of interests between the capital suppliers (shareholders and creditors) and managers. Agency costs are defined as the sum of the monitoring expenditures by the principal, bonding costs by the agent, and a residual loss. The existence of agency problem will arise due to the conflicts either between managers and shareholders (agency cost of equity) or between shareholders and debt holders (agency costs of debt). Ng'ang'a (2017) argued that agency theory is concerned with analyzing and resolving problems that occur in the relationship between shareholders and their professional agents.

A reliable tool to control agency cost can be the use of debt capital. Leverage will force managers to generate and pay out cash, simply because interest payments are compulsory. Interest payments will reduce the amount of remaining cash flows. Thus, debt can be viewed as a smart device to reduce the agency costs (Zurigat, 2014). The agency theory focuses on the divergence of interests between managers and stockholders. Okiro (2014) postulates that stockholders are wealth maximizes while managers maximize a utility function that include remuneration, power, job security and status.

Mwirie (2015) argues that debt can be used to control the managers' behaviour by reducing the free cash flows within the firm by ensuring prompt payment of interest payments. This minimizes the cash at the disposal of managers likely to be misappropriated through personal interests or still waste the cash in organizational inefficiencies at the expense of the firm's objectives. Key among the objectives is maximization of shareholders wealth by maximizing profitability, a measure of financial performance.

Indebtedness allows shareholders and managers to adhere to same objective of maximizing financial performance and hence shareholders wealth (Luigi & Sorin, 2014). For managers, the indebtedness has the power to incite them to perform since the more the company is indebted, the higher its bankruptcy risk and the higher the risk of losing their jobs, remunerations and other advantages. This is considered to be a sufficient threat in persuading them to down their inefficient management styles and in return yield maximum cash-flow to reward the debt (Mwangi, 2015). The optimal level of indebtedness is the one that allows the minimization of overall agency costs. Agency theory is therefore adopted in this study because there is need to reduce costs resulting from the conflicts between the managers, owners and debt holders in order to maximize financial performance.

2.3 Conceptual Framework

A conceptual framework refers to a graphical representation of the theorized interrelationships of the variables of a study (Abadalla, 2017). The conceptualization of variables in academic study is important because it forms the basis for testing hypothesis and coming up with generalizations in the findings of the study (Kungu, 2015). In this study, the independent variables were the conceptualized determinants of financial performance. The independent variables of the study included capital structure, access to finance, cost of capital and tax incentives and investment practice.

There are two opposite views regarding the relationship between profitability and capital structure. Gitari (2014) in the pecking order theory suggests that firms prefer raising capital from retained earnings, then from debt, then from issuing equity. If pecking order applies, then higher profitability will correspond to a lower debt ratio. As a result, the pecking order theory implies a negative relationship between leverage and profitability (Okelo, 2015). In the agency model higher leverage helps control agency problems by

forcing managers to pay out more of the firms excess cash in interest payments (Migiro, 2013).

Accordingly, the trade-off theory predicts a positive relationship between profitability and leverage. In the theory, agency costs, taxes and bankruptcy costs incline more profitable firms towards higher leverage. First, expected bankruptcy costs decline when profitability increases. Secondly, the tax deductibility of corporate interest payments induces more profitable firms to finance with more debt. The theory looks at the tradeoff between tax benefit of debt and the costs of bankruptcy. That is there is an advantage to financing with debt, that is the tax benefits of debt and that there is a cost of financing with debt that is the bankruptcy costs and the financial distress costs of debt (Mwangi, 2015). Thus, companies with less debt have more opportunities for investment and in comparison with other active firms in industry, have more liquidity. Additional costs of debt include potential bankruptcy costs, and agency costs associated with the monitoring of investments by bondholders.

The conceptual framework shows that financial performance of manufacturing firms is affected by access to finance, capital structure, cost of capital, tax incentives and investment practice. In order to specifically address the arising research gaps, the next section presents the underlying arguments behind the figure 2.1 conceptual framework.

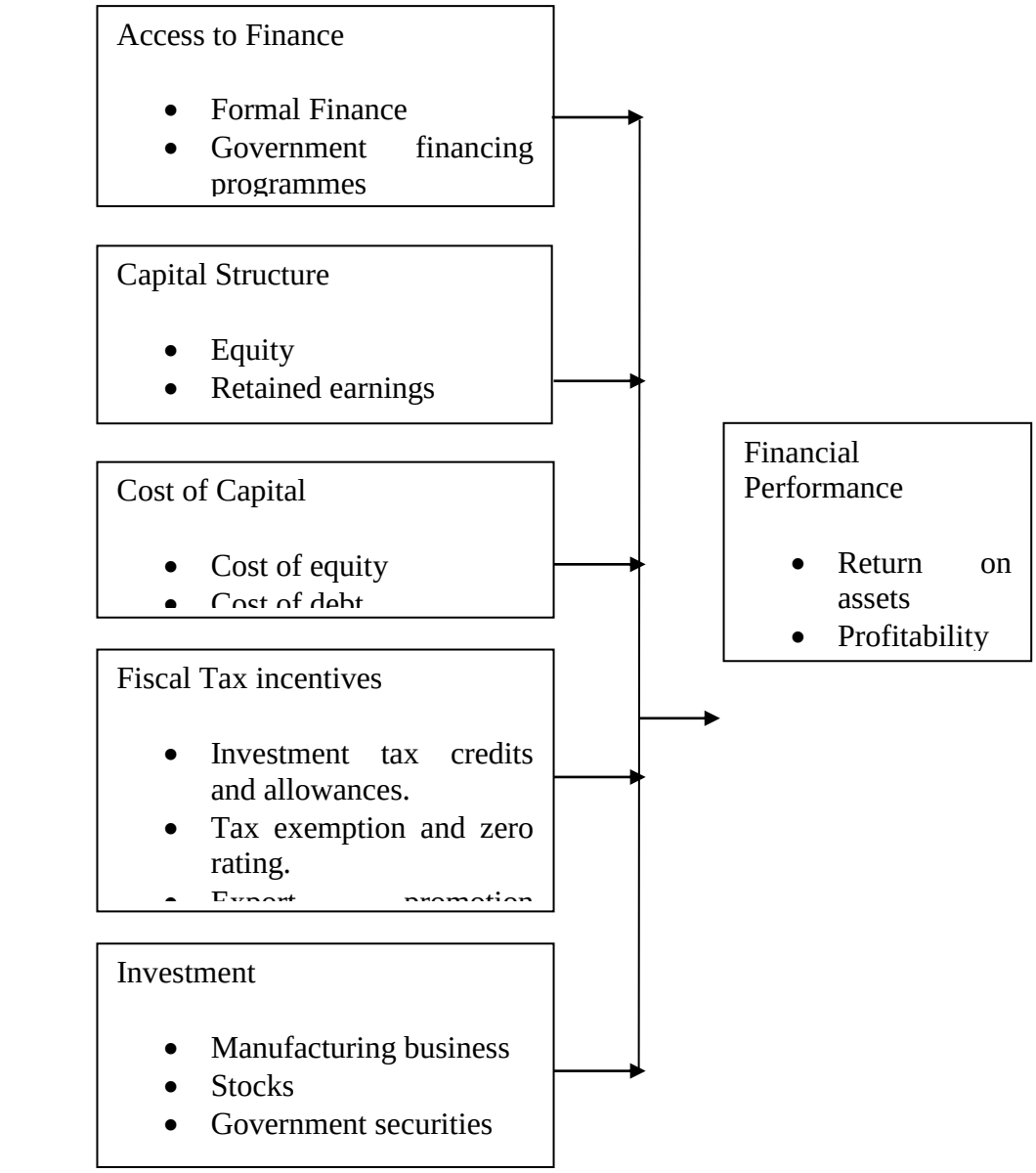

Figure 2.1: Conceptual Framework

2.4 Review of Variables

There are various studies that have been investigated by different researchers on determinants of financial performance. Teal (2012) did a study on the Nigerian manufacturing firms and used the variables: capital structure and access to finance. Kiaritha (2016) did a study on determinants of financial performance of savings and credit co-operatives in the banking sector in Kenya and used variables operation costs, saving culture and investment policies. Rotich (2016) did a study on effects of relationship banking and entrepreneurial orientation on financial performance of manufacturing firms in Kenya and used variables: lending policies, monitoring strategies and risk sharing practices. Depending on different objectives, researchers emphasize different aspects of financial performance (Kung'u 2016). Financial performance determinants that are likely to affect firm profitability therefore, in this study, include access to finance, capital structure, cost of capital, taxation and investment practice as determinants of financial performance.

2.4.1 Access to Finance

Access to credit refers to the possibility that individuals or enterprises can access financial services, including credit, deposit, payment, insurance, and other risk management services. World- bank (2014) argues that access to credit is the absence of price and non-price barriers in the use of financial services. The limited access to credit has been attributed to factors such as lack of collateral and high risk. The business challenges related to accessing capital particularly impact the manufacturing sector. The firms have a strong unmet demand for credit due to difficulty in accessing or qualifying for adequate financing. Access to finance is a key determinant of a firms' ability to develop, operate and expand (Migiro, 2013). The limited access to entrepreneurial finance is a factor influencing growth negatively (Namusonge, 2014).

Manufacturing firms have little access to finance, which thus hampers their emergence and eventual growth. Their main sources of capital are their retained earnings and informal savings and loan associations, which are unpredictable, not very secure and have little scope for risk sharing because of their regional or sectoral focus (Wamiori, Namusonge & Sakwa). Access to formal finance is poor because of the high risk of default and due to inadequate financial facilities. It is normal that during the earliest stages of the company, funding typically comes from the entrepreneur's personal financial resources and savings or from family and friends. This is because, at this stage, the firm often lacks a viable product, customers, or stable revenues. As the firm grows and begins to generate revenues, however, angels and venture capitalists may take an interest. When the firm achieves profitability and some measure of stability, bank loans may become an option (Amidu, 2010). Further, when the company has achieved significant revenues and growth, it may be a candidate for sale or for an initial public offering. Thus, potential sources of capital vary in accordance with the age and size of the company (Namusonge, 2004).

Financial access is an important determinant of the performance of enterprises as it provides them working capital, fosters greater firm innovation and dynamism, enhances entrepreneurship, promotes more efficient asset allocation and enhances the firm's ability to exploit growth opportunities (Njeru, 2012). Firms with access to funding are able to build up inventories to avoid stocking out during crises, while the availability of credit increases the growth potential of the surviving firms during periods of macroeconomic instability (Atieno, 2014). Access to external resources allows for flexibility in resource allocation and reduces the impact of cash flow problems on firm activity. Bunyasi, Namusonge & Bwisa (2014) argues that the government should build capacity of the financial institutions to enhance firm's access to finances.

Although access to finance is not easy to measure, financial depth (total loan outstanding) can be seen as an approximate indicator with direct and indirect effects on financing firms. Greater depth is to be associated with greater access for firms. Demirguc-Kunt & Beck (2012) identified geographic and demographic penetration, average size, and number of deposits as indicators of financial access. Financial access enhances financial inclusion thereby contributing to financial sector deepening and overall economic growth (Namusonge, 2012). Financial inclusion aims at drawing the unbanked population into the formal financial system to enable them access a wide range of financial services including savings, payments, money transfers, credit and insurance (Kalunda, 2013).

Financial services include loans through bank lending, savings in financial, insurance products and investment services. Access to these external financial resources is needed to ensure flexibility in resource allocation and reduce the impact of cash flow problems. Firms without access to bank funding are more vulnerable to external shocks as the lack of access to credit remains a major constraint for the business managers in developing economies. Cheng *et. al.,* (2014) in their study on corporate social responsibility and access to finance document that firms with better corporate social responsibility performance are better positioned to obtain financing in the capital markets.

Credit assumes special importance as it provides a means to smooth consumption, protect against shocks and in some cases, make productive investments which lead to higher future income. Credit offers the means to make intertemporal financial decisions – e.g., spend money productively now in order to be able to earn better later. In addition to loans, credit facilities such as overdrafts or lines of credit are increasing in importance.

Bougheas, Mizen & Yalcin (2012) carried out a study on a firm access to external finance using data from United Kingdom manufacturing firms over from 1989 to 1999.

Their measures of external finance were the ratio of a firm's short term debt to total external debt. The authors concluded that several specific characteristics such as size, collateral, riskiness, age and profitability were important determinants of access to short-term and long-term credit. Additionally they found monetary policy conditions had a greater impact on smaller, riskier and younger firms. Migiro (2013) conducted an empirical study relating Kenyan manufacturing SMEs' finance needs to information on alternative sources of finance. The findings indicate that the general knowledge and awareness of finance options available to SMEs in Kenya was poor, which hindered entrepreneur's ability to access finance.

As for access to financial markets, the Global Financial Development Database, available at www.worldbank.org/financial development, contains cross-country indicators capturing firms' access to securities markets. One of the proxy variables for access to stock and bond markets is market concentration. The idea behind this measurement is that a higher degree of concentration reflects greater difficulties for access for newer or smaller issuers. The variables in this category include the percentage of market capitalization outside of top 10 largest companies, the percentage of value traded outside of top 10 traded companies, government bond yields (3 month and 10 years), ratio of domestic to total debt securities, ratio of private to total debt securities (domestic), and ratio of new corporate bond issues to GDP.

Njeru (2015) postulates that access to credit allows entrepreneurs to take advantage of economic opportunities and provide a basis for planning and expanding business conditions. By improving access to credit enterprises are able increase earnings and savings and plan for the future (Memba, 2013). Enterprises with access to savings, credit, insurance and other financial services are more resilient and able to cope with business risks. Njoroge (2010), have documented how access to financial services has improved the performance of businesses in the manufacturing sector.

Ojeka (2013) postulates that collateral based financing has become increasingly difficult for firms whether as existing businesses or in their expansion states. Banks are reluctant to lend to manufacturing firms as they cannot meet the Banks' lending requirements. Additionally some manufacturers are of low education, management and entrepreneurial skills as well as unreliable financial records (Aderemi, 2013). Lack of access to land, utility, installation and import procedures act as constraints to manufacturing firms growth and profitability. Other constraints such as poor financial management skills and lack of required collateral make it difficult for the firms to access finance (Ayallo, 2014). In a study on determinants of access to microfinance services among self-employed persons with disabilities in Nairobi Kenya, Ayallo (2014) concluded that financial requirements remains a constraint in access to financial services which may inhibit business creation and improvement.

Memba, Gakure & Karanja (2012) in their study on impact of venture capital on growth of SMEs in Kenya cited lack of finance as a major contributor to SMEs failure in Kenya. The study revealed that firms that use venture capital experience improved performance. Factors inhibiting manufacturing firms access to credit include loans charged at high interest rates that most businesses cannot afford, lack of managerial experience and skills, insufficient information on available products, relatively low levels of financial literacy, poor business plans and other external factors (Mohembe, 2013).

In Kenya, firms have difficulties in accessing both credit and equity. Memba (2012) cited venture capital as an alternative source of finance for firms. Access to financial services has been identified as a major problem experienced by many in attempts to start and sustain business in Kenya (Njeru, 2015). Another argument by Mwangi (2016) confirms that manufacturing firms in Africa have little access to finance. If manufacturing firms are dependent on the banking system for credit, then they may be especially sensitive to conditions in the banking sector. It is widely believed that a tightening of monetary policy by the central bank causes commercial banks to reduce

the volume of their lending. While interest rates for large firms typically go up somewhat as a result of monetary tightening, these firms usually still have access to funds through financial markets. Small firms however may find their financial tap dried up completely due to a credit crunch in the banking system (Kungu, 2015).

The literature suggests that most of Kenya's manufacturing companies are small in size and undercapitalised. There is also evidence that there are multiple obstacles to obtaining access to finance. These include reliance on bank overdraft facilities, the high cost of borrowing, a segmented and incomplete financial market and macroeconomic instability (Atieno, 2014). There are specific obstacles to accessing finance that manufacturing firms have faced. Access has been largely prohibited as a result of the high cost of borrowing and the lack of financial products available to raise finance

In a study on determinants of access to external finance, evidence from Spanish firms Gonzalez, Lopez, & Saurina (2013) concluded that the nature of borrowing firm's bank relationship and collateral plays a key role in making long-term finance available to firms. In yet another study Williamson and Yang (2016) examined financially constrained firms in UK. In their study access to finance was defined as access to internally generated funds, bank lending and accounts payable. Their empirical analysis suggests firm's total assets, as a proxy available for collateral, is an important determinant of bank loan availability.

World Bank (2014) has classified financial access barriers into four main categories; physical barriers, lack of documentation barriers, affordability barriers and lack of appropriate products and services. For geographic access, branches have been the traditional bank outlet, hence geographic distance to the nearest branch, or the destiny of branches relative to the population can provide a first crude indication of geographic access or lack of physical barriers to access (Beck, dermirguc-Kunt and Martinez 2013). Additionally, financial market imperfections which limit access to finance play an

important role in perpetuating inequalities, so that financial sector reforms that promote broader access to financial services should be at the core of the development.

Beck *et al.,* (2013) point out factors that impact on firm's ability to access credit include variables largely controllable by a firm such as managerial competencies, quality of business information, availability of collateral and networking. Other factors identified as factors constraining access to credit include interest rates, collateral requirement, cumbersome documentation and time. Banks are less reluctant to lend to manufacturing firms because they may have access to detailed information about these firms' transactions through records of their checking accounts and of other financial transactions in which the bank has participated. These records allow banks to verify information that the firms provide about their financial performance.

The informal institutions include the Rotating Savings and Credit Associations (ROSCAS), mobile bankers, money lenders, and accumulating savings and credit associations (ASCRAs). Informal financial institutions are flexible, convenient and have got high loan recovery rates despite the fact that their interest rates on loans are higher than in formal banks. Manufacturing firms have little access to finance, which thus hampers their emergence and eventual growth. Their main sources of capital are their retained earnings and informal savings and loan associations, which are unpredictable, not very secure and have little scope for risk sharing because of their regional or sectoral focus (Wamiori, Namusonge & Sakwa). Access to formal finance is poor because of the high risk of default and due to inadequate financial facilities.

The high cost of finance is also linked to the lack of information on some manufacturers. This includes the poor quality of financial records and an inadequate (or lack of) collateral. Given this, they are seen as dangerous because of the lack of risk appraisal and management processes. The implication, therefore, is that these firms do not have adequate credit or collateral to meet the needs at different levels of growth. Owing to the

problems associated with accessing alternative credit facilities, a large proportion of Kenyan manufacturing firms rely more on self-financing, in terms of retained earnings, or look to external sources (Atieno, 2014).

In Kenya firms may access credit through government financing programmes such as the youth fund, the women fund and other government sponsored programmes that support business development. Many businesses lack credit to start or grow their businesses despite having created funds worth billions provided by Kenyan Government through Youth and women funds (Njeru, 2012). Most businesses feel that the bank and microfinance institutions that are meant to disburse Government funds are charging high interest rates between 15 to 20 percent. Others have gone even further and asked for collateral in order to qualify for bank loan. Nevertheless, not working with these financial institutions will mean a high default rate, which rocked youth enterprise fund. As of last 12 months of 2009 the portfolio of non-performing loans according director youth Enterprise Funds, stands at 40 percent and is about eight percent of 738 billion of the commercial loans defaulters (ICPAK, 2012).

Access is not easy to measure. It is important to distinguish between access – the possibility to use – and actual use of financial services. The difference might reflect voluntary lack of demand or the lack of need. Understanding usage requires information on both demand and supply factors, which are difficult to disentangle. Access, in turn has many dimensions: services need to be available when desired, and products need to be tailored to specific needs; the prices for these services need to be affordable, including all non-price transactions costs such as information processing costs or physical distance; and credit resources should not be limited to borrowers with connections, collateral or track record rather than projects with highest expected returns, hence provision of these services should also translate into profits for the providers, and therefore be available on a continuous and sustainable basis. In terms of use, one has to also distinguish between different services (deposit, credit, payment and insurance) and

different institutions (commercial banks, bank-like institutions such as post office savings banks or MFIs, informal providers).

One of the study variables is concerned with examining the effects of access to finance on the performance of manufacturing firms. We will make use of both subjective and objective measures of access to finance from the World Bank's Enterprise Surveys to achieve this objective. Our ideal measure of firm performance would be a combination of both financial and non-financial measures. Financial measures can be represented by profit, revenue, returns on assets etc (Santos and Brito, 2012; Chong, 2008). They have the advantage of being objective, simple and easy to understand. However, they have the drawback of being not easily available and being historical, therefore offering only lagged information. They can also be subject to manipulations, and incompleteness (Santos and Brito, 2012; Chong, 2008). Non-financial measures include number of employees, revenue growth, revenue per employee, and market share. The non-financial measures have the disadvantage of being subjective (Santos and Brito, 2012; Chong, 2008).

2.4.2 Capital Structure

In finance, capital structure refers to the way a corporation finances its assets through some combination of equity, debt, or securities. The firm's ratio of debt to total financing. Thus capital structure refers to how a firm finances its overall operations and growth by using different sources of funds. Capital structure is the way in which a firm finances its total assets, operations and growth through issuing equity, debt and hybrid securities (Okelo, 2015).

Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. Short-term debt such as working capital requirements is also considered to be part of the capital structure

(Aburub, 2012). There is a fundamental difference between financing investment through borrowing and financing either with accumulated cash or by issuing new stock. Borrowing creates a legal obligation to repay (with interest) that is not present when investment is financed internally or with equity. Therefore capital structure can be measured as the debt-to-equity ratio. The higher the ratio, the higher the gearing and the greater the risk of insolvency (Mwirie & Birundu, 2015).

The determination of capital structure involves considerations about EPS, value and cash flow. A firm may have enough debt servicing ability but it may not have assets to offer as collateral. A firms financing decision may also be influenced by the desire to maintain operating flexibility and cheaper means of raising funds (Kung'u, 2015). A cash flow analysis might indicate that a firm could carry high level of debt without much threat of insolvency. For a firm having trouble meeting its obligations, it usually is easier to negotiate new terms for bank financing than for issued securities.

To analyse on how firms choose their capital structure under pecking order and trade-off theories particularly when they have leverage, target Zurigat (2012) concluded that leverage is positively related to profitability. They used data from 114 non-financial Jordanian firms for the period 1997-2005. Panel data analysis was employed. While the study disagrees with the pecking order theory hypothesis, it supported both the Agency cost and MM capital structure relevance as both provides that profitability increase with debt capacity.

To analyse the impact of capital structure on profitability of listed companies in India, Chisti, Ali and Sangmi (2013) found that capital structure have a statistically significant impact on the profitability of firms. This invalidates the MM (1958) theory of capital irrelevance. The study used secondary data of ten automobile companies for the 2007-2012 and used ratio analysis. GP margin, NP margin ROCE and return on investments

were used as profit proxies while debt to equity, debt to assets and interest cover were used as capital structure proxies.

To determine the effect of capital structure and financial performance for industrial and allied sectors in the NSE during the period 2004 to 2008, Kaumbuthu (2011) found a negative effect of debt to equity ratio and return on equity. The findings therefore suggest that industrial firms prefer equity to debt again invalidating the pecking order theory. The proxies for capital structure and financial performance were debt to equity ratio and return on equity respectively with regression as the technique of analysis. To find out the effect of capital structure on the financial performance of SMEs in South Africa and Ghana, Abor (2012) found that that long-term debt and gross profit margin are positively related; whereas short-term debt has significant and negative relationship with gross profit margin in both South African and Ghana.

Equity is classified as common stock, preferred stock or retained earnings. It is that part of capital which is free of debt and represents ownership interest in a firm. It is therefore that amount contributed by the owners and normally includes ordinary share capital, preferential capital, retained earnings and reserves. Like debt providers, equity providers also earn returns inform of dividends from the profits generated by the firm (Mwangi, 2016). Preference shareholders receive their dividends at an agreed rate before the ordinary shareholders and any unappropriated profit is retained for firm's expansion programs (Titman *et al.,* 2011). Equity is one source of capital a company may use to finance its operations (Higgins, 2010). Many analysts define equity as the net worth of a company, the value of the assets less the value of the liabilities. The value of the equity of a business is whatever remains after the company satisfies all of the claims of its creditors.

The studies are supported by Ahmad (2012) who documents that firms that are profitable and therefore generate high earnings are expected to use less debt capital than

those who do not generate high earnings. Hence, internal funds are used first, and when that is depleted, debt is issued, and when it is not sensible to issue any more debt, equity is issued (Ali *et al.*, 2011). A study by Gupta, Srivastava & Sharma (2013), on capital structure and financial performance of publicly quoted companies in India concluded that companies that have high profitability and good performance have less debt. A study by Javed & Akhta (2012) on the relationship between capital structure and financial performance in Karachi stock exchange found a positive relationship between leverage, financial performance, and growth.

Ebimobowei (2013) investigated the impact of capital structure on performance of quoted firms in the Nigerian Stock Exchange for thirty two firms. The result revealed that short term debt, long term debt and total debt have significant negative relationship with performance. Further the results revealed that return on asset and return on equity and tangibility and efficiency have a positive relationship with performance while non-tax debt and liquidity shows negative relationship with performance. On the basis of result, they concluded that capital structure affects the performance of firms. Okiro (2014) in a study of corporate governance, capital structure, regulatory compliance and performance of firms listed at the East African community securities exchange found a significant relationship between capital structure and financial performance.

Debt financing is a major source of capital for most firms. The decision about how much of the firm's capital stock should be financed by borrowing vs equity or cash is usually called the leverage or gearing decision (Okelo, 2015). A firm is said to be "highly levered" or "highly geared" if it has a lot of debt relative to the amount of its equity. Debt financing occurs when investors provide capital in the form of loans for the managers of a company to use to operate the business. The company, in return, promises to repay the capital to the investors plus a rate of interest for the use of the capital. Debt financing is cheaper than equity financing because interest on debt is tax deductible but it is a more risky source of funding because repayments have to be made regardless of

whether the firm makes profits or losses. Debt financing becomes expensive to the firm at the point where a firm is highly leveraged because subsequent lenders will charge higher interest rates (Wamiori *et., al* 2016)

Banks require the company to have collateral to secure the loan, but this requirement often is negotiable (Ojeka, 2013). Debt structure is the ratio between current liabilities and long-term liabilities (noncurrent liabilities) in the total liabilities of the enterprise. Compared with the long-term debt financing, current liabilities financing is short-term, low cost and more debt risk relatively. Total debt include short and long term borrowings from financial institutions, debentures, bonds, deferred payment, bank borrowings and any other interest bearing loan. Abor (2010) on capital structure and profitability of SMEs in Ghana, show that short-term debt ratio is positively related with return on equity. To investigate the effect of leverage and the financial performance of listed firms in Kenya, Gitari (2014) found a significant negative effect of debt and profitability but no effect on firm value over the period 2002 – 2011.

Capital structure influences both profitability and riskiness of the firm. The greater the gearing a firm exhibits, the higher the potential for failure if cashflows fall short of those necessary to service debts. Several studies indicate that a firms capital structure decisions are affected by several firm related characteristics such as future growth options, earnings volatility, profitability and control (Titman and Wessels, 2011; Okelo, 2015). Studies such as Mwirie and Birundi (2015) have explained factors influencing capital structure from the perspective of asymmetric information and agency theory. In the international context, country norms, type and size of industry and host government controls could play a role in determining capital structure (Rajan & Zingales, 2012).

Kubai (2015) carried out a study on the effect of capital structure on the financial performance of manufacturing firms in Kenya. The results indicated a negative relation between debt and financial performance. In another study on factors influencing capital

structure in developing countries, Rajan & Zingales (2012) reported that an increased debt ratio is associated with firm size. It is argued that large firms tend to be well diversified and hence less likely to go bankrupt. Lower expected costs enable large firms to take on more debts. Therefore profitable firms will employ more debt since they are likely to have a high tax burden and low bankruptcy risk (Ooi, 2010). However, Ongore & Kusa (2012) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend on external reserves accumulated from past savings. Titman & Wessels (2011) agree that firms with high profit rates, maintain a relatively lower debt ratio since they are able to generate such funds from internal sources. This was supported by Graham (2012) who concluded that big and profitable companies present a low debt rate. In the trade-off theory, agency costs, taxes and bankruptcy costs incline more profitable firms towards higher leverage. First, expected bankruptcy costs decline when profitability increases. In addition, if past profitability is a good proxy for future profitability, profitable firms can borrow more, as the likelihood of paying back the loans is greater.

Many studies have been conducted to assert the significant determinants of capital structure of a company. Nguyen & Ramachandra (2015) in their studies postulated that, tangibility, non-debt tax shields, growth opportunities, size of the company and profitability are significant determinants of an optimal capital structure. Sharma *et. al.* (2013) in their study on factors that influence financial leverage of small business firms in India, concluded that business growth, business performance, total assets, sales, tax, and family have positive influence on the financial leverage of small business firms in India. Mwirie & Birundi (2015) carried out a study on the effect of capital structure on the financial performance of small and medium enterprises in Thika sub-county. They found no significant effect of capital structure, asset turnover and asset tangibility on the financial performance of SMEs in Thika sub-county.

In a study on microfinance institutions in sub-Saharan Africa, Kyereboah-Coleman (2009) found that high leverage is positively related with performance (i.e. ROA and ROE). In another study, Abor (2013) on small and medium-sized enterprises in Ghana and South Africa showed that long-term and total debt level is negatively related with performance. A study by Ibrahim (2012) based on a sample of non-financial Egyptian listed firms from 2002 to 2008 reveals that capital structure choice decision, in general terms, has a weak-to-no impact on firm's performance.

The primary advantage of debt financing is that it allows the founders to retain ownership and control of the company. In contrast to equity financing, debt financing allows an entrepreneur to make key strategic decisions and to keep and reinvest more company profits. Besides debt financing provides small business owners with a greater degree of financial freedom than equity financing. Debt obligations are limited to the loan repayment period, after which the lender has no further claim on the business, whereas an equity investor's claim does not end until his stock is sold (Okelo, 2015). Debt financing is easy to administer, as it lacks the complex reporting requirements that accompany some forms of equity financing. Additionally debt financing tends to be less expensive for small businesses over the long term than equity financing (Ahmad, 2012). Njeru (2015), avers that large firms had more long-term debt and small firms had more short-term debt. Owing to the problems associated with accessing alternative credit facilities, a large proportion of Kenyan manufacturing firms rely more on self-financing in terms of retained earnings. The implication therefore is that the firms do not have adequate credit to meet the needs at different levels of growth. Therefore, a finance gap exists for firms starting or wishing to expand

In a study of Jordian Insurance Companies Yassin (2012), discovered that Leverage, liquidity and firm size have a positive statistical effect on the financial performance. Besides, Coad (2008) analyzing a large longitudinal panel of French manufacturing firms found a positive and statistical relationship between firm growth and financial

performance. Afza and Hussain (2014) study on capital structure for firms in Automobile, Engineering, Cable and Electrical Goods Sectors in Pakistan revealed that firms with sound liquidity position and large depreciation allowances used retained earnings, followed by debt financing for growth while equity financing was considered as a last resort. The results supported the Static Tradeoff Theory and Pecking Order Theory.

Specifically, in most cases firms adjust their capital structure when debt levels are above-target leverage and below-target leverage as well (Byoun, 2012). Additionally, Borgia and Yan (2013) argue that capital structure is an important corporate decision because it could bring an optimal financing mix which could maximize the market value of the firm. Unless the dividend payout ratio is high, when a firm report high net profits, it is expected to have high retained earnings. Suffice to say that a good financial performance leads to a high retention.

2.4.3 Cost of Capital

From an investor's point of view a firm's cost of capital is the rate of return required by them for supplying capital for financing the enterprise. It is a vital aspect of good business planning and it reflects the opportunity cost of funds for investment in companies (Okelo, 2015). Cost of capital may be used to evaluate investment decisions as well as design a firm's debt policy. It represents a financial standard for allocating a firms funds, supplied by owners and creditors to the various investment projects in an efficient manner Capon *et. al*., (2008). Njuru *et al*. (2013) argues that various investment projects can be ranked depending on their internal rate of return.

Thus, given a rate of interest or cost of capital, an investor would choose a project whose internal rate of return exceeded the cost of capital. If investments were expected to earn a return below their cost of capital, investors would have a superior alternative for their funds. They could find other projects with the same expected return but lower risk, or

projects with the same risk, but a higher expected return. Cost of capital is primarily a risk measure, but it is also related to firm value and can be considered a key determinant of firm's value other than market and accounting performance measures. Value is created when the firm is able to enjoy a cheaper source of capital. In addition, the cost of capital is very important for a firm in order to assess future investment opportunities and to reevaluate existing investments (Okiro, 2014). The cost of equity for a firm is affected by several factors, some of which are related to characteristics of the firm itself, while others stem from the macroeconomic environment in which it operates. A study by Ahmad (2012) found that greater firm size and greater liquidity of a firm's stock are associated with a lower cost of equity.

Attar (2014) investigated the relationship between capital structure and corporate strategy of Saudi Arabian manufacturing firms. The results illustrated that the cost of servicing debt remained a significant factor that influences the capital structure decisions of Saudi manufacturing firms, despite the availability of cheap government financing. Differences in the cost of equity across firms can be affected by such variables as the degree of financial market segmentation, unexpected movements in exchange rates, inflation uncertainty, differences in personal taxes, and different legal and regulatory environments, including enforcement (Mariana, 2012).

Debt holders are exposed to the risk of default since a firm may default on its obligation to pay interest and principal (Okelo, 2015). A company may raise debt by borrowing funds from financial institutions or public deposits or debentures for a specified period of time at a certain rate of interest. The debt policy of a firm is influenced by cost consideration. Debt helps to save taxes, as interest on debt is a tax deductible expense. A firm financed by debt is under a legal obligation to pay interest and repay principal. Okelo (2015) argues that the higher the rate of return demanded by a firm's investors for the capital they provide to the firm, the more costly it is for a firm to finance itself. Secondly, the cost of capital is the rate that investors use to discount a firm's future cash

flows. The higher the cost of capital, the lower the present value of the firm's future cash flows, hence the higher the financial risk. Kungu (2015) avers that firms face several financing options, with internal finance being the least costly, debt financing next, and financing by issuing new equity the most expensive.

The preference stock dividends are paid to shareholders before common stock dividends are paid out. In the event of a company bankruptcy, preferred stock shareholders have a right to be paid company assets first. Preference shares typically pay a fixed dividend, whereas common stocks do not (Ahmad, 2012). And unlike common shareholders, preference share shareholders usually do not have voting rights.

Convertible preferred stock converts to common stock after a specific period of time. Conversion is either mandatory or voluntary, at a fixed price or market price at the time of conversion. Redeemable preferred stock can be bought back after a specific period of time, usually at a fixed rate of the issue price. Redemption is mandatory or voluntary, dependent on the specific terms of the stock, and usually only initiated by the issuer. Cumulative preferred stock implies that any dividends outstanding to preferred shareholders are carried forward and must be paid before any dividends can be paid to common shareholders (Aroni, 2015).

Preferred stock is a hybrid security with senior claim on fixed rate dividends relative to common stock. Moreover, preferred shareholders have senior claim on assets in the event of liquidation, and hence preferred stock is junior to debt, but senior to common equity in the capital structure (Berk, DeMarzo & Harford, 2012). Preferred stock is legally treated as equity, but as a financial instrument it has more in common with debt (Berk *et. al*., 2012). Like debt, preferred stock offers a fixed dividend (coupon), and is thus sensitive to changes in market interest rates. On the other hand, dividend payments are not considered a mandatory obligation, and hence failure to pay dividends does not constitute a default event. From an investor perspective, preferred stock is most similar

to debt when the issuing firm is financially healthy. When the issuing firm's financial stability weakens, preferred stock becomes more similar to equity, as the risk of failure to meet the obligations on the security increase.

2.4.4 Fiscal Tax incentives

Taxation performs an important function in economy policy by generating income for governments to finance public services, increase productivity, improve the overall quality life of people, enhance investment climates and facilitate growth. Tax is an important source of fund for development of the economy and provision of social services (Olaleye, 2016). For the tax system to be efficient and effective, the tax policy needs to be favoring the tax payers. It should be designed such that the tax rates are fairly rational.

Fiscal tax policies can be designed in such a way that they do not directly affect manufacturing firms. As such they need to be captured by the tax net. However, though legislations are necessary regulator for protection of the business environment and security of the economic agents, for establishment of the necessary social security regulations, they may also hamper compliance and the growth of business through additional expenditures and administrative obstacles (Muturi, 2015). Taxes increase the cost of running business and reduce the link between investment and the actual returns, thereby affecting economic development and growth.

Taxes should meet their commonly stated objectives that is, to raise substantial revenue for Government, to discourage consumption of certain potentially harmful products and to promote equity (Okelo, 2015). Kenyan tax structure has changed tremendously over the years. Tax reform is a change in the tax system of a country. Important changes in this area include the lowering of tariff rates and achieving horizontal and vertical equity through a wider spread of the burden as well as an improvement in the structure of the

tax administration for efficiency in tax collection. The elements of tax reform are the variables that are affected by a reform in the tax system of a country. They include, changes made to the rates of tax, introduction of new forms of taxes, changes made to the methods of assessment, the changes made to the structure of taxation, and the extensive reorganization of the institutions that administer taxes in the country (Njuru, 2013).

Finance experts agree that emerging nations must increasingly mobilize their own internal resources to provide economic growth. The most important instrument by which resources are marshaled is through the implementation of an effective tax policy. Currently, tax revenues play a vital role in Kenya's economic development. This is evidenced by the attention problems of taxation have received over the years (GOK, 20014). The Vision 2030 contains reforms in all areas of tax policy. They emphasize the need to raise more revenue without increasing the burden of taxation on those who are already contributing to the exchequer (Wawire, 2015). The tax measures contained in these documents consist of broadening the tax base to include additional sector activities and strengthen tax administration. These measures were adopted after the government realized that the present tax structure does not raise adequate revenues thereby encouraging domestic borrowing and seeking external finance, which are only temporary measures of deficit financing. Moreover, external funds can no longer be relied on due to donor conditions.

Governments undertake tax reforms to simplify the tax system, to address the equity question in the distribution of tax burden, to strengthen tax administration and to ensure revenue adequacy. Government should therefore do everything possible to increase public knowledge on tax matters (Namusonge & Biraori, 2014). Indeed, the drivers and emphasis of tax reforms will vary from country to country. Karingi *et al*. (2005) show that Kenya tax reforms emphasis has always been towards introduction of new taxes or new rates of existing bases, the need to widen tax bases and reduce exemptions, as well

as introducing more stringent administrative changes to seal loopholes and appropriate sanction measures.

Muturi and Thiga (2015) studied the tax impact on corporate financing decisions. They concluded that changes in marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. Corporate income tax has an important impact on debt-equity choices. Although, the tax shield proposition suggest that the firms facing higher marginal tax rates should use higher debts. Njuru (2015) argues that tax shield proposition does not apply if firms have interest free liabilities. Okelo (2015) postulates that the use of debt will improve a company's value as high as tax shield. Therefore, companies with a high financial performance tend to have a high debt level, probably long term debt, in order to get benefit from the tax shield. Other studies indicate a positive and statistically significant relationship between tax and leverage. The positive coefficient could be attributable to the additional tax levied on manufacturing firms. Manufacturing firms, therefore, have an incentive to employ more debt capital given that interest charges are tax deductible. Thus, successive tax increase would be associated with increasing debt capital (Wawire, 2015). A study by Ojeka (2011) on tax policy and growth of SMEs in Nigeria revealed a negative relationship between taxes and the business ability to sustain itself and to expand. The tax should be an encumbrance to the firm.

Njuru (2013) avers that taxes have negative implication on cost of production and on profitability. Namusonge *et, al.* (2014) postulates that tax law should be simplified to lower both compliance and administrative costs, to reduce uncertainty faced by taxpayers and to improve levels of voluntary compliance. Tomlin (2013) argues that the resources companies direct towards tax compliance are resources that could otherwise be used for reinvestment, facilitating future growth. Hence, there is a belief that taxes and a complex tax system put disproportionate pressure on businesses. High tax rates

and complex tax legislations can lead to various tax problems. This includes tax evasion and tax fraud.

Fiscal tax incentives are considered as a tool that is used to accelerate economic growth and even development. Ifueko (2014) further noted that fiscal tax incentives are the underlying basis is to ensure overall growth of the economy and even development of all sectors. Fiscal tax incentives are tax reduction given to encourage or support investments. Taxes increase the cost of running business and reduce the link between investment and the actual returns, thereby affecting economic development and growth.

The government uses tax system for policy goals other than raising tax revenue. For example fiscal tax incentives are an appropriate policy instrument to use in attracting investments. A fiscal tax incentive is a deduction, exclusion or exemption from a tax liability offered as an enticement to engage in a specified activity such as investment in capital goods for a specified period (Olaleye, 2016). Fiscal tax incentives are offered to taxpayers by the government as an enticement or encouragement to engage in specific course of action intended to encourage investment in certain sectors or geographical areas. Additionally fiscal tax incentives can be used in promoting investment in certain economic zones initially not very popular to investors. This is applicable in a country where the government extends tax holidays, tax exemptions, remissions, investment allowances and tax credits to the investors in specified sectors of the economy or regions (Njuru, 2013). In Kenya tax incentives is used as a policy tool to attract increased foreign direct investment through lower tax burdens, encourage private sector participation in economic and social programs where government plays a main role and promote high technology industries that have a positive externality. Special economic zones referred to as Export Processing Zones (EPZs) are examples of how tax favours can be used to encourage private investment (Wawire, 2015).

Kenya offers various types of fiscal tax incentives as provided for in the Income Tax Act CAP 470, The VAT Act CAP 476 and the EPZs Act CAP 517. These incentives are mainly fiscal incentives and they determine the fiscal policy adopted to affect macroeconomic activity in a country (UNCTAD, 2016). Fiscal tax incentives are mainly offered to encourage some favored economic activities by increasing the after-tax rate of return on the investments and to compete favorably with other countries offering the same.

Fiscal tax incentive is a deduction, exclusion or exemption from tax liability offered as an enticement to engage in a specified investment activity (Njuru, 2015). The most dominant fiscal tax incentives in Kenya take the form of investment allowances, tax credit, special economic zones, reduced tax rates and tax exemption. Specific fiscal tax incentives offered include capital allowances, capital market incentives, EPZ benefits and tax remissions for exports. For fiscal tax incentive to be justifiable, the benefits derived from any tax incentives should be significantly higher than the cost of administering them.

Fiscal tax incentives are associated with some negative aspects as they make the tax system less efficient and less predictable. Additionally fiscal tax incentives for foreign investors shift the burden of taxation to immobile factors of production such as labour. Fiscal tax incentives are also seen to favor new producers over existing producers. Moreover, tax incentives are seen to erode revenue bases, complicate tax laws and may contribute to bloated government. Muturi (2015) argues that there should be more transparency around fiscal tax incentives and whether the government objective of attracting investment is being realized. Kenya offers various types of fiscal tax incentives as provided for in the Income Tax Act CAP 470, The VAT Act CAP 476 and the EPZs Act CAP 517. These incentives are mainly fiscal incentives and they determine the fiscal policy adopted to affect macroeconomic activity in a country (UNCTAD,

2017). Tax incentives are mainly offered to encourage some favored economic activities by increasing the after-tax rate of return on the investments (Wawire, 2013).

Fiscal tax exemption refers to a case where a good or service is not chargeable to tax under the law while zero rating refers to a case where the tax rate applicable for the good or service is zero. There are various exemptions and zero rating regimes in Kenya. Certain goods, services, bodies and individuals have the tax exemption or zero rated status under the VAT Act. The government also exempts certain classes of incomes from corporation tax. A party either individual or institution can also apply to the National Treasury for tax exemption or tax remission on specific circumstances and the Minister has the power to grant such requests if there is adequate justification. Companies that import raw materials and manufacture goods for export can also get tax remission status for the exports under the Tax Remission Exemption Office arrangement. These companies already have a tax advantage since the materials imported usually do not attract any customs duty or value added tax except industrial sugar which is taxed at a low rate of 10% as customs duty. The disadvantages of giving tax exemptions, remissions and zero rated status for exports is that it results in substantial leakage of untaxed goods into the domestic market thus eroding the tax base.

The law, under the income Tax Act provides for various investment allowances. These incentives are mainly intended to encourage investments in the country and since the year 2010, the government even sought to encourage investments outside the main cities by giving higher incentives to enterprises setting up businesses in such areas (Wawire, 2015). Though the main goal is to increase investment and improve economic standards, the system is prone to abuse and requires constant monitoring to ensure its efficiency.

Investment Deduction is given to companies upon construction of a building and on the purchase and installation of new machinery used for the purposes of manufacture or for the following ancillary purposes: generation, transformation and distribution of

electricity; clean-up and disposal of effluents and other waste products; reduction of environmental damage; water supply or disposal; and workshop machinery for the maintenance of the machinery. Currently companies claim investment deduction at 100% and those who invest outside the three cities in Kenya claim at 150%, (ITA, 2016). Industrial Building deductions at a rate of 2.5%. The cost includes capital expenditure incurred on the construction of an industrial building used for business and any civil works or structures if they contribute to the use of the building including: roads and parking areas; railway lines and related structures, water, industrial effluent and sewage works; communications and electrical posts, other electricity supply works; and security walls and fencing (Njuru, 2015).

The Kenya Revenue Authority implements the issuance of the fiscal (tax) incentives in collaboration with other authorities. The tax incentives are mainly in form of capital deductions. These deductions are made at the point of computing the gains or profits of a person /company for any year of income (Njuru, 2013). Capital deductions are divided into: industrial building deductions, farmworks deductions, wear and tear deductions and investment deductions. industrial building deductions are incurred by a person on the construction of an industrial building to be used in a business carried out by them or their lessee. This allowance is claimed by the person who incurred the capital expenditure and the building must be used for the purpose of the business only so as to enjoy the industrial building deduction (Wawire, 2013). Tax remissions export office is a reprieve for manufacturers who produce to export their products. This is achieved by remitting duty and VAT on raw material used in the manufacture of the goods for export. For the purpose of this scheme, the manufacturer includes any process by which a commodity is finally produced. These include assembling, repacking, bottling, mixing, blending, grinding, cutting, bending, twisting, joining or any other similar activity (Muturi, 2015).

The capital deduction is granted on a straight line basis. For Industrial Building 2.5% capital deduction applicable within the first Forty (40) years of operation. Hotels 10% capital deduction applicable within the first 10 years of operation. Hostels and Educational Buildings certified by the commissioner 50% capital deduction for the first 2 years of operation. These buildings include; Laboratory, Workshops, Accommodation halls, classrooms, dining halls/cafeteria, other halls for use by the students, administration building, sporting facilities and staff quarters (Wawire, 2013). Building in uses for training of film producers, actors or crew 100% capital deduction. Rental residential building approved by the minister in a planned developed area 25% capital deduction. Commercial building 25% capital deduction in a developed area. Farm works Deductions refers to expenditure by the owner or tenant of agricultural land on construction of farm works. Wear and tear deductions is an allowance that is granted to the investor to cater for wear and tear on machinery (Muturi, 2015).

Heavy taxation, especially direct taxes, discourages investors. It is therefore imperative to determine an optimum level of income tax rate that maximizes tax revenue and ensures maximum investment (Karingi *et al*., 2014). Indirect taxes on imports can be used to protect local infant industries from unhealthy competition posed by cheap imports. This promotes investment in the industries that produce import substitutes. However, if indirect taxes are imposed on inputs and capital used by local producers, it will increase cost of production, which discourages investors such as manufacturing firms (Njuru, 2013).

2.4.5 Investment Practice

Investment is the amount of capital spent on increasing a firm's assets and is critical for long-run labor productivity and living standards. Investment decision is the firm resolution to invest its current funds most efficiently in the long-term assets in anticipation of an expected flow of benefits over a series of years it includes expansion,

acquisition, modernization and replacement of the long-term assets, sale of a division or business (divestment), change in the methods of sales distribution, an advertisement campaign, research and development programme, employee training and acquiring shares (Kungu, 2015). Aroni (2015) avers that an efficient allocation of capital is the most important finance function in the modern times. It involves decisions to commit the firm's funds to the long term assets. Namusonge, (2004) postulates that financial institutions in Kenya, can play a vital role in assisting firms to acquire production, investment and minor change capabilities to stay competitive.

Investment decisions are of considerable importance to the firm since they tend to determine its value by influencing its growth, profitability and risks. Investment is able to stimulate economic activity and long-term economic growth by expanding the capacity for production of goods and services. Investment decisions require special attention because of the following reasons: they influence the firm's growth in the long run, they affect the risks of the firm, they involve commitment of large amount of funds, they are irreversible or reversible at substantial loss and they are among the most difficult decisions to make (Okiro, 2014).

Fiscal tax incentives perform an essential role in promoting investment behavior but this role may be hampered in the absence of political and economic stability. Lower tax can reduce the amount of tax collected but lower tax would improve the inflows of investments in the host country and invariably more tax would be collected from these new investments. New shares represent claims on the firm’s future profits, they dilute the claims of existing shareholders in direct proportion to the amount of new stock issue. Thus, owners of the firm incur a cost in terms of reduced market value of their shares and dilution of their share of future profits. Additionally, higher level of investment is desirable for firm growth as fresh investment could produce additional output and is able to generate employment. Corporate investment decisions, generally taken at the Board level, are influenced by the firm specific factors, such as financial position of the firm

and macro economic conditions of the economy. Companies must earn a good return from their investments that will enable the board of directors make a good dividend payout. Profitability refers to a company's ability to generate an adequate return on invested capital (Kungu, 2015). Investment decision of a firm is defined to include not only those investments that create revenues and profit, but also those that save money by reducing expenditure.

Mariana (2012) averts that sales growth is an important determinant of a firm's investment decisions. Manufacturing is crucial for the robust growth of the economy, for exports and for generating substantial relevant employment. Manufacturing is a force multiplier and investment in manufacturing yields four times the effect on GDP growth (Rissa, 2014). Okiro (2014) postulates that managers should invest in profitable ventures that will be of benefit to the shareholders. If they decide to invest in non-profitable projects and they are unable to pay the interest due to debt holders, the debt holders can force the firm to liquidation and managers will lose their decision rights or possibly their employment.

Investors measure overall company performance in order to be able to make right investment decisions. The financial performance measures are assumed to be of primary interest to shareholders as they entrust their money to managers who are responsible for the application of capital but may have no incentives to increase shareholders value (Ongore & Kusa). Okelo (2015) observes that the goal of management should be to maximize the market value of the company's shareholder equity through investments in an environment where outcomes are uncertain. A proper balance between risk and return should be maintained to maximize the value of a firm's shares (Njoroge, 2010).

Government securities comprise Treasury bills, treasury bonds and long term stocks. Domestic borrowings by the government affects credit availability to the private sector since government and private sector compete for the limited resources in the domestic

market (Mwangi, 2016). The availability of domestic instruments can provide savers with an attractive alternative to capital flight as well as lure back savings from the non-monetary sector into the formal financial system.

When government borrows domestically, they utilize domestic private savings, hence this savings are no more available for private sector lending and as a result the pool of loanable funds reduces (Mwangi, 2016). Abbas and Christensen (2007) argue that this raises the cost of capital for private borrowing and in turn leads to a reduction of private investment demand and capital accumulation.

2.4.6 Financial Performance

Financial performance is a measure of how well a firm can use assets from its primary mode of business and generate revenues. It is the process of measuring the results of a firm's policies and operations in monetary terms (Mwangi, 2016). It identifies the financial strengths and weaknesses of a firm by establishing relationships between the items of the financial position and income statement. The term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure firms' performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (Njeru, 2012). Lyria *et al.* (2017) argues that financial Performance can be measured by return on investment, competitive position, market share growth, overall profitability, sales volume growth, and cash flow and profit improvement.

Measures of firm performance would be a combination of both financial and non-financial measures. Financial measures can be represented by profit, revenue, return on investment (ROI), return on equity (ROE) and earnings per share (EPS) (Omar, 2017).

They have the advantage of being objective, simple and easy to understand. However, they have the drawback of being not easily available and being historical, therefore offering only lagged information. They can also be subject to manipulations, and incompleteness (Ng'ang'a, 2017). Non-financial measures include number of employees, revenue growth, revenue per employee, market share, customers' satisfaction and employees' satisfaction. The non-financial measures have the disadvantage of being subjective (Uzel, 2015). Owing to the limitations of the financial and non-financial measures, it has become the generally acceptable standard to employ a hybrid approach combining both financial and non-financial measures of performance.

The independent variables are both subjective and objective measures. Although subjective measures offer useful insight into the business environment, they have some shortcomings. Firstly, subjective measures are firm perceptions of the business environment and this could reflect idiosyncratic differences in the degree of optimism or pessimism of the respondents (Omar, 2017). Also, answers could be influenced by the experience and performance of the firm (Omar, 2017). In light of this, it is important to use objective measures to examine how the independent variables influence the dependent variable.

Quantitative measures of firm performance include profitability measures such as gross margin, net margin for example return on sales, return on equity, economic value added, return on equity less cost of equity and return on capital employed. Other measures of performance include cash flow measures such as free cash flow over sales and growth measures for example historical revenue growth. Ideally, forward-looking measures such as expected profitability, cash flow and growth should be used to measure a firm's performance (Kiaritha, 2015).

Management researchers prefer accounting variables as performance measures such as return on equity (ROE), return on investment (ROI), and return on assets (ROA). Other

common measures of performance include Earnings per share (EPS); Price/Earning (P/E) ratio and net interest margin (NIM). The NIM variable is defined as the net interest income divided by total assets. Okiro (2014) use net interest margin and before tax profit/total assets as measures of financial performance. Earlier studies typically measure accounting rates of return. These include: Return on Investment (ROI), return on capital (ROC), return on assets (ROA) and return on sales (ROS). The idea behind these measures is perhaps to evaluate managerial performance-how well is a firm's management using the assets to generate accounting returns per unit of investment, assets or sales (Memba, 2011). The problems with these measures are well known. Accounting returns include depreciation and inventory costs and affect the accurate reporting of earnings. Asset values are also recorded historically.

Return of total assets (ROA) reflects how well management uses the firms real investments resources to generate profit (Ongore, 2013). Return on assets indicates how profitable a business is relative to its assets. It measures the ability of the firm management to generate income by utilizing company assets at their disposal. Nyabwanga, Ojera, Otieno and Nyakundi (2013) assert that return on assets must be positive and the standard figure for return on assets is 10% - 12%. The higher the ROA the better because the business is earning more money on the capital invested. ROA takes into consideration the return on investment (ROI) and indicates the effectiveness in generating profits with its available assets.

Firm performance is concerned with the overall productivity in an organization in terms of stock turnover, customers, profitability and market share (Uzel *et.al*, 2015). When corporate profitability increases, the earnings from the production and operation would be much, and the company has more funds to return the due debt. Profitability refers to the profitability level of enterprise production and management. The more corporate profitability is, the more profits a firm gets from the production and operations, the more able to guarantee of debt due for repayment (Fu Gang, 2012). The amount of profit can

be a good measure of performance of a company. So profit is used as a measure of financial performance of a company as well as a promise for the company to remain a going concern in the world of business (Agha, 2014). Migiro (2013) highlights performance measurement as one of the tools which helps firms in monitoring performance, identifying the areas that need attention, enhancing motivation, improving communication and strengthening accountability.

It is widely believed that firm growth and profit rates are related to each other (Coad, 2010, Goddard *et. al.*, 2014). There are a number of theoretical claims that growth rates have a positive impact on profit rate. Firm growth could lead to an increase in firm size resulting to larger firms which could benefit from economies of scale and in turn enhanced profits. Sales growth shows the rate of increase in a company's sales per share, based on several periodic time periods, and is considered the best gauge of how rapidly a company's core business is growing (Javed & Akhta, 2012). Cash flow tells you how much cash a business is actually generating in its earnings before depreciation, amortization, and noncash charges. Sometimes called cash earnings, it's considered a gauge of liquidity and solvency. Cash-flow growth shows the rate of increase in a company's cash flow per share, based on several time periods.

Measures of financial performance include return on sales which reveals how much a company earns in relation to its sales, return on assets determines an organization's ability to make use of its assets and return on equity reveals what return investors take for their investments. Asset turnover refers to the ratio of sales to average total assets of the firm. It measures the organizations' efficiency in deploying and utilizing its assets to generate sales revenue (Ongore & Kusa, 2013). Sales revenue has an effect on financial performance and since asset turnover is related to sales, it can therefore be concluded that asset turnover also has an impact on the eventual financial performance of the organization.

Profitability of the firm is net income to average assets. Holding margins and other operating expenses constant, it can be predicted that the higher the asset turnover, the higher the profitability of the firm (Mwirie & Birundi, 2015). A study by Ongore, (2013) on determinants of banks financial performance concluded that quality of assets has a significant influence on performance. Total assets can have a positive effect on financial performance because larger firms can use this advantage to get some financial benefits in business relations. The advantages of financial measures are the easiness of calculations and that definitions are agreed worldwide.

Traditionally, the success of a manufacturing system or company has been evaluated by the use of financial measures (Migiro, 2013). Cornett *et al.* (2008) avers that analyzing financial statement using ratio analysis is one way of identifying weaknesses and problem areas of firms as well as evaluating financial performance. Brigham & Ehrhardt (2015) commenting on analysis of financial statements, observe that financial statement analysis involves comparing the firms performance with that of other firms in the same industry and evaluating trends in the firm's financial position overtime. They note that financial ratios provide a useful tool to evaluate financial statements and single out return on equity (ROE) as the most important accounting ratio.

2.5 Research Gaps

The literature review was generally good as previous studies, historical context, theoretical analysis and empirical review on the study were all emphasized. Research topic and possible hypothesis were examined including theoretical foundation on financial performance. However, the authors failed to identify possible limitations to previous studies. Prior research was well grounded on financial performance. Their findings appear to align reasonably well with those of earlier investigations. There are contextual research gaps in the reviewed literature as most of the reviewed studies have been undertaken to analyse productivity gains in the whole economy, but few studies

have tried to analyse the determinants of financial performance at the firm level. Furthermore, very few studies exist in the local context. The review of literature also presented the methodological research gap as the methodologies used by the previous studies vary.

Githae (2012) examined the effect of technology adoption on performance of youth-led micro and small enterprises. Memba (2011), investigated the impact of venture capital finance on performance of small and medium enterprises in Kenya. The literature review affirmed that much of the empirical studies undertaken in the topic under study had been in the SMEs sector or in the banking sector (Namusonge, 2014; Njeru, 2015). Hence, there was need to focus the study in other sectors like manufacturing. Kung'u (2018) argued that capital intensity is statistically significant in explaining financial performance of multinational manufacturing firms. However, the study concentrated only on the issue of capital intensity and foreign direct investment and failed to address other determinants of financial performance.

Okiro (2016) argues that there is a significant relationship between capital structure and financial performance. Studies on financial performance have focused on capital structure (Ebimobowei, 2015; Javed & Akhta, 2015). These studies were very relevant from a financial leverage standpoint. However a focus on financial performance for comparison with other manufacturing firms would be more useful. Rotich and Namusonge (2016) investigated the effects of relationship banking and entrepreneurial orientation on financial performance of manufacturing firms in Kenya. They concluded that relationship lending, relationship monitoring, bundle of products and risk sharing positively influences financial performance of manufacturing SMEs. However, the study failed to address the issue of determinants of financial performance.

Most of the past research studies evaluated the performance of the Kenyan manufacturing sector within the boundaries of trade liberalization or technological

adoptability. Besides, literature reviewed has established that most researches have examined the relationship between capital structure and financial performance of manufacturing firms mostly in a few developed countries (Njeru 2015, Amakom 2012). For example, there appears to be little to no presence of studies that have compared the performance of the Kenyan manufacturing sector with that of other developing countries. This gap in the literature should be filled in by future researchers.

2.7 Summary

The authors generally agree that financial performance is affected by access to finance, capital structure, cost of capital, tax incentives and investment practice. However other variables that may affect financial performance include firm size and financial resources. Company performance is the measurement for what had been achieved by a company which shows good condition for certain period of time. The purpose of measuring the achievement is to obtain useful information related to flow of fund, the use of fund, effectiveness, and efficiency. Our ideal measure of firm performance would be a combination of both financial and non-financial measures. Financial measures can be represented by profit, revenue, returns on assets etc (Santos and Brito, 2012; Ng'ang'a 2017). They have the advantage of being objective, simple and easy to understand. However, they have the drawback of being not easily available and being historical, therefore offering only lagged information. They can also be subject to manipulations, and incompleteness (Uzel, 2015). Non-financial measures include number of employees, revenue growth, revenue per employee, and market share. The non-financial measures have the disadvantage of being subjective (Ng'ang'a, 2017).

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The chapter presented the research design, model specification and implementation, target population, data sampling and sample size, data collection and analysis methods that were adopted to address the research questions discussed previously and test the hypothesis postulated.

3.2 Research Design

Research design represents the methods to be adopted for collecting the data and the techniques to be used in their analysis. Kothari (2012) states that research design is the arrangement of the conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research design is the blue print for the collection, measurement and analysis of data and includes an outline of what is to be done from writing the hypothesis and its operational implications to the final analysis of data. It implies how research objectives will be reached and how the problem encountered in the research will be tackled.

The study adopted both cross-sectional research design and descriptive survey design. Cross-sectional studies are designed to collect data once over the same period of time, the data is analyzed then reported while descriptive survey design is designed to collect data from a sample with a view of analyzing them statistically and generalizing the results to a population (Kihara, 2016). Using cross-sectional design, the researcher was able to obtain research data over the same period of time. While descriptive research design was used to establish the cause and effect relationship between the dependent variable (Firm Performance) and the independent variables. The methodology used in this study compared favorably with that of previous empirical studies (Ng'ang'a 2017,

Sasaka 2017). In all these studies, the quantitative approach by use of surveys done by administration of questions was the primary methodology employed in studying financial performance. This study used similar approach to enhance comparability of findings

3.3 Target Population

A population is defined as total collection of elements about which we wish to make some inferences (Kungu, 2015). Other scholars (Kilungu, 2015), define population as a large collection of subjects from where a sample can be drawn. Kothari (2011) argues that a population is all items in any field of inquiry which is also known as the universe. Sasaka (2016), asserts that a target population is the group of individuals to whom the survey applies. It is the collection of individuals about whom conclusions and inferences are made. Mugenda & Mugenda (2012) term target population as that population to which a researcher wants to generalize the results of his study. The study focused on manufacturing firms in Kenya (KMA, 2016). The study's target population was 741 manufacturing firms operating in Kenya. The respondents were managers of manufacturing firms registered with KAM and were in KAM's 2016 directory. The study focused exclusively on the manufacturing firms that deal with transformation of raw materials and semi-finished products into more complex form or for the final consumers. Those in services and consultancy and fresh produce were omitted. The 741 firms operated in twelve major industries as shown in table 3.1.

Table 3.1: Target Population

Category of Manufacturer	Target Population
Building, Mining & Construction	29
Chemical & Allied Sector	79
Energy, Electrical & Electronics	45
Foods & Beverages Sector	187
Leather & Footwear Sector	9
Metal & Allied Sector	83
Motor Veh. Assembly & Accessories	51
Paper & Board Sector	74
Pharmaceutical & Med. Equip. Sector	24
Plastics & Rubber Sector	77
Textile & Apparels Sector	64
Timber, Wood & Furniture Sector	19
Total	**741**

3.4 Sampling Frame

The sampling frame for this study consist of all firms in Kenya registered with Kenya Association of Manufacturers (KAM), 2016 as they appear in the KAM listing manual (KAM,2016). Ng'ang'a (2017) refer to a sampling frame as the technical name for the list of the elements from which the sample is chosen from while Mugenda and Mugenda (2009) and Kothari (2012) define the term sampling frame as a list that contains the names of all the elements in a universe. The study was restricted to manufacturing firms within Kenya. The manufacturing firms were stratified into: Building, Mining and Construction: Chemical and Allied Sector: Energy, Electrical and Electronics Sector: Foods and Beverages Sector: Leather and Footwear Sector: Metal and Allied Sector: Motor Vehicles Assemblers and Accessories Sector: Paper and Board Sector: Pharmaceutical and Metal Equipment Sector: Plastic and Rubber Sector: Textile and Apparels Sector and Timber, Wood and Furniture Sector.

3.5 Sample and Sampling Technique

Kilungu, (2015) outlined the procedure for drawing a sample as consisting of the following steps: defining the population, identifying the sampling frame, selecting a sampling procedure, determining the sample size, selecting the sample units and collecting data from the sampled units. Sampling from the population is an important process in research because it can be quite impractical to survey the entire population Saunders, Lewis & Thornhill (2009). The study sample was based on manufacturing firms in Kenya.

The study adopted multistage sampling technique to select the sample size. Multistage sampling involves dividing the population into groups or clusters (Nafiu, 2012). The population was divided into two clusters that is Nairobi and Mombasa. Additionally, stratified random sampling was used to sample the 741 firms into twelve stratas

according to (KAM 2016) directory classification of manufacturing firms. Purposive sampling was then applied to select a mangers sample from the stratified companiessince they had the require responses for the study. Purposive sampling technique involves selecting certain units or cases based on a specific purpose rather than randomly (Githaiga, 2019). Proportional allocation was used to determine the size of each sample for different strata (Saunders *et al.*, 2009). Hence, the study used purposive sampling to select the 252 managers of departments from a target population of 741. The following formula used by Saunder *et al.* (2009) was adopted to determine the sample size.

$$n = \frac{p\% \times q\% \times \left(\frac{Z}{e\%}\right)^2}{}$$

where n = the minimum sample size required

p= No. of target population that conforms to the characteristic of the sample required

q= No. of target population that don't conform to the characteristic of the sample required

Confidence level required at 95%

e% =Margin of error at 5%

Using the above formula, a study sample of 252 companies was derived as laid on appendix VII. The study used sample size determination formula by Saunder *et al.*

(2009) to calculate the sample size as shown in appendix IV. The sample size is shown in table 3.2.

Table 3.2: Sample Size

Category of Manufacturer	Target Population	Percent	Sample size
Building, Mining & Construction	29	4	10
Chemical & Allied Sector	79	11	28
Energy, Electrical & Electronics	45	6	15
Foods & Beverages Sector	187	25	63
Leather & Footwear Sector	9	1	2
Metal & Allied Sector	83	11	28
Motor Veh. Assembly & Accessories	51	7	18
Paper & Board Sector	74	10	25
Pharmaceutical & Med. Equip. Sector	24	3	8
Plastics & Rubber Sector	77	10	25
Textile & Apparels Sector	64	9	22
Timber, Wood & Furniture Sector	19	3	8
Total	**741**	**100**	**252**

3.6 Data Collection Methods

Data collection methods in this study included both primary and secondary data.

3.6.1 Primary Data

The primary data was collected through a self-administered semi-structured questionnaire as shown in appendix I. The questionnaire contained closed-ended questions and a customized five-part Likert scale which was used to collect data on the variables from the departmental heads. Respondents were asked to indicate agreement with each item. Each item had a five-point scale ranging from1 = strongly disagree, 2 = disagree, 3 = indifferent, 4 = agree, and 5 = strongly agree.

A structured questionnaire is a list of questions to be answered by the respondents. The questionnaire was created with the purpose of understanding manufacturing firm's behavior and analysis of the interaction between independent and dependent variables which served the research objective. The questionnaires had been preferred because it had standard questions which could be administered to a large number of respondents in Kenya within a short time and at a minimal cost.

The questionnaire was divided into four main sections. The first section included the demographic information of the respondents, while the second part covered respondent's characteristics including experience in manufacturing, proportion of investment in manufacturing, and investment knowledge. The remaining sections covered the independent variables factors. The extent to which each variable, among the five broad categories, influences the financial performance was measured using a response scale of 5 for very high to 1 for very low.

3.6.2 Secondary Data

Secondary data was acquired through analysis of companies published accounts, from web sites of different manufacturing firms, from manufacturing firms' offices and from the registrar of companies. The data was collected for span a period of five years covering 2012 to 2016. The reason to restrict the period of the study to five years was that the latest data was readily available for this period.

3.7 Data Collection Procedures

The data was collected by use of a questionnaire. The research instrument was conveyed to the respondents through the drop and pick technique. A covering letter with each questionnaire explained the objectives of the study and assured respondents' confidentiality and urged them to participate in the study. The respondents were requested on their willingness to participate in the survey and provide the data. The questionnaire was administered to individuals of diverse characteristics, spread across various sectors in the economy, who have manufacturing firms in Kenya. The questionnaire was used to obtain primary data from the sampled respondents. Telephone costs was prohibitive, which ruled out the possibility of carrying out telephone interviews. Postal surveys were also ruled out because postal services in Kenya are unreliable and would, therefore, affect the response rates.

Secondary data was collected from financial statements using a secondary data collection sheet as shown in appendix II. The purpose for collecting secondary data was to cross validate the primary data collected. The data was extracted from annual reports of manufacturing firms for the period 2012 to 2016. Important figures from statements of comprehensive income and financial position were recorded to facilitate computation of parameters of financial performance such as return on assets and profitability. To

supplement published annual financial statements, other important quarterly business journals, manuals and in-house magazines were used.

3.8 Pilot Study

A pilot study is a small scale version, or trial run, done in a preparation for a major study. Ng'ang'a (2017) states that the purpose of a pilot study is not so much to test research hypothesis, but rather to test protocols, data collection instruments, sample recruitment strategies, and other aspects of a study in preparation for a major study. Piloting involves testing the validity and reliability of the data collection instrument and in this case the questionnaire. Nyabwanga *et al.* (2014) asserts that the respondents for a pilot study must come from outside the sample selected from the main sample of the study.

A pilot study involving 25 manufacturing firms in Mombasa county was conducted to test the reliability of the questionnaire, if need be necessary modifications were made, before administering the questionnaire to the final respondents. Cronbach's alpha (Cronbach, 1951), was used to determine the internal consistency or average correlation of independent variables to measure their reliability. A high alpha value of above 0.7 was used to suggest that the variables had a relatively high internal reliability. The 25 firms selected firms formed 10% of the target sample. The pilot test sample was within the recommended range as the rule of the thumb suggests that 5% to 10% of the target sample should constitute the pilot test (Ng'ang'a, 2017).The intention of the pilot study was to ascertain the validity of the questionnaire, and if improvements were required, this was incorporated before the final questionnaire was distributed to the actual respondents.

3.8.1 Reliability

Reliability is the measure that the data provided is consistent with what previous research literature has said or similar research with a different group of participants yields a similar set of data (Johnson & Harris, 2002; De Vaus, 2002). This means that if people answered a question the same way on repeated occasions, then the instrument can be said to be reliable. There are three different techniques for assessing reliability in data. These are test-retest, split-half and internal consistency. Test-retest method of assessing reliability of data was not found to be suitable for this study because it involves administering the same instrument twice to the same group of subjects, with a time lapse between the first and second test.

In this study, internal consistency method was used. The rationale for internal consistency is that the individual items should all be measuring the same constructs and thus correlates positively to one another. The most widely used measure for determining internal consistency is the Cronbach's coefficient alpha. The test of reliability was calculated using the SPSS (Statistical Package for Social Science). Cronbach's alpha (Cronbach, 1951), was used to determine the internal consistency or average correlation of independent variables to measure their reliability. By using this method, the researcher measured the correlation between each item in the questionnaire and others.

The Cronbach's alpha coefficient ranges between 0 and 1 (De Vaus, 2014). A reliability coefficient of zero indicates that the test scores are unreliable. On the other hand the higher the reliability coefficient, the more reliable or accurate the test scores. For social science research purposes, tests with a reliability score of 0.7 and above are reliable (Kurpius and Stafford, 2011). The reliability of the questionnaire was tested using the Cronbach's Alpha correlation coefficient with the aid of SPSS software.

Okelo (2015) postulates that Cronbach Alpha value greater than 0.7 is regarded as satisfactory for reliability assessment. As shown in Table 3.3 Cronbach alpha values for

all the variables; capital structure, cost of capital, access to finance, fiscal tax incentives and investment practice were greater than 0.7. From these findings it can be concluded that the constructs measured had the adequate reliability for the subsequent stages of analysis since all the Cronbach Alpha values were greater than 0.7.

Table 3.3: Cronbach Alpha for Reliability Assessments

Variables	**Cronbach Alpha**	**No of items**	**Comment**
Access to finance	0.832	9	Valid
Capital structure	0.841	9	Valid
Cost of capital	0.834	9	Valid
Fiscal tax incentives	0.816	9	Valid
Investment practice	0.846	9	Valid
Financial performance	0.872	9	Valid
Overall Cronbach Alpha for 54 items	0.8435	54	Valid

3.8.2 Validity

Validity ensures that the research tool is measuring what the researcher intends to measure (Kilungu, 2015). There are three methods to measure validity of a research tool, which are; content validity, criterion validity and construct validity. Content validity was used in this study. Content validity is a measure of the degree to which data collected using a particular instrument represents the content of the concept being measured (Mugenda & Mugenda, 2009). To ensure content validity, the researcher carried out a

thorough review of the literature in order to identify the items required to measure the concepts, for example, capital structure, cost of capital and access to finance. Evidence of validity is reported as validity coefficient, which can range from 0 to +1.00. The validity scores approaching 1 provide strong evidence that the test scores are measuring the construct under investigation (Kurpius & Stafford, 2011).

The validity of the questionnaire was tested and enhanced by giving the questionnaire to three senior officials from the Kenya Association of Manufacturers and three manufacturing firm's managers who were able to assess the validity of the statements on the questionnaire. Their views and responses about the questionnaire were reviewed and were used to improve the study instruments where appropriate.

3.9 Data Analysis and Presentation

Data analysis refers to the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the investigation (Kiaritha, 2015). To determine the patterns revealed in the data collected regarding the selected variables, data analysis was guided by the aims and objectives of the research and the measurement of the data collected. The data collected was quantified and coded. The statistical analysis to be employed in the study included descriptive statistics, correlation analysis and multiple regressions.

3.9.1 Qualitative Analysis

Qualitative research was used to provide deep interpretation of the research problem by exploring causal relationships among the variables selected in the study. Semi-structured interview was used to collect data with an interviewer-administered questionnaire. Qualitative data collected through interviews was first edited and response rate calculated. Descriptive statistics such as mean, standard deviation and frequency

distribution was used to analyze the data. Descriptive statistics were used to summarize the data generated by the survey in terms of the distribution of responses for each variable and the relationships between variables. Such statistics measures the point about which items have a tendency to cluster and also describes the characteristics of the data collected. Data was presented in form of tables (Kothari, 2012).

Analysis of Variance (ANOVA-F test) which determines the effect of independent variable on the dependent variable was carried out based on which the set hypothesis was accepted or rejected. The ANOVA test was chosen as the study presumes that the population being tested was normally distributed, have equal variances and the samples were independent of each other. The decision to accept or reject the research hypothesis was based on the p-values.

3.9.2 Quantitative Analysis.

Quantitative research was used to describe, explain and quantify relationships between different variables. The aim of researcher was to study the relationship between an independent variable and a dependent variable in the population. The data analysis was done using Statistical Package for Social Scientists (SPSS) version 24 to facilitate computation of descriptive statistics, multiple regression and Pearson correlation to get answers to the study questions.

Normality tests preceded data analysis. Normality tests are used to determine if a data set is well-modeled by a normal distribution (Rotich, 2016). There are various tests for assessing normality such as skewness and kurtosis, Shapiro-Wilk, Kolmogorov-Smirnov (Monari, 2016). This study used Shapiro-Wilk test to check the normality of the distribution because it is a good indicator of the normality of the data (Kiaritha, 2015)). Factor analysis was employed in order to identify the constructs that would then be regressed against the dependent variable (Uzel, 2015). Factor analysis was used to

analyze groups of related variables to reduce them into a small number of factors or components. Three main steps were followed in conducting factor analysis namely; assessment of the suitability of the data; factor extraction, and factor rotation and interpretation (Kilungu, 2015).

Preceding the factor analysis was the Kaiser-Meyer-Olkin (KMO) and Bartlett‟s Test of Sphericity (Sasaka, 2016). The KMO statistics vary between 0 and 1 (Uzel, 2015). A value of zero indicates that the sum of partial correlation is large relative to the sum of correlations indicating diffusions in the patterns of correlations hence factor analysis is likely to be inappropriate (Rotich, 2016). A value close to 1 indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors (Uzel *et al.*, 2015).

To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable. Multiple regression model was used to model the relationship between the dependent variable Y and independent variables X. The dependent variable, Y, is a discrete variable that represents a category, from a set of mutually exclusive categories.

Multiple regression measures the relationship between a categorical dependent variable and one or more independent variables by using predicted values of the dependent variable. The variable financial performance is a measure of the total contribution of all the independent variables used in the model. The probability of a particular outcome is linked to the linear predictor function. In terms of expected values, this model is expressed as follows:

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where:

Y= Financial Performance of Manufacturing Firms

β_0 = coefficient of the constant variable

$\beta_1 - \beta_5$ = Regression coefficients to be estimated.

X_1 = Access to Finance.

X_2 = Capital Structure

X_3 = Cost of Capital

X_4 = Fiscal Tax Incentives

X_5= Investment practice

E = Stochastic or disturbance term or error term.

This model is based on the assumption that the disturbance terms are uncorrelated across firms, meaning that financial performance change only as a reaction to a specific factor. A positive regression coefficient means that the explanatory variable increases the probability of the outcome, while a negative regression coefficient means that the variable decreases the probability of that outcome, a large regression coefficient means that the independent variable strongly influences the probability of that outcome, while a near-zero regression coefficient means that independent variable has little influence on the probability of that outcome. The basic idea of multiple regression is to use the mechanism for linear regression by modeling the linear combination of the explanatory variables and a set of regression coefficients that are specific to the model at hand but the same for all trials.

3.9.3 Hypotheses Testing

ANOVA test was conducted to test the significance of the relationships between the variables based on which the set hypotheses was accepted or rejected. The decision to accept the research hypothesis was based on the ρ- values. The ANOVA test was chosen as the study presumed that the population being tested was normally distributed, had equal variances and the samples were independent of each other. All hypothesis will be tested at the 95 percent confidence level (level of significance, alpha = 0.05).

Table 3.4: Hypothesis Testing

Hypothesis Statement	Hypothesis Testing	Model and Anticipated Results
$H_0$1: Access to finance does not significantly influence financial performance among manufacturing firms in Kenya	1. ANOVA – to test the overall robust of multiple regression. 2. Pearson correlation to test partial correlation between the variables	$y = B_0 + B_1 x_1 + e$ To reject $H_0$1 when P value is < 0.05 otherwise fail to reject $H_0$1 when P value is > 0.05 $Y = \beta_0 + \beta_1 X_1 + e$, where, β_0 =constant, β_1,= correlation co-efficient; X_1 = access to finance, e = error term
$H_0$2: Capital structure does not significantly influence financial performance among manufacturing firms in Kenya.	1. ANOVA – to test the overall Robust of multiple regression. 2. Pearson correlation to test the partial correlation between the variables.	$Y = B_0 + B_2 X_2 + e$ To reject $H_0$2 when P value is < 0.05 otherwise fail to reject $H_0$2 when P value is > 0.05 $Y = \beta_0 + \beta_2 X_2 + e$, where, β_0 =constant, β_2 = correlation co-efficient;

		X2 = capital structure, e = error term

Hypothesis Statement	**Hypothesis Testing**	**Model and Anticipated Results**
$H_0$3: Cost of capital does not significantly influence financial performance among manufacturing firms in Kenya.	1. ANOVA – to test the overall robust of multiple regression. 2. Pearson correlation to test the partial correlation between the variables.	$Y = B_0 + B_3 X_3 + e$ To reject $H_0$3 when P value is < 0.05 otherwise fail to reject $H_0$3when P value is > 0.05 $Y = \beta_0 + \beta_3 X_3 + e$, where, β_0 =constant, β_3 = correlation co-efficient; X_3 = cost of capital, e = error term
$H_0$3: Fiscal tax incentives significantly influence financial performance among manufacturing firms in Kenya.	3. ANOVA – to test the overall robust of multiple regression. 4. Pearson correlation to test the partial correlation between the	$Y = B_0 + B_4 X_4 + e$ To reject $H_0$4 when P value is < 0.05 otherwise fail to reject $H_0$4 when P value is > 0.05

	variables.	Y=β_0+β4X4+e, where, β_0 =constant, β4= correlation co-efficient; X4 =taxation, e = error term
$H_0$5: Investment practice does not significantly influence financial performance among manufacturing firms in Kenya.	1. ANOVA – to test the overall robust of multiple regression. 2. Pearson correlation to test the partial correlation between the variables.	$Y = B_0 + B_5 X_5 + e$ To reject $H_0$5 when P value is < 0.05 otherwise fail to reject $H_0$5 when P value is > 0.05 Y= β_0 + β_5X_5 + e, where, β_0 =constant, β_5 = correlation co-efficient; X_5 =investment practice, e = error term

3.10 Variable Definition and Measurement

A Simple random sampling method was used in this research to achieve the required response rate. The intercept target respondents was identified from the geographic location known as Kenya. The study focuses on financial performance of manufacturing firms applying a structured questionnaire. This study focused on financial factors, and

the extent to which the explanatory variables (Capital structure, access to finance, cost of capital, fiscal tax incentives and investment practice) influence the dependent variable (financial performance). The researcher then investigated the financial performance of manufacturing firms using an index scale of 1 to 5 to determine the influence of the selected independent variables on the dependent variable. The degree to which the dependent variable (financial performance) was influenced by the independent variables was measured by asking the respondent to assign a weight on the question. ROA indicate how profitable a firm is relative to its total assets while ROE indicates how much return owners get from their investment. Since the researcher used multiple regression to analyze financial performance, firms were classified into several categories.

3.11 Diagnostic Tests

There was need to establish the accuracy of data, missing data, outliers, normality and multicollinearity in order to ensure proper data management. This enabled the researcher to correct and determine the accuracy of data. The researcher checked the assumption that independent variables are normally distributed and the selected variables were adequate.

3.11.1 KMO and Bartlett's tests for Sample Adequacy

Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used on the samples to test whether the samples taken were adequate for statistical analysis. KMO measure of sampling adequacy and Bartlett's test of sphericity were carried out. The KMO index ranges from 0 to 1 with an index of 0.50 considered suitable for factor analysis. For

factor analysis to be suitable the Bartlett's Test of Sphericity should be significant ($p<0.05$) (Abdalla, 2017).

3.11.2 Multicollinearity Test

Multicollinearity was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance. It is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Ng'ang'a, 2017). In the current study tolerance ranged from 0.40 to 0.70 and therefore its reciprocal, the VIF was between one and two, below the threshold. Homogeneity means the variances should be the same throughout the data. Homoscedasticity was tested by use of Levene's test of homogeneity of variances. Levene's test, tests the null hypothesis that the variances in different groups are equal (i.e. the difference between the variances is zero). If the Levene statistic is significant at $\alpha = 0.05$ then the data groups lack equal variances (Okiro, 2014). Levene's test measures whether or not the variance between the dependent and independent variables is the same. Thus it is a check of whether the spread of the scores (reflected in the variance) in the variables are approximately similar (Okiro, 2014). If Levene's test is significant at $p \leq .05$ then we can conclude that the null hypothesis is incorrect and that the variances are significantly different, therefore, the assumption of homogeneity of variances has been violated. The test was not significant at $\alpha = 0.05$ confirming homogeneity.

3.11.3 Autocorrelation

The Durbin Watson test was used to test autocorrelation among the independent variables. This implies that observations are independent of each other. The Durbin-Watson statistic ranges from zero to four. The residuals are uncorrelated if the Durbin

Watson statistic is approximately 2. A value close to zero indicates a strong positive correlation. A value of 4 indicates strong negative correlation. Scores between 1.5 and 2.5 indicates independent observations (Garson, 2012). Testing the independence of error terms, the test results ranged between 1.81 and 2.21 supporting independence of error terms.

3.11.4 Test of Significance

Analysis of variance test was used to test the statistical significance of the variables in satisfying the set objectives while Correlation was used to test the relationship between the dependent and the independent variables.

Using SPSS version 24.0, the regression model was tested on how well it fitted the data. The significance of each independent variable was also tested. Fischer distribution test called F-test was applied. It refers to the ratio between the model mean square divided by the error mean square. F-test was used to test the significance of the overall model at a 5 percent confidence level. The p-value for each F-test was used to make conclusions on whether to accept or reject the null hypotheses. The conclusions were based on p values where if the null hypothesis was rejected then the overall model was significant and if null hypothesis was accepted the overall model was insignificant. In other words if the p-value was less than 0.05 then it was concluded that the model was significant and had good predictors of the dependent variable and that the results were not based on chance. If the p-value was greater than 0.05 then the model was not significant and could not be used to explain the variations in the dependent variable.

Correlation analysis was carried out to examine the relationships between the variables describing the direction and degree of association between the variables. A correlation was considered low if the resulting coefficient had a value close to zero and high if the

coefficient was close to 1. The Pearson Moment of Correlation Coefficient was used to examine the strength of the correlation.

3.11.5 Shapiro-Wilk (S-W) test

The Shapiro-Wilk (S-W) normality test was conducted. According to Shapiro-Wilk (S-W) test, if the p-value is greater than 0.05, the data are described as normally distributed. The hypothesis to test was whether the data was normally distributed is given by H0 and H1, set at $\alpha = 0.05$, the rule is reject H0, if p-value is less than α, else fail to reject H0: (Garson, 2012). Table 4.12 shows the Shapiro-Wilk (S-W) normality test results. The p-values for all the variables were more than 0.05 in respect of the S-W test. From these findings it can be concluded that the sample was obtained from a normally distributed population. inferential and parametric statistical analysis can be carried out on the data since the chance of outliers is minimal.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents data analysis and discussion of the study findings. The purpose of the study was to investigate the determinants of financial performance of manufacturing firms in Kenya. The chapter is divided into six parts. Part one presents a summary of the response rate for the study. Part two is a summary of the reliability and validity tests of the data for the study. Part three presents the results of the test of normality of data. Part four presents the research findings based on the study hypothesis.

Quantitative research was used to describe, explain and quantify relationships between different variables. The quantitative findings of the research have been presented under correlation analysis and regression analysis. The hypothesis was tested using the F-test and Karl Pearson's coefficient of correlation. The hypothesis was tested at 95% confidence level ($\alpha = 0.05$). The aim of the researcher was to study the relationship between an independent variable and a dependent variable in the population. Multiple regression model was used to model the relationship between the dependent variable Y and independent variables X. Part five is a discussion of the results of the study. Part six is a summary of the hypothesis testing of the study and a conclusion for the chapter.

4.2 Response Rate

The total population of manufacturing firms in Kenya was 741 where a sample of 252 firms was targeted. A total 252 questionnaires were delivered to the respondents in the sample. However, 110 questionnaires were not returned leaving a total of 142 in usable

form. This represents a response rate of 56% for the manufacturing firms in the sample. This response rate has been considered to be adequate compared to the usually expected response rate of 50-75% for hand delivered questionnaires (Saunders *et. al.*, 2009). This was comparable to previous studies for manufacturing firms that achieved almost a similar response rate. For example, Kung'u (2015) reported a response rate of 87.7 % in his study of effects of working capital management on profitability of manufacturing firms in Kenya. Kalunda *et al.* (2014) reported a response rate of 60% in their study on pharmaceutical manufacturing companies in Kenya and their credit risk management practice.

Table 4.1: Response Rate

Response rate	**Frequency**	**Percentage**
Returned	142	56
Unreturned	110	44
Total	**252**	**100**

4.3 Reliability

Reliability is the measure that the data provided is consistent with what previous research literature has said. The Cronbach's alpha coefficient ranges between 0 and 1 (Sasaka, 2016). A reliability coefficient of zero indicates that the test scores are unreliable. On the other hand the higher the reliability coefficient, the more reliable or accurate the test scores. For social science research purposes, tests with a reliability score of 0.7 and above are reliable (Sasaka, 2016). The reliability of the questionnaire was tested using the Cronbach's Alpha correlation coefficient with the aid of SPSS software. Okelo (2015) postulates that Cronbach Alpha value greater than 0.7 is

regarded as satisfactory for reliability assessment. As shown in the next section Cronbach alpha values for all the variables; capital structure, cost of capital, access to finance, fiscal tax incentives and investment practice were greater than 0.7. From these findings it can be concluded that the constructs measured had the adequate reliability for the subsequent stages of analysis since all the Cronbach Alpha values were greater than 0.7.

Table 4.2: Cronbach Alpha for Reliability Assessments

Variables	**Cronbach Alpha**	**No of items**	**Comment**
Access to finance	0.852	9	Valid
Capital structure	0.841	9	Valid
Cost of capital	0.834	9	Valid
Fiscal Tax incentives	0.816	9	Valid
Investment practice	0.861	9	Valid
Financial performance	0.882	9	Valid
Overall Cronbach Alpha for 54 items	**0.843**	**45**	**Valid**

4.4 Demographic Results

The researcher tried to establish the education level of the respondents, the age of the firm, the type of products offered, the markets served by the organization and the size of the organization in terms of total assets.

4.4.1 Education

The respondents were asked to state their education level and all the respondents specified their education. The results of the findings are given in the table 4.3 below.

Table 4.3: Respondent's Level of Education

Level of Education	Frequency	Percent
Primary level	3	2
Secondary level	99	70
University level	40	28
Total	**142**	**100**

Table 4.3 illustrates that only 2% of the respondents are of primary school education and above while those of secondary school education are the majority 70%. Those with university level of education represent 28%. The results indicate that majority of the respondents have good education background and are therefore able to make good financial decisions.

4.4.2 Age of the Firm

The researcher was interested in knowing the age of the firm. The results of the findings are given in the table 4.4 below.

Table 4.4: Age of the Firm

Age bracket	Frequency	Percent
1-5	24	17
5-10	36	25
10-20	75	53
More than 20	7	5
Total	**142**	**100**

The manufacturing firms in Kenya are between 10 to 20 years and above while those above 20 years are 7%. This implies that majority of the firms have more than ten years' experience in the manufacturing business.

4.4.3 Firms' KAM Classification

The study sought to establish the class under which the firms have been grouped by the Kenya Association of Manufacturers (KAM, 2016). As reflected in the table below, only (4%) of the firms have been grouped under building, mining and construction sector, (11%) chemical and allied sector, (6%) energy, electrical and electronics sector, (25%) foods and beverages sector, (1%) leather and footwear sector, (11%) metal and allied sector, (7%) motor vehicles assemblers and accessories sector, (10%) paper and board sector, (3%) pharmaceutical and metal equipment sector, (10%) plastic and rubber sector, (9%) textile and apparels and (3%) timber, wood and furniture sector.

The results shows that foods and beverages sector had the highest number of firms followed by chemical and allied sector and leather and footwear sector had the least number of firms. This is because agribusiness is one of the oldest economic activities in

Kenya. The sector has grown rapidly over the years alongside astronomical population growth to support ever increasing demand for foodstuffs and beverages.

The by-products of food processing are used as derivatives for some chemical manufacturing. Thus, foods and beverages and chemical and allied sectors are interrelated in terms of technology and production inputs. Technology for leather and footwear is not well developed in Kenya and such products cannot be competitively produced in Kenya. This explains the concentration nature of these two sectors.

Table 4.5: Firms' KAM Classification

Category of Manufacturer	Target Population	Percent
Building, Mining & Construction	29	4
Chemical & Allied Sector	79	11
Energy, Electrical & Electronics	45	6
Foods & Beverages Sector	187	25
Leather & Footwear Sector	9	1
Metal & Allied Sector	83	11
Motor Veh. Assembly & Accessories	51	7
Paper & Board Sector	74	10
Pharmaceutical & Med. Equip. Sector	24	3
Plastics & Rubber Sector	77	10
Textile & Apparels Sector	64	9
Timber, Wood & Furniture Sector	19	3
Total	**741**	**100**

4.4.4The type of products

Being asked the type of products the firm offers, a total of 142 respondents responded. Majority of the respondents deals in finished goods which formed 65% of the respondents and only 12% deals in raw materials as shown in table 4.6.

Table 4.6: Type of Products

Type of Products	Frequency	Percent
Raw materials	17	12
Parts	13	9
Semi-Assembled	19	13
Finished goods	93	65
Total	**142**	**100**

4.4.5 The Markets Served by the Organization

The respondents were asked to indicate the market served by the organization. The next section shows that majority of the respondents fifty one percent serve corporate markets, twenty six percent serve consumer markets while only four percent serve government markets. The results indicate that majority of the manufacturing firms serve corporate markets. This implies an increase in the number of industrial users for the manufactured products.

Table 4.7: The Markets Served by the Organization

Number of Years	Frequency	Percent
Consumer markets	37	26
Corporate markets	73	51
SME Markets	21	15
Government markets	6	4
Others	5	4
Total	**142**	**100**

4.4.6 Size of the Organization in Terms of Total Net Assets

Respondents were asked to state the size of the organization in terms of total net assets. A total 129 responded to that forming a 90.8% percent to that item. Table 4.8 shows the size of the organization in terms of total net assets. Majority of the respondents 64% have asset base of over 40 million.

Table 4.8: Size of the Organization in Terms of Total Net Assets

Total Net Assets	Frequency	Percent
1M-20Million	34	24
21M-40M	44	31
Over 40Million	64	45
Total	**142**	**100**

4.4.7 Number of Branches

Being asked the number of branches the firm has, a total of 142 respondents responded. Majority of the respondents have five to ten branches which formed 66% of the respondents and only 23% have one to five branches. Those with over ten branches represented about 11% of the respondents.

Table 4.9: Number of Branches

Number of branches	Frequency	Percent
1-5	33	23
5-10	94	66
Over 10	15	11
Total	**142**	**100**

4.5 Tests of Statistical Assumptions

The study performed tests of statistical assumptions i.e. test of regression assumption and statistic used. This included test of normality, linearity, independence, homogeneity and collinearity.

4.5.1 Sampling Adequacy

In order to establish the validity of study variables, tests of sampling adequacy were used. This enabled the study identify whether the items were appropriate for further analysis. The table below shows Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity. KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study.

The primary data test results show that the scales had values above the threshold of 0.7 as established by (Williams, 2012): access to finance (0.814), capital structure (0.843), cost of capital (0.803), Fiscal Tax incentives (0.739), Investment practice 0.812 and financial performance (0.857). Williams (2012) stated that KMO of 0.50 is acceptable degree for sampling adequacy with values above 0.5 being better.

Bartlett's Test of sphericity which analyzes if the samples are from populations with equal variances produced p-values less than .05 ($p < .001$) thus indicating an acceptable degree of sampling adequacy.

Table 4.10: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test (Primary data)

Variables	KMO Test	Bartlett's test of sphericity			Determinant
		Approx chi-Square	Df	Significance	
Capital structure	0.843	178.395	36	0.000	0.068
Cost of capital	0.803	523.118	36	0.000	0.009
Access to finance	0.814	563.126	36	0.000	0.298
Fiscal tax incentives	0.739	234.827	36	0.000	0.412
Investment practice	0.812	243.123	36	0.000	0.382
Financial performance	0.857	240.423	36	0.000	0.242

The secondary data test results show that the scales had values above the threshold of 0.7 as established by (Mwanzia, 2019): access to finance (0.624), capital structure (0.583), Investment practice 0.682 and financial performance (0.754). Omar (2016) stated that KMO of 0.50 is acceptable degree for sampling adequacy with values above 0.5 being better.

Bartlett's Test of sphericity which analyzes if the samples are from populations with equal variances produced p-values less than .05 ($p < .001$) thus indicating an acceptable degree of sampling adequacy.

Table 4.11: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test (Secondary data)

Variables	KMO Test	Bartlett's test of sphericity			Determinant
		Approx chi-Square	Df	Significance	
Capital structure	0.583	168.294	24	0.000	0.058
Access to finance	0.624	262.122	24	0.000	0.193
Investment practice	0.682	212.345	24	0.000	0.264
Financial performance	0.754	174.564	24	0.000	0.242

4.5.2 Normality Test

The researcher sought to assess the normality of data of the sample taken in respect of the various variables in the study. The purpose of normality test was to assess whether the sample was obtained from a normally distributed population. Shapiro-Wilk test is a non-parametric test that was used to test whether the data was normally distributed. The results of Shapiro-Wilk test for the key study variables, namely financial performance determinants and financial performance revealed that the data relating to all the study variables was normally distributed.

Similarly, tests for the equality of means conducted on the study variables indicated that there was no significant difference expected in the respective mean scores at 95 percent confidence level. The variability among the mean scores of the study variables were all statistically significant. This therefore validates the premise of linearity and independence of the observations. This premise stated that statistical tests and

procedures that assume normality, linearity and independence of data such as correlation and regression analysis could be used.

To measure normality on primary data, the Shapiro-Wilk (S-W) normality test was conducted. According to Shapiro-Wilk (S-W) test, if the p-value is greater than 0.05, the data are described as normally distributed (Okiro, 2014). The hypothesis to test was whether the data was normally distributed is given by H0 and H1, set at $\alpha = 0.05$, the rule is reject H0, if p-value is less than α, else fail to reject H0: (Garson, 2012). Table 4.12 shows the Shapiro-Wilk (S-W) normality test results. The p-values for all the variables; Access to finance, capital structure, cost of capital, taxation and investment practice were more than 0.05 in respect of the S-W test. From these findings it can be concluded that the sample was obtained from a normally distributed population. Condition for normality is required for one to fit a linear regression model (Okelo, 2015). These results are in support of the studies of Sasaka (2016) who noted that when data distribution had normality, it is possible to undertake any inferential and parametric statistical analysis since the chance of outliers is minimal.

Table 4.12: Shapiro-Wilk Test (Primary Data)

Variables	Statistic	Df	Sign.
Access to finance	0.8553	142	0.060
Capital structure	0.8624	142	0.083
Cost of capital	0.7321	142	0.072
Fiscal tax incentives	0.7146	142	0.094
Investment practice	0.8235	142	0.078
Financial performance	0.8574	142	0.088

The results of Shapiro-Wilk test for the secondary data study variables, namely return on assets determinants and return on assets revealed that the data relating to all the study

variables was normally distributed. Additionally, tests for the equality of means conducted on the study variables indicated that there was no significant difference expected in the respective mean scores at 95 percent confidence level. The variability among the mean scores of the study variables were all statistically significant. This therefore validates the premise of linearity and independence of the observations. This premise stated that statistical tests and procedures that assume normality, linearity and independence of data such as correlation and regression analysis could be used.

To measure normality, the Shapiro-Wilk (S-W) normality test was conducted. According to Shapiro-Wilk (S-W) test, if the p-value is greater than 0.05, the data are described as normally distributed (Okiro, 2014). The hypothesis to test was whether the data was normally distributed is given by H0 and H1, set at $\alpha = 0.05$. Table 4.13 shows the Shapiro-Wilk (S-W) normality test results for secondary data. The p-values for all the variables; Access to finance, capital structure, cost of capital, investment practice and Tax incentives were more than 0.05 in respect of the S-W test. From these findings it can be concluded that the sample was obtained from a normally distributed population. Condition for normality is required for one to fit a linear regression model (Ng'ang'a, 2017). These results are in support of the studies of Omar (2017) who noted that when data distribution had normality, it is possible to undertake any inferential and parametric statistical analysis since the chance of outliers is minimal.

Table 4.13: Shapiro-Wilk Test (Secondary Data)

Variables	Statistic	Df	Sign.
Access to finance	0.7464	142	0.074
Capital structure	0.8625	142	0.081
Investment practice	0.7632	142	0.084
Financial performance	0.7682	142	0.076

4.5.3 Summary on Tests of Statistical Assumptions

Tests of statistical assumptions included test of normality, linearity, independence, homogeneity and collinearity. Normality was tested using the Shapiro-Wilk test which has power to detect departure from normality due to either skewness or kurtosis or both. Its statistic ranges from zero to one and figures higher than 0.05 indicate the data is normal (Sabana, 2014). Normality assumes that the sampling distribution of the mean is normal. All the results were above 0.05 confirming normality.

Linearity was tested by use of ANOVA test of linearity which computes both the linear and nonlinear components of a pair of variables whereby nonlinearity is significant if the F significance value for the nonlinear component is below 0.05 (Kilungu, 2015). All the computed readings were above 0.05 confirming linear relationships (constant slope) between the predictor variables and the dependent variable. Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test whose statistic ranges from zero to four. The residuals are uncorrelated if the Durbin Watson statistic is approximately 2. A value close to zero indicates a strong positive correlation. A value of 4 indicates strong negative correlation. Scores between 1.5 and 2.5 indicates independent observations (Garson, 2012). Testing the independence of error terms, the test results ranged between 1.81 and 2.21 supporting independence of error terms.

Homogeneity means the variances should be the same throughout the data. Homoscedasticity was tested by use of Levene's test of homogeneity of variances. Levene's test, tests the null hypothesis that the variances in different groups are equal (i.e. the difference between the variances is zero). If the Levene statistic is significant at $\alpha = 0.05$ then the data groups lack equal variances (Okiro, 2014). Levene's test measures whether or not the variance between the dependent and independent variables is the same. Thus it is a check of whether the spread of the scores (reflected in the variance) in

the variables are approximately similar (Okiro, 2014). If Levene's test is significant at p ≤ .05 then we can conclude that the null hypothesis is incorrect and that the variances are significantly different – therefore, the assumption of homogeneity of variances has been violated. The test was not significant at α= 0.05 confirming homogeneity.

Multicollinearity was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance. It is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Ng'ang'a, 2017). In the current study tolerance ranged from 0.40 to 0.70 and therefore its reciprocal, the VIF was between one and two, below the threshold. Five assumptions of regression were tested and their results together with those of the test for reliability showed that the assumptions of regression were met and subsequently the data were subjected to further statistical analysis including tests of hypothesis.

4.6 Financial Performance of Manufacturing Firms

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on financial performance was done to facilitate computation of descriptive statistics and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable. The analysis was carried out for both primary and secondary data.

4.6.1 Descriptive Results on Financial Performance

The manufacturing firms financial performance were assessed by nine measures but after factor analysis these measures were reduced to seven namely enhanced operating

income, improved market share, enhanced liquidity position, increased profitability levels, enhanced return on assets, enhanced return on equity and increased sales. The significant results showed that the means were statistically different and the null hypothesis was rejected.

The next section shows the relevant statistical results of financial performance of manufacturing firms. The highest mean score was registered by increased sales growth with a mean of 3.9859 and the second were improved market share with a mean of 3.9085. The third were increased profitability levels with a mean of 3.8099 while enhanced return on assets had a mean of 3.7042.

Enhanced return on equity registered a mean of 3.6901. The implication of the mean scores is that the higher the mean the higher the influence of the construct on financial performance. The overall mean score for all the measures was moderate at 3.7776.

Table 4.14: Descriptive Results on Financial Performance of Manufacturing Firms (primary data).

	Opinion statement	N	Mean	Std. Deviation
1	We have achieved enhanced operating income	142	3.7887	.08352
2	We have had an improved market share over the last five years	142	3.9085	.09889
3	We have achieved an enhanced liquidity position over the last five years	142	3.5563	.10412
4	We have experienced improved profitability levels over the last five years	142	3.8099	.08418
5	We have achieved an enhanced return on assets over the last five years	142	3.7042	.08701
6	We have achieved an enhanced return on equity over the last 5 years	142	3.6901	.09115
7	We have experienced increased sales growth over the last five years	142	3.9859	.08994

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The mean scores differed from one manufacturing firm to another with highest difference being noted in increased sales growth. The least variance was noted in

enhanced liquidity position. The implication of the results is that most respondents felt that increased sales growth was the highest determinant of manufacturing firm performance with the highest mean of 3.9859 while enhanced liquidity position had the least influence at 3.5563.

Table 4.15: Descriptive Results on Financial Performance of Manufacturing Firms (secondary data).

	N	Mean	Std. Deviation
Return on asset year 1	142	.527672	.1718861
Return on asset year 2	142	.553214	.1798842
Return on asset year 3	142	.539896	.1598329
Return on asset year 4	142	.546245	.1699252
Return on asset year 5	142	.562129	.1849431

The mean scores differed from one year to another with highest difference being noted in return on asset in year five at 0.562129. Return on assets in year 2 has a moderate influence with a mean of 0.553214 while return on asset year 1 had the least influence at 0.527672. The implication of the mean scores is that the higher the mean the higher the influence of the construct on financial performance.

4.7 Descriptive Results on Independent Variables

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on independent variables was done to facilitate computation of descriptive statistics to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.7.1 Descriptive Results on Access to Finance

The study sought to investigate the effect of access to finance on financial performance of manufacturing firms in order to either accept or reject the null hypothesis. That is, Ho: there a significance difference expected between the means, at $\alpha = 0.05$, two-tailed, Reject Ho: if P-value $\leq \alpha$, otherwise fail to reject Ho: if P-value $> \alpha$.

The manufacturing firms access to finance were assessed by nine measures namely access to credit through bank lending, possession of collateral, funds from government grants and incentives, access to finance from rotating savings and credit societies and finance from savings and loan associations. Table 4.16 summarizes the respondent's degree of agreement on how access to finance measures affects financial performance of manufacturing firms. The highest mean score was registered by access to finance through savings and credit societies with a mean of 3.4324 and the second were access to finance through bank lending with a mean of 3.3254. The third were possession of collateral with a mean of 3.0042. The implication of the mean scores is that the higher the mean the higher the influence of the construct on access to finance. The overall mean score for all the measures was moderate at 3.29.

Table 4.16: Descriptive Results on Access to Finance (Primary data).

	Opinion statement	N	Mean	Std. Deviation
1	Access to credit through bank lending actualizes financial performance	142	3.3254	.11456
2	Access to funds through financial and insurance products facilitates financial performance	142	2.01420	.12076
3	Possession of collateral facilitates our firms financial performance	142	3.0042	.11287
4	Funds from government loans enhances our financial performance	142	3.4366	.11105
5	Access to finance through government revolving funds	142	3.2324	.11854
6	Funds from government grants and incentives facilitates our financial performance	142	3.3239	.11109
7	Informal finance from friends and relatives facilitates financial performance	142	2.1930	.12383
8	Access to finance through rotating savings and credit societies actualizes our financial performance.	142	3.4324	.11684
9	Informal finance from savings and loan association facilitates financial performance	142	3.2958	.11603

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The implication of the results is that most respondents felt that access to finance through savings and credit societies was the highest determinant of manufacturing firm

performance with the highest mean of 4.1268 while government grants and savings loan had the least influence at 2.9577.

Table 4.17: Descriptive Results on Access to Finance (Secondary data).

	N	Mean	Std. Deviation
Access to External Finance Yr 1	142	.560737	.1482879
Access to External Finance Yr 2	142	.559142	.1515312
Access to External Finance Yr 3	142	.551758	.1682626
Access to External Finance Yr 4	142	.569733	.2037717
Access to External Finance Yr 5	142	.571394	.2033881
Access to Savings Yr 1	142	.562312	.1512655
Access to Savings Yr 2	142	.547155	.1394934
Access to Savings Yr 3	142	.569218	.1611287
Access to Savings Yr 4	142	.579093	.1669935
Access to Savings Yr 5	142	.589472	.1702447

The mean scores differed from one year to another with highest difference being noted in return on asset in year five for both access to external finance and access to savings at 0.571394 and 0.589472 respectively. The implication of the mean scores is that the higher the mean the higher the influence of the construct on access to finance.

4.7.2 Descriptive Results on Capital Structure.

The capital structure refers to how a firm finances its overall operations and growth by using different sources of funds. Capital structure influences both profitability and riskiness of the firm. The greater the gearing a firm exhibits, the higher the potential for failure if cashflows fall short of those necessary to service debts. Several studies indicate that a firms capital structure decisions are affected by several firm related characteristics

such as future growth options, earnings volatility, profitability and control (Titman and Wessels, 2015; Glen and Pinto, 2016).

The manufacturing firms capital structure were assessed by nine measures but after factor analysis these measures were reduced to seven namely equity capital facilitates financial performance, equity capital helps maximize firm value, optimal financing mix facilitates financial performance, retained earnings have impacted positively on financial performance, dividend payout have impacted on financial performance, use more debt than equity because interest on debt is tax deductible and debt capital facilitates firms financial performance. Table 4.18 summarizes the respondent's degree of agreement on how capital structure measures affects financial performance of manufacturing firms.

Table 4.18: Descriptive Results on Capital Structure (Primary data).

	Opinion Statement	N	Mean	Std. Deviation
1	Equity capital facilitates our firms financial performance	142	4.0282	.07608
2	Use of equity capital helps to maximize firm value	142	4.0000	.06996
3	optimal financing mix facilitates our firms financial performance	142	3.7817	.10100
4	Retained earnings have impacted positively on our financial performance	142	3.7183	.09963
5	Dividend payout have impacted negatively on our firms financial performance	142	3.4930	.09728
6	More debt than equity because interest on debt is tax deductible	142	3.5141	.08640
7	Debt capital facilitates our firms financial performance	142	3.4155	.08897

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The highest mean score was registered by equity capital facilitates financial performance with a mean of 4.0282 and the second were equity capital helps maximize firm value with a mean of 4.000. The third was optimal financing mix facilitates financial performance with a mean of 3.7817 while the fourth was retained earnings have impacted on financial performance had a mean of 3.7183. The fifth was dividend payout have impacted positively on financial performance with a mean of 3.493. The sixth variable was use more debt than equity because interest on debt is tax-deductible with a mean of 3.5141. The last variable was debt capital facilitates financial performance with a mean of 3.4155. The implication of the mean scores is that the higher the mean the higher the influence of the construct on capital structure. The overall mean score for all the measures was moderate at 3.176. The mean scores differed from one manufacturing firm to another with highest difference being noted in equity capital facilitates financial performance. The least variance was noted in debt capital facilitates financial performance. The implication of the results is that most respondents felt that equity capital facilitates financial performance was the highest determinant of manufacturing firm performance with the highest mean of 4.0282 while debt capital facilitates financial performance had the least influence at 3.4155.

Table 4.19: Descriptive Results on Capital Structure (Secondary data).

	N	Mean	Std. Deviation
Equity Ratio Yr 1	142	.518268	.1582214
Equity Ratio Yr 2	142	.551896	.1553092
Equity Ratio Yr 3	142	.536336	.1720344
Equity Ratio Yr 4	142	.541652	.1573234
Equity Ratio Yr 5	142	.559011	.1702100
Debt Ratio Yr 1	142	.607907	.1519799
Debt Ratio Yr 2	142	.652882	.1502739
Debt Ratio Yr 3	142	.577224	.1569391
Debt Ratio Yr 4	142	.575428	.1730794
Debt Ratio Yr 5	142	.575375	.1710167

The mean scores differed from one year to another with highest difference being noted in debt ratio in year 2. The least variance was noted in equity ratio in year 1. Debt ratio in year 2 has the highest influence on return on assets with the highest mean of 0.652882 while equity ratio year 1 had the least influence at 0.518268. The implication of the mean scores is that the higher the mean the higher the influence of the construct on capital structure.

4.7.3 Descriptive Results on Cost of Capital.

The manufacturing firms cost of capital were assessed by nine measures but after factor analysis these measures were reduced to six namely interest paid to debt holders have impacted negatively on financial performance, cost of equity impacts negatively on performance, cost of equity discourages our firm from using it, cost of equity determines our choice of financing and interest rates have an impact on financial performance. This is because factor analysis identified three major factors which had the biggest influence on manufacturing firm's performance. The significant results showed that the means were statistically different and the null hypothesis was rejected. Factor 1 was cost of equity which had the two constructs, factor two was named interest rates with the last construct, factor three was named cost of debt which had two constructs whose means have been identified in Table 4.20.

Table 4.20: Descriptive Results on Cost of Capital

	Opinion Statement	N	Mean	Std. Deviation
1	Interest paid to debt holders have impacted negatively on our firms financial performance	142	3.0423	.08590
2	The high cost of debt discourages our firm from using it.	142	2.9366	.07427
3	Cost of equity impacts negatively on financial performance	142	2.5845	.09064
4	The high cost of equity discourages our firm from using it	142	3.0775	.08660
5	In our firm the cost of debt determines our choice of financing	142	2.9718	.08299
6	Interest rates have an impact on our firms financial performance	142	2.1972	.09956

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The highest mean score was registered by the high cost of equity discourages our firm from using it with a mean of 3.0775 and the second were interest paid to debt-holders impacts negatively on financial performance with a mean of 3.0423. The fourth were the high cost of debt discourages our firm from using it. The fourth were cost of equity determines our choice of financing with a mean of 2.9718 while cost of equity impacts negatively on financial performance had a mean of 2.5845. The last construct were interest rates have an impact on financial performance with a mean of 2.1972. The implication of the mean scores is that the higher the mean the higher the influence of the construct on cost of capital. The overall mean scores for all the measures was moderate

at 2.8016. The mean scores differed from one manufacturing firm to another with highest difference being noted in cost of equity discourages our firm from using it. The least variance was noted in interest rates have an impact on firm's financial performance. The implication of the results is that most respondents felt that the high cost of equity discourages firms from using it was the highest determinant of manufacturing firm performance with the highest mean of 3.1268 while interest rates have an impact on firms financial performance had the least influence at 2.1972.

The manufacturing firms cost of capital were assessed by nine measures but after factor analysis these measures were reduced to seven namely interest paid to debt holders have impacted negatively on financial performance, cost of equity impacts negatively on performance, cost of equity discourages our firm from using it, cost of equity determines our choice of financing and interest rates have an impact on financial performance. This is because factor analysis identified three major factors which had the biggest influence on manufacturing firm's performance. The significant results showed that the means were statistically different and the null hypothesis was rejected. Factor 1 was cost of equity which had the two constructs, factor two was named interest rates with the last construct, factor three was named cost of debt which had two constructs.

4.7.4 Descriptive Results on Fiscal Tax incentives

The manufacturing firms fiscal tax incentives were assessed by nine measures but after factor analysis these measures were reduced to seven namely investment tax credits and allowances facilitates our firm's financial performance, investment deduction upon construction of a new building facilitates our firm's financial performance, Investment deduction upon installation of new machinery facilitates our firm's financial performance, export promotion incentives facilitates our firm's financial performance, reduced taxes on raw materials facilitates our firm's financial performance, zero rated tax rate facilitates our firm's financial performance and tax

exemptions and tax credits offered by the government facilitates our firms financial performance.

Table 4.21: Descriptive Results on Fiscal Tax incentives

	Opinion Statement	N	Mean	Std. Deviation
1	Investment tax credits and allowances facilitates our firm's financial performance.	142	2.9155	.08510
2	Investment deduction upon construction of a new building facilitates our firm's financial performance.	142	2.9225	.08366
3	Investment deduction upon installation of new machinery facilitates our firm's financial performance	142	2.9366	.07820
4	Export promotion incentives facilitates our firm's financial performance.	142	3.1972	.07948
5	Reduced taxes on raw materials facilitates our firm's financial performance	142	3.0634	.07756
6	Zero rated tax rate facilitates our firm's financial performance	142	2.7958	.10508

7	Tax exemptions and tax credits offered by the government facilitates our firms financial performance	142	2.9437	.08106

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The highest mean score was registered by Export promotion incentives facilitates our firm's financial performance with a mean of 3.1972, the second were Reduced taxes on raw materials facilitates our firm's financial performance with a mean of 3.0634. The third were tax exemptions and tax credits offered by the government facilitates our firms financial performance facilitates our firm's financial performance with a mean of 2.9437 while investment deduction upon installation of new machinery facilitates our firm's financial performance had a mean of 2.9366. Investment deduction upon construction of a new building facilitates our firm's financial performance registered a mean of 2.9225 and Investment tax credits and allowances facilitates our firm's financial performance had a mean of 2.9155. The last construct was zero rated tax rate facilitates our firm's financial performance had a mean of 2.7958. The implication of the mean scores is that the higher the mean the higher the influence of the construct on tax incentives. The overall mean score for all the measures was moderate at 2.9678. The mean scores differed from one manufacturing firm to another. The implication of the results is that most respondents felt export promotion incentives facilitates our firm's financial performance with the highest mean of 3.1972. The manufacturing firms investment practice were assessed by nine measures but after factor analysis these measures were reduced to seven whose means have been identified in Table 4.22.

Table 4.22: Descriptive Results on Investment Practice (primary data)

	Opinion statement	N	Mean	Std. Deviation
1.	We prefer investment in government bonds as they give good returns	142	4.1901	.07929
2.	Short term investments such as money market is preferred due to good returns and reliability	142	3.9437	.10519
3.	Investment in government securities is highly preferred due to lower risk and earnings stability	142	3.6479	.09386
4.	Investment in core manufacturing business is highly preferred due to good returns and reliability	142	3.5845	.09064
5.	Our investment portfolio gives good returns than that of competitors	142	4.0775	.08660
6.	Long term investment such as plant and equipment is preferred due to stability of earnings	142	3.5845	.09064
7.	Our investment portfolio is well diversified resulting to good returns	142	3.9648	.08083

Key, scale: 1-1.8 strongly disagree, 1.8-2.6 disagree, 2.6-3.4 neither agree nor disagree, 3.4-4.2 agree, 4.2-5 strongly agree.

The seven measures are investment in government bonds, short term investment such as money market, investment in government securities, investment in core manufacturing business, investment portfolio gives good returns, long-term investment such as plant and buildings and our investment is well diversified resulting to good returns. This is

because factor analysis identified two major factors which had the biggest influence on manufacturing firm's performance. The significant results showed that the means were statistically different and the null hypothesis was rejected. Factor 1 was core manufacturing business which had the first four constructs, factor two was named investment in stocks with three constructs.

The highest mean score was registered by investment in government bonds gives good returns with a mean of 4.1901 and the second were our investment portfolio gives good returns with a mean of 4.0775. The third were short term investment such as money market with a mean of 3.9437. The fourth were investment in government securities is preferred with a mean of 3.6479 while investment in manufacturing business is preferred and long term investment such as plant and equipment is preferred both registered a mean of 3.5845. The implication of the mean scores is that the higher the mean the higher the influence of the construct on investment practice. The overall mean score for all the measures was moderate at 3.8516. The mean scores differed from one manufacturing firm to another with highest difference being noted in we prefer investment in government bonds as they give good returns. The least variance was noted in investment in core manufacturing business is preferred. The implication of the results is that most respondents felt that investment in government bonds gives good returns was the highest determinant of manufacturing firm performance with the highest mean of 4.1901.

Table 4.23: Descriptive Results on Investment Practice (Secondary data).

	N	Mean	Std. Deviation
Roi Yr 1	142	1.525701	.1882487
Roi Yr 2	142	1.671093	.1775545
Roi Yr 3	142	1.672138	.1921066
Roi Yr 4	142	1.728391	.1693001
Roi Yr 5	142	1.683943	.1971424
Earnings per Share Yr 1	142	1.607579	.2350107
Earnings per Share Yr 2	142	1.740007	.1554931
Earnings per Share Yr 3	142	1.620454	.2162775
Earnings Per Share Yr 4	142	1.703206	.1588213
Earnings per Share Yr 5	142	1.761463	.1734921

The highest mean score was registered by earnings per share year 5 with a mean of 1.761463 and the second were earnings per share year 2 with a mean of 1.740007. The third were return on investment year 4 with a mean of 1.72839. The implication of the mean scores is that the higher the mean the higher the influence of the construct on investment practice.

4.8 Inferential Results of Access to Finance on Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on access to finance was done to facilitate computation of factor analysis, correlation and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.8.1 Access to Finance KMO Measures and factor analysis

Financial access is an important determinant of the performance of enterprises as it provides working capital, fosters greater firm innovation and dynamism, enhances entrepreneurship, promotes more efficient asset allocation and enhances the firm's

ability to exploit growth opportunities (Omar, 2017). KMO test measures sample adequacy and it ranges between 0 and 1. KMO test measures were shown in table 4.24.

Table 4.24: Access to Finance Measures KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	841.936
	df	36
	Sig.	.000

A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on access to finance had 0.814 which represented great acceptability of the use of factor analysis and sufficient intercorrelations. Bartlett's test of Sphericity is significant (chi-square=841.936, $p<0.000$). Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix.

The total variance explained in the access to finance constructs was explained in table 4.25.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation.

The nine measures of access to finance were subjected to factor analysis and the results show that there was one important factor driving access to finance use in manufacturing firms which accumulated to 58.782% of the total variance. These factor had the greatest

influence on access to finance and hence the financial performance of manufacturing firms. This is because it had Eigen values of more than 1.0.

Table 4.25: Total Variance Explained for Access to Finance Measures

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.878	58.782	58.782	5.878	58.782	58.782
2	.942	9.420	68.202			
3	.896	8.969	77.171			
4	.814	8.143	85.314			
5	.575	5.758	91.073			
6	.344	3.449	94.521			
7	.260	2.600	97.121			
8	.176	1.765	98.886			
9	.100	1.114	100.000			

Extraction Method: Principal Component Analysis.

A Principal Component Analysis with varimax rotation was performed on nine access to finance measures in order to examine the dimensionality of access to finance and financial performance and also to find out if all the variables were significant to financial performance. The other objective was to group the common factors and to retain a small number of factors which had the highest influence (Kiaritha, 2015).

Table 4.26 depicts the component factor loadings for access to finance drivers of financial performance. From the component matrix all the access to finance measures were grouped into one factor.

The factor had access to credit through bank lending, funds from government grants and incentives,, possession of collateral facilitates our firms financial performance, funds from government loans facilitates our financial performance, access to finance through rotating savings and credit societies actualizes our financial performance, informal finance from savings and loan association facilitates financial performance and informal finance from friends and relatives facilitates financial performance. This factor was named Access to finance. The explanation is that most of the access to finance influence on manufacturing firms' financial performance was explained by these seven factors.

Table 4.26: Component Matrix for Access to Finance Measures

Opinion statement	Component 1
1 Access to credit through bank lending actualizes financial performance	.789
2 Funds from government grants and incentives facilitates our financial performance	.839
3 Possession of collateral facilitates our firms financial performance	.880
4 Funds from government loans facilitates our financial performance	.770
5 Access to finance through rotating savings and credit societies actualizes our financial performance.	.915
6 Informal finance from savings and loan association facilitates financial performance	.875
7 Access to finance through savings in financial and insurance products	-.155
8 Informal finance from friends and relatives facilitates financial performance	.779
9 Stability of retained earnings have impacted positively on financial performance	.062

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

The agreed respondents indications on financial performance of manufacturing linked with access to finance was consistent with the studies of (Migiro, 2012) who established that manufacturing firms that have better access to finance have good financial performance. The results were also consistent with the findings of (Njoroge, 2015) who

established that manufacturing firms that have good access to formal credit reported high financial performance.

4.8.2 Linear Regression Results of Financial Performance and Access to Finance.

Data on independent variables were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.27. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between access to finance and financial performance of manufacturing firms in Kenya.

Table 4.27: Regression of Financial Performance and Access to Finance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Primary	.810[a]	.656	.654	.61237
Secondary	.413[a]	.171	.165	.1201273

a. Predictors: (Constant), Access to Finance

The primary data results showed that access to finance had moderate explanatory power on financial performance as it accounted for 65.6% percent of its variability (R square = 0.656). This means that about 65.6% of the variation in financial performance is explained by the model.

This means 34.4% of the variation in financial performance is unexplained by the model. Adjusted R^2 is a modified version of R^2 that has been adjusted for the number of predictors in the model by less than chance. The adjusted R^2 of 0.654 which is slightly lower than the R^2 value is a precise indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables.

The adjusted R^2 indicates that 65.4% of the changes in the financial performance is explained by the model and 34.6% is not explained by the model. This means that access to finance has a strong influence on the financial performance of manufacturing firms in Kenya. These findings were supported by a study on the financial performance of manufacturing firms in Kampala that established a positive relationship between access to credit and financial performance (Nyangoma, 2012). The results were also supported by findings of Kalunda (2013) that access to finance has a moderate relationship with financial performance. Additionally Sabana (2014) found a positive relationship between financial access and performance of enterprises in Nairobi city council. The findings were also supported by a study on small and medium enterprises in Nairobi that established a positive relationship between access to finance and financial performance (Namusonge, 2014).

Secondary data on independent variables was regressed with secondary data on return on assets of manufacturing firms in Kenya. The results suggest that independent variables accounted for about 17.1% of variations in return on assets of manufacturing firms in Kenya (R square .171). The other remaining percentage is accounted for by other determinants

Table 4.28: ANOVA of Financial Performance and Access to Finance

Model		Sum of Squares	Df	Mean Square	F	Sign.
1	Regression	100.142	1	100.142	26.704	.000[b]
Primary	Residual	52.500	140	.375		
	Total	152.642	141			
	Regression	.416	1	.416	28.803	.000[b]
Secondary	Residual	2.020	140	.014		
	Total	2.436	141			

A. Dependent Variable: Financial Performance, Return on Asset.
B. Predictors: (Constant), Access To Finance

In table 4.28 ANOVA F test was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. Primary data ANOVA test results on Access to Finance revealed F-statistic of 26.704 which was significant at 0.05 ($P < 0.05$). ANOVA test revealed that access to finance has significant effect on financial performance of manufacturing firms. The P value was 0.000 which was less than 5% level of significance. The *P* value was 0.000 implying that the model was significant. The study therefore rejected the first null hypothesis.

Ho: Access to finance does not significantly affect the financial performance of manufacturing firms in Kenya.

Secondary data ANOVA test results on independent variables revealed F-statistic of 28.803 which was significant at 0.05 ($P < 0.05$). The test revealed that access to finance has significant effect on return on assets and consequently financial performance of manufacturing firms.

Table 4.29: Model of Coefficients of Access to Finance

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sign.**
	B	**Std. Error**	**Beta**		
(Constant)	.375	.165		2.276	.002
Access To Finance(primary)	.780	.048	.810	16.341	.000
(Constant)	.134	.077		1.725	.000
Access to Finance(secondary)	.728	.136	.413	5.367	.000

a. Dependent Variable: Financial Performance, Return on assets.

To assess the effect of access to finance on the financial performance of manufacturing firms, the study had set the following null hypothesis; HO**:** There is a no significant effect of access to finance on financial performance of manufacturing firms in Kenya. The individual regression results in Table 4.29 reveal statistically significant positive linear relationship between access to finance and financial performance ($\beta = 0.810$, P-value = 0.000). Hence, HO: is rejected since $\beta \neq 0$ and P-value<0.05. These findings are supported by a study in Nairobi city council that established a positive relationship between financial access and performance of enterprises (Sabana, 2014).

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.1.

$Y = \beta_o + \beta_1 X_1 + \varepsilon$

$Y = 0.375 + 0.780X_1$ ..... Equation 4.1

Where,

Y – Financial Performance, X_1 – Access to finance

From the regression model, it is clear that access to finance had a higher influence on financial performance.

The secondary data results revealed statistically significant positive linear relationship between access to finance and return on assets ($\beta = 0.413$, P-value = 0.000). These findings are supported by Njeru, (2015) who postulates that access to finance allows entrepreneurs to take advantage of economic opportunities and provide a basis for planning and expanding business conditions. The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.2.

$Y = \beta_o + \beta_1 X_1 + \varepsilon$

$Y = 0.134 + 0.728X_1$ ..... Equation 4.2

Where,

Y – Return on assets, X_1 – Access to finance

From the regression model, access to finance had a higher influence on return on assets.

4.8.3 Correlation Results of Financial Performance and Access to Finance

A correlation test was conducted to test the relationship between access to finance and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.30.

Table 4.30: Correlation Coefficients of Financial Performance and Access to Finance (Primary data)

Variable		Access Finance	ToFinancial Performance
Access To Finance	Pearson Correlation	1	.810**
	Sig. (2-tailed)		.000
	N	142	142
Financial Performance	Pearson Correlation	.810**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

The results indicates that there is a relationship between access to finance and financial performance with coefficient of 0.810. This confirms that there is a positive and significant relationship between access to finance and Firms financial performance. The study supports the findings of Omar (2017) who found a positive relation between access to finance and growth of family business in Kenya. Omar *et al.* (2014) points access to finance as an important determinant of the performance of enterprises.

Table 4.31: Correlation Coefficients of Financial Performance and Access to Finance(Secondary data)

Variable		Access to Finance	Financial Performance
Access to Finance	Pearson Correlation	1	.413**
	Sig. (2-tailed)		.000
	N	142	142
Return on assets	Pearson Correlation	.413**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

Secondary data results indicates that there is a relationship between access to finance and return on assets with coefficient of 0.413. This confirms that there is a positive and significant relationship between access to finance and financial performance. The study supports the findings of Sabana (2014) who found a positive relation between financial access and performance of micro enterprises in Nairobi City in Kenya.

4.9 Inferential Results of Capital structure on Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on capital structure was done to facilitate computation of descriptive statistics, factor analysis, correlation and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.9.1 KMO test and Capital Structure Factor Results

In order to find out the factors that were driving capital structure in manufacturing firms, KMO and Bartlett's test were performed. KMO measures sampling adequacy which explains the extent to which indicators of a construct belong to each other. KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on capital structure had 0.861 which represented great acceptability of the use of factor analysis and sufficient intercorrelations. Bartlett's test of Sphericity is significant (chi-square=521.049, $p<0.000$). Tables 4.32 shows the results of factor analysis for capital structure.

Table 4.32: KMO and Bartlett's Test for Capital Structure

Kaiser-Meyer-Olkin	Measure of Sampling adequacy	.861
Bartlett's Test of Sphericity	Approx. Chi-Square	521.049
	df	36
	Sig.	.000

Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix. The total variance explained in the Capital structure constructs was explained in table 4.33

Table 4.33: Total Variance Explained for Capital Structure Measures

Compo-nent	**Initial Eigen values**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumula tive %**	**Total**	**% of Variance**	**Cumula tive %**	**Total**	**% of Variance**	**Cumul a tive %**
1	6.230	62.306	62.306	6.230	62.306	62.306	6.028	60.281	60.281
2	1.713	17.135	79.441	1.713	17.135	79.441	1.916	19.160	79.441
3	.877	9.745	89.186						
4	.372	4.132	93.318						
5	.271	3.012	96.330						
6	.158	1.755	98.085						
7	.097	1.081	99.166						
8	.048	.533	99.699						
9	.027	.301	100.000						

Extraction Method: Principal Component Analysis.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation. The nine measures of capital structure were subjected to factor analysis and the results show that there were two critical factors driving capital structure use in manufacturing firms which accumulated to 79.44% of the total variance. Factor I had the highest variance of 62.306% while factor two had 17.135%. These two factors had the greatest influence on capital structure and hence the financial performance of manufacturing firms. This is because they all had Eigen values of more than 1.0. Table 4.34 depicts the rotated component factor loadings capital structure drivers of financial performance.

Table 4.34: Rotated Component Matrix for Capital Structure Measures

Opinion statement		Component	
		Equity capital	**Debt capital**
1	The use of equity capital facilitates our firms financial performance	.928	-.103
2	The use of equity capital helps maximize firm value	.916	-.040
3	Optimal financing mix facilitates our firms financial performance	.935	-.057
4	Stability of retained earnings have impacted positively on financial performance	.973	-.069
5	High dividend payout have impacted negatively on financial performance	.965	-.093
6	We rely more on self financing in terms of retained earnings	.935	-.059
7	We use more debt than equity because interest on debt is tax deductible	.286	.850
8	Use of debt capital facilitates our firms financial performance	-.053	.441
9	Bond financing is preferred due to increased earnings	.283	.850

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

The analysis of variance identified the Eigen values which is the variance of each factor or component in comparison with the total variance of all the items in the construct. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation.

Principal component analysis with a Varimax rotation was used to factor the nine items related to capital structure and financial performance. The correlation matrices among the items revealed a number of correlations in excess of 3 which meant that all responses were suitable for factorization. From the Variance matrix, there were two variables that had Eigen values of more than 1.0 which meant that these were the capital structure variables that had the highest influence on manufacturing firm's performance. Component one had the highest variance of 6.23 which accounted for 62.306 % of the variance. Component 2 had the second highest variance of 1.713 contributing 17.13% of the variance.

The cumulative results showed that there were two important factors driving the use of capital structure in manufacturing firms which accumulated to 79.441% of the total variance in this construct. The other three factors also explained the variance at less than 20% which meant that some variance had been explained by latent variables. The researcher deleted all the variables which did not relate to either factor 1 or 2 in order to continue working out for further relationships.

From the rotation matrix, all the capital structure measures were grouped into two factors equity capital and debt capital. Factor one had five variables which include use of equity capital facilitates our firms financial performance, use of equity capital helps to maximize firm value, Optimal financing mix facilitates financial performance, stability of retained earnings have impacted positively on financial performance, high dividend payout have impacted negatively on financial performance and we rely more on self financing in terms of retained earnings and the high cost of equity discourages our firm from using it. This factor was named equity capital. Factor two had we use more debt than equity because interest on debt is tax deductible, use of debt capital facilitates our firms financial performance and Bond financing is preferred due to increased earnings. This factor was named debt capital. The explanation is that most of

the capital structure influence on manufacturing firm's financial performance was explained by these two factors

The agreed respondents indications on financial performance of manufacturing linked with equity capital was consistent with the studies of Zurigat (2012) who established that manufacturing firms that have high leverage have good financial performance. The results were also consistent with the findings of (Okiro, 2014) who found a significant relationship between capital structure and financial performance.

4.9.2 Linear Regression Results of Capital Structure and Financial Performance

Data on independent variables were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.35. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between capital structure and financial performance of manufacturing firms in Kenya.

Table 4.35: Regression of Financial Performance and Capital Structure (primary data)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Primary	.695[a]	.483	.480	.75062
Secondary	.474[a]	.225	.219	.11614

a. Predictors: (Constant), Capital Structure

The primary data results showed that capital structure had moderate explanatory power on financial performance as it accounted for 48.3% percent of its variability (R square = 0.483). This means that about 48.3% of the variation in financial performance is explained by the results.

This means 51.7% is unexplained by the results. Adjusted R_2 is a modified version of R^2 that has been adjusted for the number of predictors in the model by less than chance. The adjusted R^2 of 0.483 which is slightly lower than the R^2 value is a precise indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables. The adjusted R_2 indicates that 48.3% of the changes in the financial performance is explained by the model and 51.7% is not explained by the results.

This means that capital structure has a moderate influence on the financial performance of manufacturing firms in Kenya. The results identified with a study of Javed *et. al.,* (2012) which established a moderate relationship between capital structure and financial performance. Besides Olaro (2014) found a moderate relationship between capital structure and performance of firms listed at the East African community securities exchange. Birundu (2015) found a positive relationship between capital structure and financial performance of SMEs in Thika sub-county.

Like in the primary data, secondary data results showed that capital structure had moderate explanatory power on return on assets as it accounted for 22.50% percent of its variability (R square = 0.225). This means that capital structure has a moderate influence on the return on assets of manufacturing firms in Kenya. The results identified with a study of Nawi (2015), which established a positive relationship between capital structure and financial performance of SMEs in Malysia.

Table 4.36: ANOVA of Financial Performance and Capital structure

Model		Sum Squares	of df	Mean Square	F	Sign.
Primary	Regression	73.763	1	73.763	130.918	.000[b]
	Residual	78.880	140	.563		
	Total	152.642	141			
Secondary	Regression	.548	1	.548	40.592	.000[b]
	Residual	1.888	140	.013		
	Total	2.436	141			

a. Dependent Variable: Financial Performance, Return on assets.

b. Predictors: (Constant), Capital Structure.

In table 4.36 Stepwise ANOVA was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. The secondary data ANOVA test results on capital structure revealed F-statistic of 40.592 which was significant at 0.05 ($P < 0.05$). The primary data ANOVA test results on capital structure revealed F-statistic of 130.918 which was significant at 0.05 ($P < 0.05$). ANOVA test revealed that capital structure has significant effect on financial performance of manufacturing firms. The P value was 0.000 which was less than 5% level of significance. This is depicted by linear regression results. The *P* value was 0.000 implying that the model was significant. The study therefore rejected the second null hypothesis.

Ho: Capital structure does not significantly affect the financial performance of manufacturing firms in Kenya.

Table 4.37: Model of Coefficients

Model		Unstandardized Coefficients		Standardized t Coefficients		Sign.
		B	Std. Error	Beta		
Primary	(Constant)	.851	.192		4.426	.000
	Capital Structure	.688	.060	.695	11.442	.000
Secondary	(Constant)	.198	.056		3.557	.000
	Capital Structure	.612	.096	.474	6.371	.000

a. Dependent Variable: Financial Performance, Return on asset

To determine the effect of capital structure on the firm performance, the null hypotheses was formulated as follows: H0: There is a no significant effect of capital structure on the financial performance of manufacturing firms in Kenya. The individual results showed in table 4.37 revealed that the effect of capital structure on financial performance was statistically significant (β=0.695, p-value =0.000). Hence, H0: is rejected since $\beta \neq 0$ and P-value <0.05. The results are supported by a study by in Malaysia that established a positive relationship between capital structure and financial performance of SMEs (Nawi, 2015).

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.3.

$Y = \beta_o + \beta_2 X_2 + \varepsilon$

$Y = 0.851 + 0.688 X_2$ ..... Equation 4.3

Where,

Y – Financial Performance, X_2 – Capital Structure

From the regression model, capital structure had a higher influence on financial performance.

Like in the primary data, the regression model obtained using secondary data showed that capital structure had a positive influence on return on assets (β=.474). It is prudent to increase capital as a strategy of increasing return on assets. Manufacturing firms can achieve this by encouraging shareholders to have more equity in the firm.

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.4.

$Y = \beta_o + \beta_2 X_2 + \varepsilon$

$Y = 0.198 + 0.612 X_2$ ..... Equation 4.4

Where,

Y – Return on assets, X_2 – Capital structure

From the regression model, capital structure had a higher influence on return on assets.

4.9.3 Correlation Results of Financial Performance and Capital Structure

A correlation test was conducted to test the relationship between capital structure and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.38.

Table 4.38: Correlation Coefficients **of Financial Performance and Capital Structure (Primary data)**

Variable		Capital Structure	Financial Performance
Capital Structure	Pearson Correlation	1	.695**
	Sig. (2-tailed)		.000
	N	142	142
Financial Performance	Pearson Correlation	.695**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

A correlation test was conducted to test the relationship between capital structure and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.38. The results indicates that there is a relationship between capital structure and financial performance with coefficient of 0.695. This confirms that there is a positive and significant relationship between capital structure and firms financial performance. The study supports the findings of Monyi (2017) who found a positive relation between capital structure and financial performance of deposit taking microfinance institutions in Kenya.

Table 4.39: Correlation Coefficients of Financial Performance and Capital Structure(Secondary data)

Variable		Capital Structure	Financial Performance
Capital Structure	Pearson Correlation	1	.325**
	Sig. (2-tailed)		.000
	N	142	142
Return on Asset	Pearson Correlation	.325**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

Secondary data results indicates that there is a relationship between capital structure and return on asset with coefficient of 0.325. The study supports the findings of Monyi (2017) who found a positive relation between capital structure and financial performance of micro enterprises in Nairobi City County in Kenya.

4.10 Inferential Results of Cost of Capital on Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on cost of capital was done to facilitate computation of factor analysis and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.10.1 Cost of Capital Factor Results

Cost of capital is the rate of return required by owners for supplying capital for financing the enterprise. Cost of capital may be used to evaluate investment decisions as

well as design a firm's debt policy. It represents a financial standard for allocating a firms funds, supplied by owners and creditors to the various investment projects in an efficient manner (Okelo, 2015). A Principal Component Analysis with varimax rotation was performed on nine cost of capital measures in order to examine the dimensionality of cost of capital and financial performance and also to find out if all the variables were significant to financial performance. The other objective was to group the common factors and to retain a small number of factors which had the highest influence (Sabana, 2014).

In order to find out the factors that were driving cost of capital in manufacturing firms, KMO and Bartlett's test were performed. KMO measures sampling adequacy which explains the extent to which indicators of a construct belong to each other. The results of factor analysis were shown in tables 4.40.

Table 4.40: Cost of Capital Measures KMO and Bartlett's Test

Kaiser-Meyer-Olkin	Measure of Sampling Adequacy.	.772
Bartlett's Test of Sphericity	Approx. Chi-Square	377.728
	df	36
	Sig.	.000

KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on cost of capital had 0.772 which represented great acceptability of the use of factor analysis and sufficient intercorrelations.

Bartlett's test of Sphericity is significant (chi-square=377.728, p<0.000). Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix. The total variance explained in the cost of capital constructs was explained in table 4.36.

Table 4.41: Total Variance Explained for Cost of Capital Measures

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.981	49.812	49.812	4.981	49.812	49.812	4.968	49.685	49.685
2	2.112	21.124	70.937	2.112	21.124	70.937	2.125	21.252	70.937
3	.980	10.890	81.827						
4	.682	7.580	89.407						
5	.489	5.434	94.841						
6	.247	2.749	97.590						
7	.115	1.279	98.870						
8	.066	.736	99.606						
9	.035	.394	100.000						

Extraction Method: Varimax Rotation.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation. The nine measures of cost of capital were subjected to factor analysis and the results show that there were two important factors driving cost of capital use in manufacturing firms which accumulated to 70.937% of the total variance.

Factor I had the highest variance of 49.812% while factor two had 21.124%. These two factors had the greatest influence on cost of capital and hence the financial performance of manufacturing firms. This is because they all had Eigen values of more than 1.0. The analysis of variance identified the Eigen values which is the variance of each factor or component in comparison with the total variance of all the items in the construct.

From the Variance matrix, there were two variables that had Eigen values of more than 1.0 which meant that these were the cost of capital variables that had the highest influence on manufacturing firm's performance.

The cumulative results showed that there were three important factors driving the use of cost of capital in manufacturing firms which accumulated to 70.937% of the total variance in this construct. Further relationships as shown in the rotated component matrix in table 4.42.

Table 4.42: Rotated Component Matrix for Cost of Capital Measures

	Opinion statement	Component	
		Cost of debt	Cost of equity
1	Interest paid to debt holders have impacted negatively on financial performance	.894	-.049
2	The firm has employed more debt in order to reduce tax liability and increase value	.947	.017
3	The high cost of debt impacts negatively on financial performance	.758	-.160
4	cost of equity impacts negatively on financial performance	.100	.962
5	The high cost of equity discourages our firm from using it	.018	.932
6	In our firm the cost of equity determines our choice of financing	.131	.946
7	Interest rates have an impact on firms financial performance	.613	.165
8	The company considers cost of preference shares as an important factor in determining financial performance.	.922	.011
9	The high cost of preference shares discourages our firm from using it	-.147	.192

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

From the rotation matrix in Table 4.42 all the cost of capital measures were grouped into two factors namely cost of debt and cost of equity. Component one had Interest paid to debt holders have impacted negatively on financial performance, The firm has employed

more debt in order to reduce tax liability and increase value, The high cost of debt impacts negatively on financial performance, Interest rates have an impact on firms financial performance and the company considers cost of preference shares as an important factor in determining financial performance. This factor was named cost of debt. Component two had cost of equity impacts negatively on financial performance. The high cost of equity discourages our firm from using it and the company considers cost of preference shares as an important factor in determining financial performance. This factor was named cost of equity. The explanation is that most of the cost of capital influence on manufacturing firm's financial performance was explained by these two factors. The average means of each construct was analyzed. Factor one which was named cost of debt had an average mean of 2.989 while factor two which was named cost of equity had a mean of 2.878. The high cost of preference shares discourages our firm from using it was henceforth excluded from further analysis because it seemed to have low mean and therefore much of its influence could be explained by the other factors.

The agreed respondents indications on financial performance of manufacturing linked with cost of equity was consistent with the studies of Ahmad (2015) who found that greater profitability of a firm is associated with a lower cost of equity. The results were also consistent with the findings of Yassin (2014) who found a significant negative relationship between cost of debt and financial performance.

4.10.2: Linear Regression Model of Financial Performance and Cost of Capital.

Data on independent variables were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.43. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between cost of capital and financial performance of manufacturing firms in Kenya.

Table 4.43: Regression of Financial Performance and Cost of Capital

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.679[a]	.461	.457	.76670

a. Predictors: (Constant), Cost of Capital

The results showed that cost of capital had moderate explanatory power on financial performance as it accounted for 46.1% percent of its variability (R square = 0.461). This means that about 46.1% of the variation in financial performance is explained by the results. Additionally 53.9% of the variation in financial performance is unexplained by the model. Adjusted R^2 is a modified version of R^2 that has been adjusted for the number of predictors in the model by less than chance. The adjusted R^2 of 0.457 which is slightly lower than the R^2 value is a precise indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables.

The adjusted R^2 indicates that 45.7% of the changes in the financial performance is explained by the model and 54.3% is not explained by the model. Therefore cost of capital has a low influence on the financial performance of manufacturing firms in Kenya. Ojeka (2014) supported this study by establishing a moderate positive relationship between cost of capital and financial performance. The results are also supported by a study by Mariana (2015) which established a moderate relationship between cost of capital and financial performance.

Table 4.44: ANOVA F-Test of Financial Performance and Cost of Capital

Model	Sum of Squares	df	Mean Square	F	Sign.
Regression	70.345	1	70.345	119.668	.000[b]
Residual	82.297	140	.588		
Total	152.642	141			

A. Dependent Variable: Financial Performance

B. Predictors: (Constant), Cost of Capital

In table 4.44 Stepwise ANOVA was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. The ANOVA test results on cost of capital revealed F-statistic of 119.668 which was significant at 0.05 ($P < 0.05$). ANOVA test revealed that cost of capital has significant effect on financial performance of manufacturing firms. The P value was 0.000 which was less than 5% level of significance. The *P* value was 0.000 implying that the model was significant. The study therefore rejected the third null hypothesis.

Ho: Cost of capital does not significantly affect the financial performance of manufacturing firms in Kenya.

Table 4.45: Model **of Coefficients on cost of capital**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sign.
		B	Std. Error	Beta		
1	(Constant)	.474	.234		2.031	.002
	Cost Of Capital	.794	.073	.679	10.939	.000

Dependent Variable: Financial Performance

The regression constant is also significant; therefore the fitted equation is;

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.6.

$Y = \beta_o + \beta_3 X_3 + \varepsilon$

$Y = 0.474 + 0.794 X_3$ ..... Equation 4.6

Where,

Y – Financial Performance, X_3 – Cost of capital

From the regression model, it is clear that cost of capital had a higher influence on financial performance.

4.10.3 Correlation Results of Financial Performance and Cost of capital

A correlation test was conducted to test the relationship between cost of capital and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.46.

Table 4.46: Correlation Results of Financial Performance

Variable		Cost Of Capital	Financial Performance
Cost Of Capital	Pearson Correlation	1	.679**
	Sig. (2-tailed)		.000
	N	142	142
Financial Performance	Pearson Correlation	.679**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

A correlation test was conducted to test the relationship between cost of capital and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.46. The results indicates that there is a relationship between cost of capital and financial performance with coefficient of 0.679. This confirms that there is a positive and significant relationship between cost of capital and firms financial performance.

4.11 Inferential Results of Fiscal Tax Incentives on Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on taxation policy was done to facilitate computation of factor analysis and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.11.1 Factor Results of Fiscal Tax Incentives

Taxes should meet their commonly stated objectives that is, to raise substantial revenue for government, to discourage consumption of certain potentially harmful products and to promote equity (Okelo, 2015). Finance experts agree that emerging nations must increasingly mobilize their own internal resources to provide economic growth. The most important instrument by which resources are marshaled is through the implementation of an effective tax policy (Namusonge, 2014).

Taxes increase the cost of running business and reduce the link between investment and the actual returns, thereby affecting economic development and growth (Njuru, 2013). In order to find out the factors that were driving tax incentives in manufacturing firms, KMO and Bartlett's test were performed. KMO measures sampling adequacy which explains the extent to which indicators of a construct belong to each other. Table 4.47 shows the results of factor analysis for fiscal tax incentives.

Table 4.47: KMO and Bartlett's Test for Fiscal Tax incentives

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	595.992
	df	36
	Sig.	.000

KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on fiscal tax incentives had 0.831 which represented great acceptability of the use of factor analysis and sufficient intercorrelations.

Bartlett's test of Sphericity is significant (chi-square=595.992, p<0.000). Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix.

Table 4.48: Total Variance Explained for Fiscal Tax incentive Measures

Compo-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumula tive %	Total	% of Variance	Cumula tive %	Total	% of Variance	Cumula tive %
1	5.974	59.749	59.749	5.974	59.749	59.749	5.931	59.314	59.314
2	2.077	20.772	80.521	2.077	20.772	80.521	2.120	21.207	80.521
3	.833	9.251	89.771						
4	.397	4.414	94.186						
5	.267	2.969	97.154						
6	.116	1.284	98.439						
7	.063	.705	99.144						
8	.050	.553	99.697						
9	.027	.303	100.000						

Analysis Extraction Method: Principal Component.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the

analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation. The nine measures of tax incentives were subjected to factor analysis and the results show that there were two critical factors driving tax incentives use in manufacturing firms which accumulated to 80.52% of the total variance. Factor one had the highest variance of 59.74% while factor two had 20.77%. These two factors had the greatest influence on fiscal tax incentives and hence the financial performance of manufacturing firms. This is because they all had Eigen values of more than 1.0. Table 4.49 depicts the rotated component factor loadings tax incentive drivers of financial performance.

Table 4.49: Rotated Component Matrix for Fiscal Tax Incentive Measures

Opinion statement	Component	
	Tax credits and allowances	**Export promotion incentives**
1 Investment tax credits and allowances facilitates our firm's financial performance.	.929	.027
2 Investment deduction upon construction of a new building facilitates our firm's financial performance.	.595	.085
3 Investment deduction upon installation of new machinery facilitates our firm's financial performance	.964	.018
4 Zero rated tax rate facilitates our firm's financial performance	.063	.951
5 Tax exemptions and credits offered by the government facilitates our firms financial performance	.946	.009
6 Tax amnesty and holidays is a precursor for our firms financial performance	.911	-.022
7 Tax remission on exported goods facilitates our firm's financial performance.	.167	.750
8 Export promotion incentives facilitates our firm's financial performance	.143	.955
9 Reduced taxes on raw materials facilitates our firm's financial performance	-.137	.958

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 2 iterations.

The analysis of variance identified the Eigen values which is the variance of each factor or component in comparison with the total variance of all the items in the construct. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation.

Principal component analysis with a Varimax rotation was used to factor the nine items related to fiscal tax incentives and financial performance. The correlation matrices among the items revealed a number of correlations in excess of two which meant that all responses were suitable for factorization. From the Variance matrix, there were two variables that had Eigen values of more than 1.0 which meant that these were the fiscal tax incentive variables that had the highest influence on manufacturing firm's performance. Component one had the highest variance of 5.97 which accounted for 59.749 % of the variance. Component two had the second highest variance of 2.077 contributing 20.77% of the variance. The cumulative results showed that there were two important factors driving the use of fiscal tax incentive measures in manufacturing firms which accumulated to 80.52% of the total variance in this construct. The other factors also explained the variance at less than 20% which meant that some variance had been explained by latent variables. In evaluating what variables to retain the factor loadings were taken into account and the minimum factor loadings were 0.57 which were considered to be high. The factors affecting one variable were all put together and given a name so that the factors were reduced to a minimum of two. The researcher deleted all

the variables which did not relate to either factor 1 or factor 2 in order to continue working out for further relationships.

From the rotation matrix in Table 4.49, all the nine measures were grouped into two factors. Tax incentive 1 which had investment tax credits and allowances facilitates our firm's financial performance, investment deduction upon construction of a new building facilitates our firm's financial performance, investment deduction upon installation of new machinery facilitates our firm's financial performance, zero rated tax rate facilitates our firm's financial performance, tax exemptions and credits offered by the government facilitates our firms financial performance and tax amnesty and holidays is a precursor for our firms financial performance. This factor was named tax credits and allowances. Tax incentives 2 had tax remission on exported goods facilitates our firm's financial performance, export promotion incentives facilitates our firm's financial performance and reduced taxes on raw materials facilitates our firm's financial performance. This factor was named export promotion incentives. The explanation is that most of the fiscal tax incentives influence on manufacturing firms financial performance was explained by these two factors. The agreed respondents indications on financial performance of manufacturing firms was consistent with the studies of Wawire (2015) who established a moderate relationship between taxation and financial performance.

4.11.2 Linear Regression Result of Financial Performance and Fiscal Tax incentives

Data on independent variables were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.50. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between fiscal tax incentives and financial performance of manufacturing firms in Kenya.

Table 4.50: Regression of Financial Performance and Fiscal Tax incentives

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699[a]	.489	.485	.74646

a. Predictors: (Constant), Fiscal Tax Incentives.

The primary data study results established that fiscal tax incentives had moderate explanatory power on manufacturing firm's financial performance as it accounted for 48.9 percent of its variability (R square = 0.489). This means that about 48.9% of the variation in financial performance is explained by the results. This means 50.1% of the variation in financial performance is unexplained by the model. Adjusted R^2 is a modified version of R^2 that has been adjusted for the number of predictors in the model by less than chance.

The adjusted R^2 of 0.489 which is slightly lower than the R^2 value is a precise indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables. The adjusted R^2 indicates that 48.9% of the changes in the financial performance is explained by the model and 51.1% is not explained by the results. This means that fiscal tax incentives has a moderate influence on the financial performance of manufacturing firms in Kenya. These results concur with the findings by Wawire (2013) which established a low positive relationship between taxation and financial performance in Kenya's private sector.

Table 4.51: Stepwise ANOVA

Model	Sum of Squares	df	Mean Square	F	Sign.
Regression	74.634	2	74.634	133.946	.000[b]
Residual	78.008	140	.557		
Total	152.642	141			

A. Dependent Variable: Financial Performance

B. Predictors: (Constant), Fiscal Tax Incentives

ANOVA was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. The ANOVA test results on fiscal tax incentives revealed F-statistic of 133.946 which was significant at 0.05 ($P < 0.05$). ANOVA test revealed that fiscal tax incentives has significant effect on financial performance of manufacturing firms. The P value was 0.000 which was less than 5% level of significance. The study therefore rejected the fourth null hypothesis.

Ho: Fiscal Tax Incentives does not significantly affect the financial performance of manufacturing firms in Kenya.

Table 4.52: Model of Coefficients of Fiscal Tax Incentives

Model		Unstandardized Coefficients		Standardized t Coefficients		Sign.
		B	Std. Error	Beta		
Primary	(Constant)	.648	.207		3.134	.002
	Fiscal Tax incentives	.730	.063	.699	11.573	.000

a. Dependent Variable: Financial Performance

To determine the effect of fiscal tax incentives on the firm performance, the null hypotheses was formulated as follows: H0: There is a no significant effect of fiscal tax incentives on the financial performance of manufacturing firms in Kenya. The individual results showed in table 4.52 revealed that the effect of fiscal tax incentives on financial performance was statistically significant (β=0.699, p-value =0.000). Hence the null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.7.

$Y = \beta_o + \beta_4 X_4 + \varepsilon$

$Y = 0.648 + 0.730 X_4$ ..... Equation 4.7

Where,

Y – Financial Performance, X_4 – Fiscal tax incentives

From the regression model, it is clear that fiscal tax incentives had a higher influence on financial performance.

4.11.3 Correlation Results of Financial Performance and Fiscal Tax Incentives

A correlation test was conducted to test the relationship between Tax Incentives and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.53.

Table 4.53: Correlation Financial Performance and Fiscal Tax incentives

Variable		Tax Incentives	Financial Performance
Fiscal Tax Incentives	Pearson Correlation	1	.699**
	Sig. (2-tailed)		.000
	N	142	142
Financial Performance	Pearson Correlation	.699**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

A correlation test was conducted to test the relationship between fiscal tax incentives and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.53. The results indicates that there is a relationship between fiscal tax incentives and financial performance with coefficient of 0.699. This confirms that there is a positive and significant relationship between fiscal tax incentives and firms financial performance. The results were also consistent with the findings of (Ojeka, 2014) whose study on tax policy and growth of manufacturing firms in Nigeria revealed

a moderate relationship between taxes and the business ability to sustain itself and to expand.

4.12 Inferential Results of Investment and Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis on investment practice was done to facilitate factor analysis and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.12.1 Investment Factor Results

Investment decision of a firm includes not only those investments that create revenues and profit, but also those that save money by reducing expenditure. Manufacturing is a force multiplier and investment in manufacturing yields four times the effect on GDP growth (Rissa, 2014). Okiro (2014) postulates that managers should invest in profitable ventures that will be of benefit to the shareholders. In order to find out the factors that were driving investment practice in manufacturing firms, KMO and Bartlett's test were taken. KMO measures sampling adequacy which explains the extent to which indicators of a construct belong to each other. Tables 4.54 shows the results of KMO test for investment measures.

Table 4.54: KMO and Bartlett's Test for Investment Measures

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.733
Bartlett's Test of Sphericity	Approx. Chi-Square	357.835
	df	36
	Sig.	.000

KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on investment practice had 0.733 which represented great acceptability of the use of factor analysis and sufficient intercorrelations.

Bartlett's test of Sphericity is significant (chi-square=357.835, p<0.000). Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix. The total variance explained in the investment practice constructs was explained in table 4.55.

Table 4.55: Total Variance Explained for Investment Practice Measures

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.525	45.258	45.258	4.525	45.258	45.258	4.495	44.955	44.955
2	2.162	21.624	66.882	2.162	21.624	66.882	2.192	21.927	66.882
3	.951	10.567	77.449						
4	.715	7.950	85.399						
5	.566	6.284	91.683						

6	.423	4.700	96.383
7	.207	2.296	98.679
8	.067	.743	99.422
9	.052	.578	100.000

Extraction Method: Principal Component Analysis.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages. The nine measures of investment practice were subjected to factor analysis and the results show that there were two critical factors driving investment policy use in manufacturing firms which accumulated to 66.882% of the total variance. Factor I had the highest variance of 45.258% while factor two had 21.624%. These two factors had the greatest influence on investment practice and hence the financial performance of manufacturing firm. Table 4.56 depicts the rotated component factor loadings.

Table 4.56: Rotated Component Matrix for Investment Measures

Opinion statement	Component	
	1	2
1 We prefer investment in government bonds as they give good returns	.681	.037
2 Investments such as Money market is preferred due to good returns and reliability	.859	-.002
3 Investment in government securities is highly preferred due to lower risk and earnings stability	.665	.008
4 Investment in stocks is highly preferred due to good returns and reliability	.213	.509
5 our investment Portfolio gives good returns than that of competitors	.033	.980
6 We prefer investment in corporate bonds as they give good returns	.039	.982
7 Long term investment such as plant and equipment preferred due to stability of earnings	.901	.051
8 Investment in manufacturing business helps to improve firm value	.760	-.002

a. Rotation converged in 3 iterations.

Extraction Method: Principal Component Analysis. 2 Components extracted.

The analysis of variance identified the Eigen values which is the variance of each factor or component in comparison with the total variance of all the items in the construct. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation.

Principal component analysis with a Varimax rotation was used to factor the nine items related to investment practice. The correlation matrices among the items revealed a number of correlations in excess of two which meant that all responses were suitable for factorization. From the Variance matrix, there were two variables that had Eigen values of more than 1.0 which meant that these were the investment practice variables that had the highest influence on manufacturing firm's performance. Component one had the highest variance of 4.5258 which accounted for 45.25 % of the variance. Component two had a variance of 2.162. The cumulative results showed that there were two critical factors driving the use of investment practice in manufacturing firms which accumulated to 66.882% of the total variance in this construct. The other three factors also explained the variance at less than 33% which meant that some variance had been explained by latent variables. In evaluating what variables to retain the factor loadings were taken into account and factors affecting one variable were all loaded up together and given a name so that the factors were reduced to a minimum of two. The researcher deleted all the variables which did not relate to either factor one, or two in order to continue working out for further relationships as shown in the rotated component matrix.

From the rotation matrix in Table 4.56, all the investment measures were grouped into two factors, investment practice 1 and investment practice 2. Investment practice 1 had Investment in government bonds gives good returns, investment in money market is preferred, our investment Portfolio gives good returns than that of competitors investment in government securities is preferred due to lower risk and earnings stability. This factor was named investment in stocks. Investment practice 2 had our Investment in core manufacturing is highly preferred due to good returns and reliability, and our firms investment portfolio is well diversified resulting to good returns and long term investment such as plant and equipment is preferred due to stability of earnings. This factor was named investment in manufacturing business. The explanation is that most of the investment practice influence on manufacturing firms' financial performance was

explained by these two factors. The agreed respondents indications on financial performance of manufacturing linked with investment in manufacturing was consistent with the studies of Kung'u (2014) who established that investment in manufacturing enhances income and profitability.

4.12.2 Linear Regression Result of Financial Performance and Investment

The aggregate mean score of investment practice (independent variable) were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.57.

Table 4.57: Regression of Financial Performance and Investment Practice

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
Primary	.761[a]	.579	.576	.67777
Secondary	.499	.249	.243	.114336

a. Predictors: (Constant), Investment Practice.

The primary data coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between investment practice and financial performance of manufacturing firms in Kenya. The results showed that investment practice had moderate explanatory power on financial performance as it accounted for 57.9% percent of its variability (R square = 0.579). This means that about 57.9% of the variation in financial performance is explained by the result. This means 42.1% of the variation in financial unexplained by the result.

The adjusted R^2 of 0.576 which is slightly lower than the R^2 value is a precise indicator of the relationship between the independent and the dependent variable because it is sensitive to the addition of irrelevant variables. The adjusted R^2 indicates that 57.6% of the changes in the financial performance is explained by the model and 42.4% is not explained by the model. This means that investment practice has a moderate influence on the financial performance of manufacturing firms in Kenya.

The secondary data results showed that investment practice had moderate explanatory power on financial performance as it accounted for 24.9% percent of its variability (R square = 0.249). This means that about 24.9% of the variation in financial performance is explained by the result.

Table 4.58: ANOVA of Financial Performance and Investment Practice

Model		Sum of Squares	df	Mean Square	F	Sign.
Regression		95.056	2	47.528	64.721	.000[b]
Primary Residual		57.586	139	.414		
	Total	152.642	141			
Regression		.615	2	.308	23.474	.000[b]
Secondary Residual		1.821	139	.013		
	Total	2.436	141			

A. Dependent Variable: Financial Performance, Return on Asset.

Predictors: (Constant), Investment Practice

ANOVA was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. The secondary data ANOVA test results on investment practice revealed F-statistic of 23.474 which was significant at 0.05 ($P < 0.05$). The primary data ANOVA test results on investment practice revealed F-statistic of 64.721 which was significant at 0.05 ($P < 0.05$). ANOVA test revealed that investment practice has significant effect on financial performance of manufacturing firms. The P value was 0.000 which was less than 5% level of significance. The *P* value was 0.000 implying that the model was significant. The study therefore rejected the fifth null hypothesis.

Ho: Investment practice does not significantly affect the financial performance of manufacturing firms in Kenya.

Table 4.59: Model of Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sign.**
		B	**Std. Error**	**Beta**		
Primary	(Constant)	.394	.192		2.056	.002
	Investment Practice	.845	.061	.761	13.867	.000
	(Constant)	.560	.186		3.016	.000

Secondary	Investment Practice	.241	.137	.160	1.758	.000

a. Dependent Variable: Profitability

To determine the effect of investment on manufacturing firm's financial performance, the null hypotheses was formulated as follows: H0**:** There is a no significant effect of investment on the financial performance of manufacturing firms in Kenya. The model of coefficient primary data results showed in table 4.59 revealed that the effect of investment practice on financial performance was statistically significant (β=0.761, p-value =0.000).

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.8.

$Y = \beta_o + \beta_5 X_5 + \varepsilon$

$Y = 0.394 + 0.845 X_5$ .....Equation 4.8

Where,

Y – Return on Assets, X_5 – Investment Practice

From the regression model, it is clear that investment practice had a higher influence on financial performance.

Secondary data results showed in table 4.59 revealed that the effect of investment in stocks on return on assets was statistically significant (β=0.160, p-value =0.000). Hence, H0: is rejected since $\beta \neq 0$ and P-value <0.05.

The null hypothesis is rejected since $\beta \neq 0$ and p-value<0.05. The regression model is summarized by equation 4.9.

$Y = \beta_o + \beta_5 X_5 + \varepsilon$

$Y = 0.560 + 0.241 X_5$ ..... Equation 4.9

Where,

Y – Return on Assets, X_5 – Investment Practice

From the regression model, it is clear that investment practice had a higher influence on return on assets.

4.12.3 Correlation Results of Financial Performance and Investment Practice

A correlation test was conducted to test the relationship between investment practice and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.60.

Table 4.60: Correlation Coefficients of Financial Performance and Investment Practice (Primary data)

Variable		Investment Practice	Financial Performance
Investment Practice	Pearson Correlation	1	.761**
	Sig. (2-tailed)		.000
	N	142	142
Financial Performance	Pearson Correlation	.761**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

A secondary data correlation test was conducted to test the relationship between investment practice and financial performance of manufacturing firms in Kenya. The correlation results are presented on Table 4.61. The results indicates that there is a relationship between investment practice and financial performance had a positive relationship with a coefficient of 0.761. This confirms that there is a positive and significant relationship between investment practice and firms financial performance.

Table 4.61: Correlation Coefficients of Financial Performance and Investment (Secondary data)

Variable		Financial Performance	Investment Practice
Return on Asset	Pearson Correlation	1	.499**
	Sig. (2-tailed)		.000
	N	142	142
Investment Practice	Pearson Correlation	.499**	1
	Sig. (2-tailed)	.000	
	N	142	142

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

A correlation test was conducted to test the relationship between investment practice and return on assets of manufacturing firms in Kenya. The correlation results are presented on Table 4.61. The results indicates that there is a relationship between investment practice and return on assets with coefficient of 0.499. This confirms that there is a positive and significant relationship between investment practice and firms return on assets and hence on financial performance. The study supports the findings of Kiaritha (2015) who found a positive relation between investment and financial performance of deposit taking Saccos in Kenya.

4.13 Inferential Results of independent variables and Financial Performance

In order to find out the factors that were driving financial performance measures in manufacturing firms, data analysis was done to facilitate computation of factor analysis, correlation and multiple regression to get answers to the study questions. To test the hypothesis for this study, the independent variables were regressed against financial performance as the dependent variable.

4.13.1 Financial Performance Factor Results

Factor analysis method was used to describe variability among observed variables and correlated variables in terms of lower number of unobserved (latent) variables called factors. This helps in reducing a large number of variables to small numbers of factors for modeling purposes and to select subset variables from a large set, based on which original variables had the highest correlations with the factor. Factor loadings are the correlations between the original variables and factors and the key to understanding the nature of a particular factor. Ng'an'ga (2017) avers that factor analysis helps in grouping variables with similar characteristics together. This study used factor analysis to create a small number of factors (access to finance, cost of capital, capital structure, taxation, investment practice and financial performance) from a large number of variables/indicators which were capable of explaining the observed variance in the larger number of variables. These factors were then used for further analysis. Squared factor loadings indicated what percentage of the variance in the original variables is explained by a factor (Sabana, 2014).

Financial performance is a measure of how well a firm has used assets from its primary mode of business to generate profits. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Javed *et. al.,* 2012). The key financial drivers enhancing performance are profit margin, asset turnover, leverage, cash flow, and working capital (Odhuon, Kambona, Odhuno, & Wadongo, 2013). Kungu (2014) postulates that a firm must earn sufficient profits to sustain operations of the business to be able to form profits for expansion and growth and to contribute towards the social overheads for the welfare of the society.

In order to find out the factors that were driving financial performance measures in manufacturing firms, KMO and Bartlett's test were taken. KMO measures sampling

adequacy which explains the extent to which indicators of a construct belong to each other.

Table 4.62 shows the results of factor results for financial performance.

Table 4.62: KMO and Bartlett's Test for Financial Performance

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.815
Bartlett's Test of Sphericity	Approx. Chi-Square	350.095
	df	21
	Sig.	.000

KMO test measures sample adequacy and it ranges between 0 and 1. A value close to 1 indicates that patterns of correlations are compact and hence the Factor Analysis is reliable and appropriate for the study. KMO measures on financial performance had 0.815 which represented great acceptability of the use of factor analysis and sufficient intercorrelations.

Bartlett's test of Sphericity is significant (chi-square=350.095, $p<0.000$). Bartlett's test checks if the observed correlation matrix diverges significantly from the identity matrix. The total variance explained in the financial performance constructs was explained in the next section.

Table 4.63: Total Variance Explained for Financial Performance Measures

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.072	60.722	60.722	6.072	60.722	60.722
2	.898	12.822	73.544			
3	.674	9.627	83.171			
4	.573	8.190	91.362			
5	.319	4.550	95.912			
6	.181	2.582	98.494			
7	.105	1.506	100.000			

Extraction Method: Principal Component Analysis.

The analysis of variance identified the Eigen values are the elements that describe the degree of change in each variable in relationship to the total overall variables. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation. The nine measures of financial performance were subjected to factor analysis and the results show that there was one critical factor driving financial performance use in manufacturing firms which accumulated to 60.722% of the total variance. The factor had the greatest influence on financial performance of manufacturing firms. This is because it had Eigen values of more than 1.0. Principal component analysis with a Varimax rotation was used to factor the nine items related to financial performance. The factor results are shown in the next section.

Table 4.64: Component Matrix for Financial Performance Measures

	Opinion Statement	Component 1
1	In our firm we have achieved enhanced operating income	.901
2	We have had an improved market share over the last five years	.646
3	In our firm have experienced increased profitability levels over the last five years	.772
4	We have had an increase in number of employees over the last five years	.839
5	In our firm we have achieved enhanced return on assets over the last five years	.654
6	In our firm we have achieved enhanced return on equity over the last five years	.707
7	In our firm we have experienced increased sales growth over the last five years	.891

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

The analysis of variance identified the Eigen values which is the variance of each factor or component in comparison with the total variance of all the items in the construct. In the analysis of variance other elements include the percentage of variance and also the cumulative percentages which were explained by the extracted factors before and after the rotation. The cumulative results showed that there was one critical factor driving financial performance in manufacturing firms which accumulated to 60.07% of the total variance in this construct. The other factors also explained the variance at less than 40% which meant that some variance had been explained by latent variables. In evaluating what variables to retain the factor loadings were taken into account and the minimum factor loadings were 0.53 which were considered to be moderately high.

From the extracted matrix all the financial performance measures were grouped into one factor, FP1. Financial performance 1 had enhanced operating income, enhanced liquidity position and increased profitability, enhanced market share, enhanced return on assets,

return on equity and increased sales growth. This factor was named financial performance. The explanation is that most of the financial performance influence on manufacturing firm's financial performance was explained by these one factor

The agreed respondents indications on financial performance of manufacturing linked with profitability was consistent with the studies of Mwirie (2015) who established that favorable financial performance of manufacturing firms is related to profitability and high asset turnover. The results were also consistent with the findings of (Ongore and Kusa 2013) who established that manufacturing firms that have high return on equity reported high financial performance.

4.13.2 Linear Regression Result of Independent Variables and Financial Performance

Primary data on independent variables were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 4.65. The coefficient of determination (R^2) and correlation coefficient (R) shows the degree of association between the dependent variables and financial performance of manufacturing firms in Kenya.

Table 4.65: Regression Results on Independent Variables and Financial Performance

Model	R	R Square	Adjusted RSquare	Std. Error of the Estimate
Primary data	.858[a]	.735	.726	.54492
Secondary	.618	.382	.369	.1044078

a. Predictors: (Constant), Capital Structure, Access To Finance,

Cost of Capital, Investment Practice,

Fiscal Tax Incentives.

b. Dependent Variable: Financial Performance, Return on Assets

The results showed that independent variables had moderate explanatory power on financial performance as it accounted for 73.5% percent of its variability (R square = 0.735). This means that about 73.5% of the variation in financial performance is explained by the model.

The adjusted R^2 indicates that 72.6% of the changes in the financial performance is explained by the model and 26.4% is not explained by the model. This means that independent variables has a strong influence on the financial performance of manufacturing firms in Kenya. The findings were also supported by a study on small and medium enterprises in Nairobi that established a positive relationship between dependent variable and financial performance (Namusonge, 2014).

Secondary data on independent variables was regressed with secondary data on return on assets of manufacturing firms in Kenya. The results suggest that independent variables accounted for about 38.2% of variations in return on assets of manufacturing firms in Kenya. The other remaining percentage is accounted for by other determinants.

Table 4.66: ANOVA F-Test Results of Financial Performance and Independent Variables

Model		Sum Squares	ofdf	Mean Square	F	Sig.
Primary	Regression	112.258	5	22.452	75.609	.000[b]
	Residual	40.384	137	.297		
	Total	152.642	141			
Secondary	Regression	.932	3	.311	28.486	.000[b]
	Residual	1.504	138	.011		
	Total	2.436	141			

b. Predictors: (Constant), Access To Finance, Capital Structure,

Cost of Capital, Fiscal Tax Incentives, Investment

Practice

In table 4.66 ANOVA F test was done to test the significance of the independent variables on the dependent variable and the existence of variable variations within the model. Secondary data ANOVA test results on independent variables revealed F-statistic of 28.486 which was significant at 0.05 ($P < 0.05$).

The primary data overall Analysis of Variance (ANOVA) highlighted in table 4.66 showed that the F-value of the overall regression model was 75.609 at $p < 0.05$ and the significance value of the model was 0.000. The significance value of 0.000 implied that the study variables access to finance, capital structure, cost of capital, tax incentives and

investment practice had a positive influence on manufacturing firm's financial performance.

4.13.3 Correlation Results of Manufacturing Firm's Financial Performance

To establish the relationship among determinants of financial performance and financial performance a correlation matrix was used. Table 4.67 shows the correlation matrix. The table shows the relationship between determinants of financial performance and financial performance. The correlation analysis was carried out to establish the relationship between independent variables and financial performance. Ng'ang'a *et al.* (2017) argued Pearson Correlation Coefficient is the most widely used method of measuring the degree of relationship between two variables. This ranges from -1 to +1, where -1 indicates a perfect negative correlation, 0 no correlation and +1 a perfect positive correlation. This assists a researcher in determining the magnitude and direction of the relationship between variables. In summary the results show strong implications to the performance of manufacturing firms in Kenya with a significance P- value of 0.000.

Table 4.67: Correlation Coefficients of Financial Performance and the IndependentVariables (Primary data)

		X_1	X_2	X_3	X_4	X_5	Y
Access To Finance (X_1)	Pearson Correlation	1					
	Sig. (2-tailed)						
	n	142					
Capital Structure (X_2)	Pearson Correlation	.631**	1				
	Sig. (2-tailed)	.000					
	n	142	142				
Cost Of Capital (X_3)	Pearson Correlation	.659**	.681**	1			
	Sig. (2-tailed)	.000	.000				
	n	142	142	142			
Fiscal tax incentives (X_4)	Pearson Correlation	.722**	.660**	.865**	1		
	Sig. (2-tailed)	.000	.000	.000			
	n	142	142	142	142		
Investment Practice (X_5)	Pearson Correlation	.715**	.775**	.771**	.750**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	n	142	142	142	142	142	
Financial Performance (Y)	Pearson Correlation	.810**	.695**	.679**	.699**	.761**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	n	142	142	142	142	142	142

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

*. Correlation is significant at the 0.05 level (2-tailed).

The results show that all the five determinants had a significant correlation with financial performance in manufacturing firms. Kung'u (2015) supported this study by establishing a positive correlation between the determinants and financial performance

of manufacturing firms in Kenya. Access to finance was found to correlate very strongly with all the four determinants with a positive correlation between access to finance and capital structure with a coefficient correlation of 0.631. Access to finance correlated strongly with investment policy with a coefficient correlation of 0.715. Access to finance had a very strong positive correlation with financial performance with a coefficient correlation of 0.810. This implies that if manufacturing firms adopt better access to finance measures as a determinant of financial performance, they are likely to improve their performance.

Nyangoma (2012) supported the findings of this study by establishing a positive relationship between access to credit and financial performance of manufacturing firms in Kampala. The implication of these findings to variables of financial performance in manufacturing firms is that access to finance is very important and manufacturing firms must improve their access to finance to ensure better financial performance.

The study established a moderate relationship between capital structure and financial performance of manufacturing firms in Kenya. The correlation was positive with a correlation coefficient of 0.695. Gitari (2014) supported these results by establishing a weak positive relationship between capital structure and financial performance of manufacturing companies in Nairobi securities exchange. Capital structure had a moderate correlation with tax incentives with a correlation coefficient of 0.699.

Cost of capital had moderate to weak relationship with the other determinants. There was a weak positive relationship between cost of capital and financial performance with a correlation coefficient of 0.679. Similarly fiscal tax incentive had a weak relationship with other determinants of financial performance with a correlation coefficient of 0.699 between fiscal tax incentive and financial performance. Wawire (2015) supported the findings of this study by establishing a weak correlation between effective tax rate, interest rate and performance. Additionally, Gatsi *et. al.* (2013) in their study of income

tax on financial performance of listed manufacturing firms in Ghana found a weak relationship between tax and financial performance.

The study established a moderate relationship between investment policy and the other determinants of financial performance. There was a positive relationship between investment policy and financial performance with a positive correlation coefficient of 0.761. Results show that all the determinants had a significant influence on financial performance of manufacturing firms in Kenya.

Table 4.68: Correlation Coefficients of Independent Variables and Financial Performance (Secondary data)

Variable		Access Finance	ToCapital Structure	Investment practice	Financial Performance
Access Finance	Pearson ToCorrelation	1	.350**	.219**	.413**
	Sig. (2-tailed)		.000	.009	.000
	N	142	142	142	142
Capital Structure	Pearson Correlation	.350**	1	.466**	.474**
	Sig. (2-tailed)	.000		.000	.000
	N	142	142	142	142
Investment Practice	Pearson Correlation	.219**	.466**	1	.499**
	Sig. (2-tailed)	.009	.000		.000
	N	142	142	142	142
Return on Asset	Pearson Correlation	.413**	.474**	.499**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	142	142	142	142

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

In table 4.68 the correlation coefficient between access to finance, capital structure, investment practice and return on assets was found to be 0.413, 0.474 and 0.499 respectively. This indicated a positive relationship between independent variables of

manufacturing firms and return on asset. The significance probability for this relationship was found to be 0.000, 0.000 and 0.009 respectively and all of them were less than 0.05 indicating that the relationship between financial performance and the independent variables was statistically significant at 5% level of significance.

4.14 Hypothesis Testing

The study was based on the premise that the determinants of financial performance influenced the financial performance of manufacturing firms. Four relevant hypotheses had been set to guide the study as highlighted in the conceptual framework in chapter two. To establish the statistical significance of respective hypotheses, simple and multiple linear regression analysis were conducted as appropriate at 95 percent confidence level ($\alpha = 0.05$). Additionally, the data was subjected to statistical collinearity tests in Table 4.69 which were deemed necessary to test for multicollinearity of variables before application of multiple regression analysis. This was necessary in order to find out if any independent variables were highly correlated with the dependent variable (Sabana, 2014).

Table 4.69: Model of Coefficients and Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Primary							
	(Constant)	2.121	.174		.696	.000		
	Access To Finance	.482	.067	.501	7.215	.002	.404	2.478
	Capital Structure	.152	.071	.153	2.129	.005	.375	2.665
	Cost Of Capital	.054	.111	.046	.481	.001	.214	4.662
	Fiscal Tax Incentives	.025	.101	.024	.251	.002	.209	4.784
	Investment Practice	.256	.097	.230	2.649	.006	.258	3.882
	Secondary							
	(Constant)	.665	.164		4.045	.000		
	Access to Finance	.459	.126	.260	3.636	.000	.874	1.144
	Capital Structure	.292	.102	.226	2.869	.005	.718	1.392
	Investment Practice	.470	.106	.336	4.436	.000	.779	1.284

a. Dependent Variable: Financial performance, Return on Asset

b. Predictors: (Constant), Access To Finance, Capital Structure, Cost of Capital, Fiscal Tax Incentives, Investment Practice

The primary data regression results in Table 4.69 revealed statistically significant positive linear relationship between independent variables and financial performance (β = .501, .153, .046, .024, .230) for access to finance, capital structure, cost of capital, Fiscal tax Incentives and investment practice respectively.

The secondary data results revealed statistically significant positive linear relationship between independent variables and return on assets (β = 0.260, .226 and .336) for access to finance, capital structure and investment respectively, P-value = 0.000). These findings are supported by a study in Nairobi city council that established a positive

relationship between independent variables and performance of enterprises (Sabana, 2014).

The regression model obtained using secondary data showed that the variables had greater influence on financial performance than those of primary data.

To test for multicollinearity the study adopted the variance inflation factors and the tolerance levels. Table 4.69 depicts the Variance Inflation Factor (VIF) which is used to provide an index that measures how much the variance (the square of the estimate's standard deviation) of the estimated regression coefficient is increased because of multicollinearity. Multicollinearity occurs when the independent variables in the model are correlated. This leads to increased standard error of estimates and it can give misleading results in a study**.** Severe multicollinearity can increase the variance of the coefficient of estimates and make them sensitive to small changes rendering the results difficult to interpret**.** The results show that their relationships were positive and statistically significant which established that the study variables had a high tolerance level and were free from multicollinearity. None of the VIF for the predictor variables exceeded 10, the threshold beyond which multicollinearity was a problem **(**Ng'ang'a, 2017). The lack of severe multicollinearity implies that the regression coefficients were reasonably accurate and therefore the fitted model was accurate in prediction.

The five hypotheses were tested all at once using multiple linear regression model whereby the independent variables were regressed against the dependent variable so as to determine the required coefficients and p-values for establishing significance. The test was done at significance level of $p < 0.05$ such that when p-value was more than the significance level, the model was insignificant.

The results in table 4.69 showed that Access to finance, capital structure, Cost of Capital, Tax Incentives and Investment in Stocks, Investment practice had a significant

effect with p-values of 0.002, 0.005, 0.001, 0.002 and 0.006 respectively. The research therefore rejected the null hypothesis of the determinants of financial performance because ($p < 0.05$). From the research results in table 4.69, a multiple linear regression equation that can be used to estimate financial performance of manufacturing firms in Kenya given the determinants of financial performance:

$$\mathbf{Y} = 2.121 + 0.482\ X_1 + 0.152\ X_2 + 0.054\ X_3 + 0.025\ X_4 + 0.256 X_5$$

where:

Y = Financial performance

$\mathbf{X_1}$ = Access to finance

$\mathbf{X_2}$ = Capital Structure

$\mathbf{X_3}$ = Cost of capital

$\mathbf{X_4}$ = Fiscal Tax Incentives

$\mathbf{X_5}$ = Investment Practice

The regression results showed that a unit change in access to finance, resulted in 48.2 percent ($\beta=0.482$) change in manufacturing firm financial performance. Additionally, a unit change in capital structure resulted in a 15.2 percent ($\beta=0.152$) while an increase in investment practice affected manufacturing firms financial performance by 25.6 percent ($\beta=0.256$).

For secondary data the null hypotheses were tested all at once using multiple linear regression model whereby the independent variables were regressed against the dependent variable so as to determine the required coefficients and p-values for

establishing significance. The test was done at significance level of $p < 0.05$ such that when p-value was more than the significance level, the model was insignificant.

The results in table 4.70 showed that Access to finance, capital structure and investment practice had a significant effect with p-values of 0.000, 0.005 and 0.000 respectively. The research therefore rejected the null hypothesis of the determinants of financial performance because ($p < 0.05$).

Table 4.70: Summary of Hypothesis Test Results

Hypothesis	**P-Values**	**Decision**
1.Access to finance does not significantly affect financial performance among manufacturing firms in Kenya	0.002	Rejected
2. Capital structure does not significantly affect financial performance among manufacturing firms in Kenya.	0.005	Rejected
3.Cost of capital does not significantly affect financial performance among manufacturing firms in Kenya.	0.001	Rejected
4. Fiscal Tax incentives does not significantly affect financial performance among manufacturing firms in Kenya.	0.002	Rejected
5. Investment practice does not significantly affect financial performance among manufacturing firms in Kenya.	0.006	Rejected

4.15 Discussion of Key Results

(a) Primary data

The key objective of the study was to assess the effect of determinants of financial performance among manufacturing firms in Kenya. The variables under considerations were access to finance, capital structure, cost of capital, fiscal tax incentives and investment practice. The next section discusses the variables in full.

4.15.1 Access to Finance

Access to finance was measured by seven constructs and the results found a positive relationship between access to finance and manufacturing firm's financial performance. The results agree with those of a study in Kampala that established a positive relationship between access to credit and financial performance (Nyangoma, 2012). The results are also consistent with a study of Sabana (2014) which established that access to finance was a key driver of firm performance. The five top constructs that were frequently used and which had the highest mean scores were access to credit through bank lending with a mean of 3.32, possession of collateral with a mean of 3.00 and access to funds through saving in financial and insurance products 2.01.

These moderately high means are supported by other studies that established the above constructs as key in influencing firm performance. The results also concur with a study of access to finance and performance of small scale enterprises in Kenya that established a positive relationship between access to finance and financial performance (Atieno, 2015). Regression Analysis was used to test $H0_1$: that there is a significant effect of access to finance on the performance of manufacturing firms in Kenya. The regression results showed a positive relationship between access to finance and manufacturing firms financial performance (R =0.810, P=0.000).

4.15.2 Capital Structure

Capital structure was measured by nine constructs and the results found a moderate relationship between capital structure and manufacturing firm's financial performance. The results agree with those of a study in Kenya that established a moderate relationship between capital structure and financial performance (Ebimobowe *et. al.*, 2013). Descriptive results of capital structure (CS) on manufacturing firm's financial performance showed that capital structure played a role on the firm performance with a mean of 3.176. This is consistent with a study of (Okiro, 2014) which established that capital structure had a moderate relationship with firm performance. This study had five top constructs that were frequently used and which had the highest mean scores were: equity capital facilitates financial performance with a mean of 4.02, equity capital helps maximize firm value with a mean of 4.00, optimal financing mix facilitates financial performance with a mean of 3.78, Stability of debt versus equity have impacted positively on our financial performance with a mean of 3.71, Increased liabilities have impacted negatively on our firms financial performance with a mean of 3.49, use more debt than equity because interest on debt is tax deductible with a mean of 3.51 and debt capital facilitates firms financial performance with a mean of 3.41. These moderately high means are supported by other studies that established the above constructs as weak in influencing firm performance. Regression Analysis was used to test $H0_1$: that there is no significant effect of capital structure on the financial performance of manufacturing firms in Kenya. The regression results showed a weak positive relationship between capital structure and financial performance (R=0.695, P=0.000). This means that 69.5% of change in manufacturing firm performance was explained by capital structure.

4.15.3 Cost of Capital

Cost of capital was measured by seven constructs and the results found a low positive relationship between cost of capital and manufacturing firm's financial performance. The results agree with those of a study that established a low positive relationship between cost of capital and financial performance (Ahmad, 2012). Descriptive results of cost of capital on manufacturing firms financial performance showed that cost of capital played a role on the firm performance with a mean of 3.176. This is consistent with a study of (Njuru *et. al*., 2013) which established that cost of capital had a weak relationship with firm's financial performance. This study five top constructs that were frequently used and which had the highest mean scores were: interest paid to debt-holders have impacted negatively on performance with a mean of 3.04, cost of equity impacts negatively on performance with a mean of 2.93, cost of equity discourages our firm from using it with a mean of 3.07, cost of equity determines our choice of financing with a mean of 2.97 and interest rates have an impact on financial performance with a mean of 2.19.

The moderately high means are supported by other studies that established the above constructs as moderate in influencing firm performance. The results also concur with a study of cost of capital and high-tech investment in East Africa that established a negative relationship between cost of capital and financial performance (Mariana, 2012). Regression Analysis was used to test $H0_3$: that there is no significant effect of cost of capital on the financial performance of manufacturing firms in Kenya. The regression results showed a moderate positive relationship between cost of capital and financial performance (R =0.679, P=0.000). This means that 67.9% of change in manufacturing firm performance was explained by cost of capital.

4.15.4 Fiscal Tax incentive

Fiscal tax incentive was measured by seven constructs and the results found a low positive relationship between taxation and manufacturing firm's financial performance. The results agree with those of a study that established a low positive relationship between tax incentives and financial performance (Karingi, 2016). The means on the influence of fiscal tax incentives on manufacturing firms' financial performance showed that fiscal tax incentives played a role on the firm performance with a mean of 3.28. This is consistent with a study of (Njuru *et. al*., 2013) which established that taxation had a weak relationship with firm performance. This study had seven top constructs that were frequently used and which had the highest mean scores were: The highest mean score was registered by reduced taxes on raw materials facilitates our firm's financial performance with a mean of 3.1972, the second were reduced taxes on raw materials facilitates our firm's financial performance with a mean of 3.0634. The third were tax exemptions and credits offered by the government facilitates performance with a mean of 2.9437 while investment deduction upon installation of new machinery facilitates our firm's financial performance had a mean of 2.9366. Investment deduction upon construction of a new building facilitates our firm's financial performance registered a mean of 2.9225 and Investment tax credits and allowances facilitates our firm's financial performance had a mean of 2.9155. The last construct was Zero rated tax rate facilitates our firm's financial performance had a mean of 2.7958. These moderately high means are supported by other studies that established the above constructs as positive in influencing firm performance. The results also concur with a study of tax policy and financial performance in Nigeria that established a negative relationship between taxation and financial performance (Ojeka, 2011). Regression Analysis was used to test $H0_4$: that there is no significant effect of tax incentives on the performance of manufacturing firms in Kenya. The regression results showed a weak positive relationship between tax incentives and

financial performance (R =0.699, P = 0.000). This means that 69.9% of change in manufacturing firm performance was explained by fiscal tax incentives.

4.15.5 Investment

Investment was measured by seven constructs and the results found a positive relationship between investment and manufacturing firm's financial performance. The results agree with those of a study that established a positive relationship between investment and financial performance (Coasta, 2012). Descriptive results on the influence of investment practice on manufacturing firms financial performance showed that investment played a role on firm performance with a mean of 3.85. This is consistent with a study of (Beccalli, 2010) which established that investment was a key driver of firm performance. This study five top constructs that were frequently used and which had the highest mean scores include investment in government bonds gives good returns with a mean of 4.1901, our investment portfolio gives good returns with a mean of 4.0775, short term investment such as money market with a mean of 3.9437, investment in government securities is preferred with a mean of 3.6479 while investment in stocks is preferred and long term investment such as land and buildings is preferred both registered a mean of 3.5845.

These moderately high means are supported by other studies that established the above constructs as key in influencing firm performance. The results also concur with a study of investment and GDP growth that established a positive relationship between investment and financial performance (Rissa, 2014). Regression Analysis was used to test $H0_5$: that there is no significant effect of investment on the financial performance of manufacturing firms in Kenya. The regression results showed a strong positive relationship between investment and financial performance (R =0.761, P = 0.000). This means that 76.1% of change in manufacturing firm performance was explained by investment.

Secondary data

The results of secondary data are summarized in terms of Return on Assets. The secondary data results revealed statistically significant positive linear relationship between independent variables and return on assets (β = 0.260, .226 and .336) for access to finance, capital structure and investment respectively, P-value = 0.000).

Secondary data on access to finance was regressed with secondary data on return on assets of manufacturing firms in Kenya. The results suggest that independent variables accounted for about 17.1% of variations in return on assets of manufacturing firms in Kenya (R square .171). The other remaining percentage is accounted for by other determinants. This is an indication of a positive relationship between access to finance and return on assets which is further supported by an F statistics of 28.803 and a significance of 0.000 which is less than the critical value of 0.05.

Secondary data results showed that capital structure had moderate explanatory power on financial performance as it accounted for 22.50% percent of its variability (R square = 0.225). This is an indication of a positive relationship between capital structure and return on assets which is further supported by an F statistics of 40.592 and a significance of 0.000 which is less than the critical value of 0.05. This means that capital structure has a moderate influence on the financial performance of manufacturing firms in Kenya.

The secondary data results showed that investment practice had moderate explanatory power on financial performance as it accounted for 24.9% percent of its variability (R square = 0.249). This means that about 24.9% of the variation in financial performance is explained by the result. This is an indication of a positive relationship between investment practice and return on assets which is further supported by an F statistics of 23.474 and a significance of 0.000 which is less than the critical value of 0.05. This

means that investment practice has a moderate influence on the financial performance of manufacturing firms in Kenya.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter presents a summary of the discussions of the study findings, conclusions that were derived from the study and the recommendations made from the findings of the study. Attention was given to the objectives and research questions of the study which were used as units of analysis. Additionally, the chapter also highlights the recommendations of the study and suggested areas for further research.

5.2 Summary

The section summarizes the results of the study in terms of the demographic and the quantitative analysis. The study sought to evaluate the determinants of financial performance of manufacturing firms in Kenya.

5.2.1 Effect of Access to Finance on Financial Performance Among Manufacturing Firms in Kenya.

The study found out that access to finance significantly and positively affected manufacturing firm performance. This resulted from the fact that access to finance were the key determinants of the manufacturing firm's financial performance. Manufacturing firms have little access to finance, which thus hampers their emergence and eventual growth. Access to finance enables managers of manufacturing firm business to expand their businesses, provides them working capital, fosters greater firm innovation and dynamism, enhances entrepreneurship, promotes more efficient asset allocation and enhances the firm's ability to exploit growth opportunities. By improving access to credit enterprises are able increase earnings and savings as well as plan for the future.

Access to credit contributes to higher productivity and efficiency. Firms with access to credit have higher average profit and sales volume along with greater average productivity of labour and capital as well as efficiency compared with firms with no access to credit. Lack of credit is considered as one of the critical impediments to raising investment. Increasing access to financial services for manufacturing firms is critical for helping them to adopt new and more productive income earning opportunities and technologies. Despite significant progress and adoption of new and innovative digital technologies, many manufacturers still lag behind in accessing credit due to costs, collateral and other barriers which preclude them to access formal financial services.

Financial services include loans through bank lending, savings in financial, insurance products and investment services. Access to these financial resources is needed to ensure flexibility in resource allocation and reduce the impact of cash flow problems. Firms without access to bank funding are more vulnerable to external shocks as the lack of access to credit remains a major constraint for manufacturing firms in Kenya. Enterprises with access to savings, credit, insurance and other financial services are more resilient and able to cope with business risks. Moreover advances in information technology offer the opportunity to lower the cost and risk of providing financial services to manufacturing firms.

Access to finance is critical to unlocking Africa's growth potential especially in the manufacturing sector. Firms that have good access to finance have experienced increased earnings and profitability. Managers are advised to be more vigilant in accessing finances as access to finance was key in influencing manufacturing firm performance. Evidence has shown that financial access promotes growth of manufacturing firms through the provision of credit to both new and existing businesses. It benefits the economy in general by accelerating economic growth, intensifying competition, as well as boosting demand for labor. Lack of financial access limits the range of services and credits available for manufacturing firms. Some manufacturing

firms rely on their personal wealth or internal resources to invest in their businesses, which limits their full potential and leading to diminished growth.

In a show of commitment to manufacturing sector the Kenya government has empowered the manufacturing sector by improving access to finance. The government has licensed more providers of financial services who are encouraged to lend to the manufacturing sector. The government has also rolled out its own financing programmes that has helped manufacturing firms gain increased access to financial services. Informal financial institutions are flexible, convenient and have got high loan recovery rates despite the fact that their interest rates on loans are higher than in formal banks. Although informal finance activities are found in various forms, they tend to have little impact on financing of crucial aspects of manufacturing firms investment.

Lack of access to land, utility, installation and import procedures act as constraints to manufacturing firms growth and profitability. Other constraints such as poor financial management skills and lack of required collateral make it difficult for the firms to access finance. Factors inhibiting manufacturing firms access to credit include loans charged at high interest rates that most small businesses cannot afford, lack of managerial experience and skills, insufficient information on available products, relatively low levels of financial literacy, poor business plans and other external factors. Lack of access to finance hampers manufacturing firms emergence and eventual growth. Other sources of capital are retained earnings and informal savings and loan associations, which are unpredictable, not very secure and have little scope for risk sharing.

5.2.2 Effect of Capital Structure on Financial Performance Among Manufacturing Firms in Kenya

The study found out that capital structure significantly and positively affected firm performance. This study highlighted the importance of capital structure to the performance of manufacturing firms in Kenya. Capital structure is an important

corporate decision because it could bring a financing mix which could maximize the market value of the firm. Additionally, return on asset and return on equity have a positive relationship with performance.

From the findings it was established that firms use shareholders' funds as much as practical before they result to borrowing so as to minimize the risks related to debt financing. This risks include huge interest payments on the debt to erode the returns, restrictive debt covenants, are likely to lead the firms to financial distress and eventual collapse. Large manufacturing firms maintain a relatively lower debt ratio since they are able to generate such funds from internal sources. Therefore big and profitable companies present a low debt rate. The companies tend to have stable sales levels, assets that make good collateral for loans, and a high growth rate can use debt more heavily than other companies.

The study found out that firms with sound liquidity position used retained earnings, followed by debt financing for growth while equity financing was considered as a last resort. Therefore owing to the problems associated with accessing alternative credit facilities, a large proportion of Kenyan manufacturing firms rely more on self-financing in terms of retained earnings. The implication of using retained earnings is that the firms do not have adequate credit to meet the needs at different levels of growth. Therefore, a finance gap exists for firms starting or wishing to expand.

The study found a positive relationship between debt capital and financial performance. This is because some of the companies utilize debt as opposed to equity for additional funding. Debt include short and long term borrowings from financial institutions, debentures, bonds, deferred payment, bank borrowings and any other interest bearing loan. The study found that long term debt is comparatively more palatable than short term debt. This is based on the finding that employment of long term debt increases financial performance while short term debt has an opposite effect. It was therefore

recommended that manufacturing firms should balance their capital structure in order to avoid bankruptcy costs that is associated with excess debt. The study found out that much of manufacturing firms' assets are financed by short term debts. Such short term debt instruments include overdraft facilities and other debts of less than one year. Therefore regulators are encouraged to create more short term financial instruments to offer many alternatives that may even help to reduce borrowing cost due to competition.

5.2.3 Effect of Cost of Capital on Financial Performance Among Manufacturing Firms in Kenya

The study found out that cost of capital had a weak influence on manufacturing firm performance. The cost of capital is very important for a firm in order to assess future investment opportunities and to reevaluate existing investments. It was therefore recommended that manufacturing firms should identify the cheapest cost of capital to avert the negative effect on firm performance. The low effect of cost of capital on firm performance could be attributed to increased cost of doing business as a result of high cost of accessing the funds.

From the findings many companies raise debt by borrowing funds from financial institutions such as banks. Debt helps to save taxes, as interest on debt is a tax deductible expense. Additionally the high cost of debt discourages some manufacturing firms from raising funds through debt capital. From the findings the cost of debt had a bigger influence on the method of financing than the cost of equity. The study found out that manufacturing firms that use too much debt have limited cashflow and interrupted growth patterns. This may be attributed to the fact that lots of finances are used to repay off debts. Additionally the study found out that many manufacturing firms preferred internally generated funds as opposed to debt financing.

3.11.5 Effect of Fiscal Tax Incentives on Financial Performance Among Manufacturing Firms in Kenya

The government uses tax system for policy goals other than raising tax revenue. Currently, tax revenues play a vital role in Kenya's economic development. The study found out that fiscal tax incentives had a low influence on manufacturing firm performance. It was therefore recommended that manufacturing firms should understand the taxation systems in order to remain complaint with government policies. Further recommendations include introduction of new taxes or new rates of existing bases, the need to widen tax bases and reduce exemptions, as well as introducing more stringent administrative changes to seal loopholes and appropriate sanction measures. Broadening the tax base may include additional sector activities and strengthening tax administration. The study found out that fiscal tax incentives, encourages investors. It is therefore imperative to determine an optimum level of fiscal tax incentives that maximizes tax revenue and ensures maximum investment. The positive effect of fiscal tax incentives on firm performance could be attributed to multiple fiscal tax incentives given to businesses by the government such as tax credits and investment deductions. Other fiscal tax incentives that improves the financial performance of manufacturing firms include tax exemptions and allowances.

5.2.5 Effect of Investment Practice on Financial Performance among Manufacturing Firms in Kenya

The study found out that investment significantly and positively affected manufacturing firm performance. This resulted from the fact that investment decisions were the key determinants of the manufacturing firm performance. Investment decisions enables managers of manufacturing firm business to invest in the best portfolio mix enabling them to maximize profits. Managers are advised to be more vigilant in their investment decisions in order to make maximize productivity and returns. The findings of this study

showed that government policies are imperative to investment. Poor investment strategies hampers manufacturing firms emergence and eventual growth. Therefore the government should embark on reforms in the areas that enhance investment.

5.3 Conclusions

Conclusions were based on the objectives of the study whether determinants of financial performance had a significant influence on firm performance. The focus of this study was on manufacturing sector in Kenya since the sector is expected to play a critical role in propelling the economy to a 10 per cent growth rate, in line with the aspirations of Vision 2030 and in supporting the country's social development agenda through the creation of jobs, the generation of foreign exchange, and by attracting foreign direct investment. To meet these goals, manufacturing firms in Kenya require effective financial management practices to drastically manage these challenges and achieve superior performance. Particularly, these firms need to embrace the use of good financial management strategies as it has been acknowledged by researchers as being critical for such manufacturing firms to remain competitive in the global economy.

5.3.1 Access to Finance and Financial Performance Among Manufacturing Firms in Kenya

The results established that access to finance was found to significantly and positively influence manufacturing firm financial performance. When access to finance stated hypotheses was tested in the regression model it was found to have a significant relationship between itself and manufacturing firm financial performance. The findings of the study established that firms that had better access to finance had improved performance.

5.3.2 Capital Structure and Financial Performance Among Manufacturing Firms in Kenya

Additionally the results established that capital structure was found to significantly and positively influence manufacturing firm financial performance. When capital structure stated hypotheses was tested in the regression model it was found to have a significant relationship between itself and manufacturing firm financial performance. The findings of the study established that firms that had optimal capital structure had improved performance.

5.3.3 Cost of Capital and Financial Performance Among Manufacturing Firms in Kenya

The results established that cost of capital was found to significantly but weakly influence manufacturing firm's financial performance. When cost of capital stated hypotheses was tested in the regression model it was found to have a significant but weak relationship between itself and manufacturing firm financial performance. The findings of the study established that cost of capital resulted to decreased financial performance.

5.3.4 Fiscal Tax Incentive and Financial Performance Among Manufacturing Firms in Kenya

The results established that fiscal tax incentive was found to significantly influence manufacturing firm financial performance. When fiscal tax incentive stated hypotheses was tested in the regression model it was found to have a significant relationship between itself and manufacturing firm financial performance. The findings of the study established that prudent fiscal tax incentive management practices resulted to increased financial performance.

5.3.5 Investment Practice and Financial Performance Among Manufacturing Firms in Kenya

The results established that investment practice was found to significantly and positively influence manufacturing firm financial performance. When investment practice stated hypotheses was tested in the regression model it was found to have a significant relationship between itself and manufacturing firm financial performance. The findings of the study established that firms that had prudent investment practices reported improved performance.

Access to finance was the determinant which had the highest effect on firm performance followed by investment practice and capital structure. Cost of capital and tax incentive had a low to moderate relationship with manufacturing firm performance. The results revealed that there were other unidentified latent variables which were influencing the manufacturing firm's financial performance. Some of these factors are stiff competition and quality of products. It was concluded that the firms needed to embrace better access to finances in order to improve performance. The results obtained from this study were important in terms of reflecting the determinants of financial performance of manufacturing firms in Kenya. The results further revealed a positive relationship between the individual determinants of financial performance and firm performance.

5.4 Recommendations

The researcher recommends the adoption of determinants of financial performance in order to improve financial performance of manufacturing firms. The study findings support the view that determinants of financial performance have a significant effect on firm performance. However, the influence of each determinant varies from one firm to another. To achieve maximum performance, managers must select the determinant that

suits their firm. Recommendations were based on the findings of the study and as per the specific objectives.

5.4.1 Policy recommendations

The study would assist managers to develop structures and institutions that contribute to better tax systems and stable financial institutions resulting to better access to finance and optimal investment portfolio. Policies should ensure better access to financial services and consequently better financial performance of manufacturing firms. The policies should ensure that firms can access financial services including savings, payments, money transfers, credit and insurance. The government should improve access to land to improve collateral based financing and improve business creation. The government's strategy should aim to capitalize on rapid advances in mobile communications and digital payment systems to connect manufacturing firms to affordable and reliable financial services. The role of the government should be to assist in improving the functioning of the financial sector especially through developing institutional and technical capacities. This will contribute greatly towards developing the domestic financial systems that serve manufacturing firms.

Efforts are needed to build inclusive financial systems in the country. This includes, taking full advantage of the technological advances in developing financial infrastructure and architecture to lower transaction costs, encouraging transparency, openness and competition to encourage the financial institutions to expand service coverage to the excluded groups, and enforcing prudential regulations to provide the financial institutions with the right incentives to move towards developing an inclusive financial sector.

Policies should be put in place to encourage firms to maintain a capital structure that facilitates financial performance. These include policies that encourage firms to

maintain a lower debt ratio since they are able to generate such funds from internal sources. A lower debt ratio will lower the risk of bankruptcy. The government should put policies on better credit control mechanisms to ensure companies can access bank financing at reasonable rates. Other rules and measures should be put in place to ensure compliance to the regulations which are intended to protect borrowers. Rules on interest rates by the central bank of Kenya are intended to help the financial system maintain an affordable cost of capital. Additionally firm managers should be encouraged to raise equity by listing at the securities exchanges. The capital market regulators on the other hand should have the necessary infrastructure and regulatory framework that entice the firms to list.

Empirical literature indicate that cost of capital depends on market factors like inflation, interest levels, tax levels, investment policy, dividend policy, capital structure policy and security market conditions. Therefore, it is recommended that measures be taken by market regulators particularly the Central bank of Kenya to manage inflation and interest rate levels within low manageable levels. If these efforts are supplemented by managerial actions for use of low cost of capital strategies, then cost of capital could drastically be reduced to appropriate levels.

Additional policy measures should be put in place to ensure the Kenyan tax system evolves to the level of the global tax systems. This will facilitate an upgrading of the actual tax systems in order to respond to the existing taxation issues and make Kenya more attractive to investors. The government should come up with incentive schemes that encourage investment in manufacturing firms since manufacturing is a high yielding sector. It is further recommended that retained earnings of corporations should be allocated to shareholders and form part of their taxable income. However, along with allocation of earnings, shareholders should also receive a tax credit for corporation tax paid on retained earnings. Policy tools to attract increased foreign direct investment through lower tax burdens should be put in place.

The government should provide investment allowances to manufacturing firms. The benefits accrued in terms of increase in level of investments should exceed revenue forgone by the government through tax exemptions. Mechanisms should be put in place to ensure firms maintain a high current ratio to enable firms meet their debt obligations as they fall due. Finally, the government should ensure security and political stability and the infrastructure should be improved.

5.4.2 Managerial recommendations

For the manufacturing firms, access to financial services would support them to successfully adopt new manufacturing technologies, invest in new business opportunities, or find new and more productive jobs. At the same time, the access would prevent a large number of manufacturers to fall back into bankruptcy, financial setbacks, and other shocks. Thus making available effective tools for savings, payment, credit, and insurance, especially at critical moments, should be adopted as an effective strategy for manufacturers to achieve higher levels of profitability.

The study further recommends that the cost of capital should be used as a benchmark by the firm when undertaking investment decisions such that an investment will be said to add value to the firm when it generates income that is greater than its cost of capital. In so doing, firms are able to predict the viability of future projects and therefore select those that add the greatest value to the firm.

From the results, it came it was concluded that all the determinants had a significant positive effect on firm performance. The study will assist policy makers in coming up with policies geared towards improving manufacturing firm performance. The study will assist intellectuals and be a reference for future studies and practitioners undertakings on determinants of financial performance. This study makes a useful contribution to the advancement of academic knowledge on determinants of financial performance of manufacturing firms in Kenya.The results of this research reveals positive implications

for managers in the manufacturing firm industry in Kenya on the adoption of determinants of financial performance. The implications are that managers need to adopt the determinants of financial performance according to their firm requirements in order to improve performance.

5.5 Areas of further research

The results of the study found out that determinants of financial performance improved manufacturing firm performance. However the study did not come up with any optimum point at which the firms should employ them. The study also did not come up with a way of combining the various forms of determinants of financial performance. It is on the above basis that this study recommends further studies to establish the best combination of determinants of financial performance. The researcher studied the determinants of financial performance in Kenya. Further studies could be carried out to identify the determinants of financial performance in East Africa. Therefore further research is therefore recommended on the influence of other determinants of financial performance that have not been addressed in this study. A weak manufacturing sector may affect the investors, consumers and government negatively through poor performance. Additionally, further studies could be carried out to identify the determinants of financial performance of manufacturing firms but include a moderating variable or control variable.

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APPENDICES

Appendix I: Financial Performance Questionnaire

The questionnaire on the subject: DETERMINANTS OF FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS IN KENYA.

Your responses to these questions will be highly appreciated.

RESPONDENT INSTRUCTIONS : PART 1

SECTION A: DEMOGRAPHIC PROFILE

1. Name of your business (optional) _____

2. Gender Male □ Female □

3. Using the categories below please indicate the level of Education (please tick one)

□ Primary □ Secondary □ University and above

4. Age of the firm

Less than 30 □

31-40 □

41-50 □

More than 50 □

SECTION B: GENERAL INFORMATION ABOUT THE COMPANY

5. What types of products does your company deal with? (please tick one)

Raw Materials and parts □

Semi-Assembled components □

Finished Goods □

6. When did your company commence its operations? (please tick one).

a. □ 1-5years ago b. □ 6-10years ago c. □ over 10 years ago

7. Which type of markets is served by your organization?

(i) Reseller and consumer markets (B2C markets). □

(ii) Corporate markets (B2B) □

(iii) Small and medium enterprises markets (B2SME markets). □

(iv) Government institution markets. □

(v) Others (please specify). _____

8. Please indicate the size of your organization in terms of total net assets.

a. 1Million-20Million □ b. 21Million -40Million □ c. Over 40 d. Million □

9. How many branches/outlets does your firm have.

a. 1-5 □ b. 5-10 □ c. over10 □

10. Using the information given below, please indicate the number of employees the firm employs.

a 1-10 □ b. 11-50 □ c. over 50 □

RESPONDENT INSTRUCTIONS: PART 2

(C) ACCESS TO FINANCE

Please indicate your level of agreement with the effect of access to finance on financial performance among manufacturing firms in Kenya on a scale of 1-5 where: 5 =

Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree.

Effect of access to finance		5	4	3	2	1
	Financial services					
11	Access to credit through bank lending actualizes our financial performance					
12	Access to funds through savings in financial and insurance products facilitates our firm's financial performance.					
13	Possession of collateral facilitates our firm's financial performance.					
	Government financing programmes					
14	Funds from government loans enhances our financial performance.					
15	Access to finances through government revolving funds actualizes our financial performance.					
16	Funds from government grants and incentives facilitates our financial performance.					
	Informal sources of funds					
17	Informal finances from friends and relatives					

	facilitates our firm's financial performance.					
18	Access to finances through rotating savings and credit societies (ROSCAS) actualizes our financial performance.					
19	Informal finance from saving and loan association facilitates our business growth					

(D) CAPITAL STRUCTURE

Please indicate your level of agreement with the effect of capital structure on financial performance among manufacturing firms in Kenya on a scale of 1-5 where: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree.

Effect of capital structure		**5**	**4**	**3**	**2**	**1**
	Equity					
20	Use of equity capital facilitates our firms financial performance.					
21	In our firm use of equity capital helps to maximize firm value					
22	Optimal financing mix facilitates our firms financial performance.					

	Retained earnings					
23	Stability of debt versus equity have impacted positively on our financial performance.					
24	Increased liabilities have impacted negatively on our firms financial performance.					
25	In our firm we rely more on self -financing in terms of retained earnings.					
	Debt					
26	In our firm we use more debt than equity because interest on debt is tax-deductible**.**					
27	Use of debt capital facilitates our firm's financial performance.					
28	In our firm bond financing is preferred due to increased earnings					

(E) COST OF CAPITAL

Please indicate your level of agreement with the effect of cost of capital on financial performance among manufacturing firms in Kenya on a scale of 1-5 where: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree

Effect of cost of capital		5	4	3	2	1
	Cost of debt					
29	Interest paid to debt holders have impacted negatively on our firm's financial performance.					
30	The firm has employed more debt in order to reduce tax liability and increase value.					
31	The high cost of debt discourages our firm from using it					
	Cost of equity					
32	Cost of equity impacts negatively on financial performance.					
33	The high cost of equity discourages our firm from using it.					
34	In our firm the cost of equity determines our choice of financing.					
	Cost of preference shares					
35	The fixed dividend on preference shares helps our firm to achieve earnings stability.					
36	The company considers cost of preference shares as an important factor in determining financial performance.					
37	The high cost of preference shares discourages our firm					

	from using it.					

(F) FISCAL TAX INCENTIVES

Please indicate your level of agreement with the effect of fiscal tax incentives issues on financial performance among manufacturing firms in Kenya on a scale of 1-5 where: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree

Effect of tax incentives		**5**	**4**	**3**	**2**	**1**
	Investment tax credits and allowances					
38	Investment tax credits and allowances facilitates our firm's financial performance.					
39	Investment deduction upon construction of a new building facilitates our firm's financial performance.					
40	Investment deduction upon installation of new machinery facilitates our firm's financial performance.					
	Tax Exemption and zero rating					
41	Zero rated tax rate facilitates our firm's financial performance					
42	Tax exemptions and credits offered by the government facilitates our firm's financial performance.					

43	Tax amnesty and holidays is a precursor for our firm's financial performance.					
	Export Promotion incentives					
44	Tax remission on exported goods facilitates our firm's financial performance.					
45	Export promotion incentives facilitates our firm's financial performance.					
46	Reduced taxes on raw materials facilitates our firm's financial performance					

(G) INVESTMENT

Please indicate your level of agreement with the effect of investment practices on financial performance among manufacturing firms in Kenya on a scale of 1-5 where: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree**.**

Effect of investment practice		**5**	**4**	**3**	**2**	**1**
	Government securities					
47	In our firm we prefer investments in government bonds as they give good returns.					
48	In our firm short term investment such as money market fund is preferred due to good returns and					

	reliability.					
49	Investment in government securities is highly preferred due to lower risk and earnings stability.					
	Stocks					
50	In our firm investment in stocks is highly preferred due to good returns and reliability.					
51	In our firm we prefer investments in corporate bonds as they give good returns.					
52	Our firm's investment portfolio gives good returns than that of competitors.					
	Core Manufacturing Business					
53	In our firm long term investment such as plant and equipment is preferred due to stability of earnings.					
54	Investment in core manufacturing business helps to improve firm's value.					
55	Our firm's investment portfolio is well diversified resulting to good returns.					

(H) FINANCIAL PERFORMANCE

Over the last five years relative to your direct competitors, indicate your level of agreement with the following financial performance outcomes on a scale of 1-5 where: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree and 1 = Strongly disagree.

Financial performance outcomes		5	4	3	2	1
56	In our firm we have achieved enhanced operating income.					
57	In our firm we have had an improved market share over the last five years					
58	Our firm have experienced increased profitability levels over the last five years.					
59	In our firm we have had a high increase in number of employees over the last five years.					
60	In our firm we have achieved an enhanced return on assets over the last five years.					
61	In our firm we have achieved an enhanced return on equity over the last five years.					
62	Our firm has experienced increased sales growth over the last five years.					

Appendix II: Secondary Data Collection Sheet

The record survey sheet was filled in by the researcher himself. All information required in the matrix came from the annual reports of the manufacturing firms for the period 2012 to 2016

	2012 KSHS MILLION	2013 KSHS MILLION	2014 KSHS MILLION	2015 KSHS MILLION	2016 KSHS MILLION
Sales					
Cost of sales					
Gross profit					
Profit before tax and interest					
Current assets					
Current liabilities					
Working capital					
Non-current assets					
Total Assets					
Accounts payable					
Accounts receivable					
Inventories					
Cash and cash balances					
Return on Assets (ROA) = Profit BIT /Total Assets					

Appendix III: Letter of Introduction

Dear Respondent,

Re: Research Study

The objective of this request is to collect information to assist in my research project as part of the requirement to be fulfilled in attaining a Doctor of philosophy degree at the Jomo Kenyatta University of Agriculture and Technology. I am greatly humbled to select you as one of my respondents.

Your timely assistance is highly appreciated, and I wish to sincerely thank you in advance.

Yours Truly,

Gladys Micere Wamiori.

Appendix IV: Sample Size Determination Using Saunder's Formula

$$n = p\% \times q\% \times \left[\frac{Z}{e\%}\right]^2$$

where:

n = the minimum sample size required

P% = the proportion belonging to a specific category (50%).

q% = the proportion not belonging to the specific category (50%)

Z = the value corresponding to the confidence level required (1.96 for 95% level of confidence)

e% = the margin of error estimated at $\pm$ 5%

n^1 = adjusted sample size

P = study population (499 classified manufacturing firms)

Therefore:

$$n = 50\% \times 50\% \times \frac{1.96}{5\%}^2$$

$$n = 0.5 \times 0.5 \times \frac{1.96}{0.05}^2$$

$$= 0.25 \times 1536.64$$

Minimum sample size required for the population = 385

However, the actual sample size (adjusted) for this study will therefore be;-

$$n^1 = \frac{n}{1+\frac{n}{p}}$$

$$= \frac{385}{1+385/741}$$

$$= \frac{385}{1+0.519568}$$

244

$$= \frac{385}{1.519568}$$

Adjusted sample size, $n^1 = 252$

Appendix V: Sample Size

Category of Manufacturer	**Population size**	**Percent%**	**Sample size %*252**
Building, Mining & Construction	29	4	10
Chemical & Allied Sector	79	11	28
Energy, Electrical & Electronics	45	6	15
Foods & Beverages Sector	187	25	63
Leather & Footwear Sector	9	1	2
Metal & Allied Sector	83	11	28
Motor Veh. Assembly & Accessories	51	7	18
Paper & Board Sector	74	10	25
Pharmaceutical & Med. Equip. Sector	24	3	8
Plastics & Rubber Sector	77	10	25
Textile & Apparels Sector	64	9	22
Timber, Wood & Furniture Sector	19	3	8
Total	**741**	**100**	**252**

Appendix VI: Test of regression assumption and statistic used

Results of Tests of Statistical Assumptions (Test of regression assumption and statistic used)

N		N	Normality (Shapiro-Wilk test)	Linearity (ANOVA test)	Independence (Durbin-Watson test)	Homogeneity (Levene test)	Collinearity VIF (Tolerance Test)
Threshold assumption is met if:			p > 0.05	p > 0.05	1.5- 2.5	p > 0.05	VIF 10 max
Access to finance	Government financing programmes	142	0.8553	0.36	1.94	2.76	3.112(0.499)
	Financial institution						
	Stocks and bonds						

Capital structure	Equity Debentures Retained earnings	142	0.8624	0.42	1.87	3.078	1.844 (0.542)
Cost of capital	Cost of equity Cost of debt Cost of preference shares	142	0.7321	0.64	2.04	2.145	1.943(0.623)
Taxation policy	Corporate tax Excise tax	142	0.7146	0.18	1.76	2.263	1.301(0.468)
Investment policy	Assets Shares	142	0.7841	0.16	2.08	1.356	2.979(0.605)
Financial performance	Return on assets Sales	142	0.8574	0.66	2.03	2.484	2.607(0.634)

growth	
Profitability	

Appendix VII: List of Firms

Industrial and Manufacturing Companies in Kenya

SOURCE: KENYA ASSOCIATION OF MANUFACTURERS (KAM)

	Building & Construction
1.	Kenya Builders & Concrete Ltd
2.	E. A. Portland Cement Co. Ltd
3.	Bamburi Special Products Ltd
4.	Bamburi Cement Ltd
5.	Athi River Mining Ltd
6.	Kay Salt Ltd
7.	Kenya Builders and Concrete Ltd
8.	Mombasa Cement Ltd
9.	Saj Ceramics Ltd
10.	Central Glass Industries Ltd
	Chemicals & Allied
11.	Basco Products (K) Ltd
12.	Carbacid (CO2) Ltd

13.	Colgate Palmolive (EA) Ltd
14.	Cooper K – Brands Ltd
15.	Deluxe Inks Ltd
16.	Henkel Kenya Ltd
17.	Magadi Soda Company Ltd
18.	Match Masters Ltd.
19.	Orbit Chemicals Industries Ltd.
20.	Shreeji Chemicals Limited
21.	Supa Brite Ltd
22.	Super Foam Ltd
23.	Syngenta East Africa Ltd
24.	Synresins Ltd
25.	Tri-Clover Industries Ltd
26.	Uniliver Kenya Ltd
27.	Vitafoam Products Ltd
28.	Metroxide Africa Ltd.

29.	Oasis Limited
30.	Osho Chemicals Industries
31.	BOC Kenya Ltd
32.	Crown Gases Ltd
33.	Galaxy paints
34.	Seweco Paints Ltd.
35.	Maroo polymers Ltd
36.	Twiga Chemical Industries Ltd
37.	Soilex Chemicals Ltd.
38.	Chemicals and Solvents (EA) Ltd

	Energy, Electrical & Electronics
39.	Assa Abloy East Africa Ltd
40.	East African Cables Ltd
41.	Ken West Cables Ltd
42.	Nationwide electrical Industries
43.	Optimum Lubricants Ltd

44.	Baumann Engineering Ltd
45.	PCTL Automation Ltd
46.	International Energy Technik
47.	Modulec Engineering Systems Ltd.
48.	Metlex International Ltd
49.	Power Technics Ltd
50.	Reliable Electricals Engineers Ltd
51.	Sollatek Electronics (Kenya) Ltd
52.	Specialised Power Systems Ltd
53.	Virtual City Ltd
NO.	Food & Beverages
54	Africa Spirit Limited
55.	Alphine Coolers Ltd
56.	Alpha Fine Foods Ltd
57.	Aquamist Ltd
58.	Al-Mahra Industries Ltd

59.	Bidco Oil Refineries Ltd
60.	B. A.T. Kenya Ltd
61.	Broadway Bakery Ltd
62.	Brookside dairy Ltd
63.	Bidco Oil Refineries Ltd
64.	Bio Food Products Ltd
65.	Blowplast Ltd
66.	Candy Kenya Ltd
67.	C. Dormans Ltd
68.	Coca –Cola East Africa Ltd
69.	Crown Foods Ltd
70.	Deepa Industries Ltd
71.	Del Monte Kenya Ltd
72.	Edible Oil Products Ltd
73.	East African Breweries Ltd
74.	Eastern Produce Kenya Ltd (Kakuzi)

75.	East African Seed Co.Ltd
76.	East African Sea Foods Ltd
77.	Europack Industries Ltd
78.	Farmers Choice Ltd.
79.	Global Fresh Ltd
80.	Green Forest Food Ltd
81.	Highland Canners Ltd
82.	Insta Products (EPZ) Ltd
83.	Jambo Biscuits (K) Ltd
84.	Kapa Oil Refineries Ltd
85.	Kenafric Industries Ltd
86.	Kenya Nut Company Ltd
87.	Kenya Sweets Ltd
88.	Kenya Tea Development Agency
89.	Kenchik Ltd
90.	Koba Waters Ltd

91.	London Distillers (K) ltd
92.	Lari Dairies Alliance ltd
93.	Maji Foods Industries Ltd
94.	Mastermind Tobacco (K) Ltd.
96	Mini Bakeries (Nbi) Ltd
97.	Miritini Kenya Ltd
98.	Nairobi Bottles Ltd
99.	NAS Airport Services
100.	Nestle Kenya Ltd
101.	Patco Industries Ltd.
102.	Pembe Flour Mills Ltd
103.	Pearl Industries Ltd
104.	Premier Flour Mills ltd
105.	Razco Ltd
106.	Rafiki Millers Ltd
107.	Sigma Supplies Ltd.

108.	Softa Bottling Co
109.	Spin Knit Dairy Ltd
110.	Spice World Ltd
111.	Trufoods Ltd
112.	Unga Group Ltd
113.	Usafi Services Ltd
114.	Uzuri Foods Ltd
115.	Valuepak Foods Ltd
116.	Wanji Food Industries Ltd
117.	Wrigley Company (EA) ltd
	Leather & Foot Wear
118.	Bata Shoes Co (K) Ltd
119.	Leather Industries of Kenya Ltd
	Metal & Allied
120.	Alloy Steel Casting Ltd
121.	ASL Ltd.
122.	Athi River Steel Plant Ltd
123.	Chrystal Industries Ltd

124.	Davis & Shirtliff Ltd
125.	Devki Steel Mills Ltd
126.	East African Foundry Works (K) Ltd
127.	General Aluminum Fabricator
128.	Kens Metal Industries
129.	Mabati Rolling Mills Ltd
130.	Manufacturers & Supplier (K) Ltd.
131.	Nampak Kenya Ltd.
132.	Welding Alloys Ltd
133.	Wire Products Ltd
134.	Steelmakers Ltd
135.	Warren Enterprises Ltd
136.	Steel Structures Ltd
137.	Napro Industries Ltd
138.	Metal Crown Ltd
139.	Nails & Steel Products Ltd.

140.	Heavy engineering Ltd.
141.	Elite Tools Ltd
142.	Ndume Ltd
143.	Richfield Engineering Ltd
144.	Standard Rolling Mills Ltd
145.	Soni Technical Services Ltd
146.	Viking Industries Ltd
147.	Standard Rolling Mills Ltd
	Motor Vehicles & Accessories
148.	Associated Battery Manufacturers (EA) Ltd
149.	Auto Ancilliaries Ltd
150.	Auto Springs Manufacturers Ltd
151.	Banbros Ltd
152.	Bhachu Industries Ltd
153.	General Motors East Africa Ltd
154.	Kenya Grange Vehicle Industries Ltd
155.	Impala Glass Industries

156.	Chui Auto Spring Industries Ltd
157.	Kenya Grange Vehicle Industries
158.	Mann Manufacturing Co Ltd
159.	Megh Cushion Industries Ltd.
160.	Mutsimoto Motor Kenya Ltd
161.	Pipe Manufacturers Ltd
162.	Sohansons Ltd
163.	Theevan Enterprises Ltd
164.	Toyota East Africa Ltd
165.	Unifilters Kenya Ltd
	Paper & Board
166.	Allpack Industries Ltd
167.	Bag and Envelops Converters Ltd
168.	Carton Manufacturers Ltd
169.	Chandaria Industries Ltd
170.	Colour Labels Ltd

171.	Graphics & Allied Ltd
172.	Jomo Kenyatta Foundation
173.	Kartasi Industries Ltd
174.	Kenafric Diaries Manufactures Ltd
175.	Kenya Stationers Ltd
176.	Nation Group Ltd.
177.	Twiga Stationeries & Printers
178.	Kenya Litho Ltd
179.	Tetra Pak Ltd
180.	Colourprint Ltd
181.	Brand Printers Ltd
182.	Elite Offset Ltd
183.	Icons Printers Ltd
184.	Statpack Industries Ltd
185.	The Regal Press Kenya Ltd
186.	Stallion Stationery

187.	Mufindi Paper Ltd
188.	Printwell Industries
189.	United Bags Manufacturers Ltd
190.	Standard Group Ltd
Pharmaceutical & Medical Equipment	
191	Beta Health care International Ltd
192.	Biodeal Laboratories Ltd
193.	Cosmos Ltd
194.	KAM Industries Ltd
195.	Pharmaceutical Manufacturing Co (K) Ltd.
196.	Elys Chemicals Industries Ltd
197.	Pharm Access Africa Ltd
198.	Dawa Ltd
	Plastic and Rubber
199.	ACME Containers Ltd
200.	Bobmil Indutries Ltd
201.	Haco Industries Kenya Ltd
202.	Kenpoy Manufacturers Ltd

203.	Kingsway Tyres & Automart Ltd
204.	Nairobi Plastics Ltd
205.	Uni-Plastics Ltd
206.	Threadsettrs Tyres Ltd
207.	Super Manuafacturers Ltd
208.	Styroplast Ltd.
209.	Sanpac Africa Ltd.
210.	Safepak Ltd.
211.	Rubber Products Ltd
212	Raffia Bags (K) Ltd
213.	Polythene Industries Ltd
214.	Plastic & Rubber
215.	King Plastic Industries Ltd
216.	Metroplastics Kenya Ltd.
217.	Packaging Masters Ltd.
218.	Premier Industries Ltd

219.	Blowplast Ltd
220.	Umoja Rubber Products ltd
221.	Techpak Industries Ltd
222.	Sumaria Industries Ltd
223.	Silpack Industries Limited
	Textiles & Apparels
224.	Africa Apparels EPZ
225.	Ajit Clothing Factory Ltd
226.	Alltex EPZ Ltd
227.	Alpha Knits Ltd
228.	Amedo Centre Kenya Ltd
229.	Bogan Industries Ltd
230.	Kema E.A Ltd
231.	Kikoy Co. Ltd
232.	Le-Stud Ltd
233.	Midco Textiles (EA) Ltd
234.	Ngecha Industries Ltd

235.	Protex Kenya (EPZ) Ltd
236.	Spinners & Spinners Ltd
237.	Straight-line Enterprises Ltd
238.	Sunflag Textile & Knitwear
239.	Thika Cloth Mills Ltd
240.	Vaja Manufacturers Ltd
241.	Teita Estate Ltd
242.	Thika Cloth Mills Ltd
243.	Spin Knit Limited
244.	Summit Fibres Limited
	Timber & Furniture
245.	Economic Housing Group Ltd
246.	Fine woodworks Ltd
247.	Kenya Wood Ltd
248.	Woodmakers Kenya Ltd
249.	Panesar's Kenya Ltd
250.	Woodtex Kenya Ltd

251.	Shamco Industries Ltd
252.	Rai Plywoods (Kenya) Ltd