EFFECT OF ACCESS TO FINANCE ON FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS IN KENYA

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ABSTRACT

The objective of this study was to examine the effect of access to finance on financial performance of manufacturing firms in Kenya. The research scope focused on manufacturing firms in Kenya. The target population of the study was 199 manufacturing firms based in Nairobi County taken to be a representative of all manufacturing firms in Kenya. In order to collect data from the sampled respondents, stratified random sampling was used to classify each of the twelve sub sectors into individual strata. 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 both descriptive and exploratory in collecting data. The key findings were that access to finance had a positive influence on the financial performance of manufacturing firms. There was a significant linear relationship between access to finance and manufacturing firm's financial performance. The study assists policy makers in coming up with better policies on improvement of financial performance. The study adds to the literature on manufacturing firm's financial performance.

Key Terms: Access to finance, Financial Performance, Innovation, Financial market, Investment

INTRODUCTION

Access to Finance or 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 (2008) 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 (Lopez *et. al.,* 2007).

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 (Beck, *et al.,* 2006). 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, 2009). Access to external resources allows for flexibility in resource allocation and reduces the impact of cash flow problems on firm activity.

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 and Martinez (2007) 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. 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 (Hannig *et al,* 2010).

Saleemi, **(**2006) 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, 2011). Enterprises with access to savings, credit, insurance and other financial services are more resilient and able to cope with business risks. Njoroge **(**2008), 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,2008). In a study on determinants of access to microfinance services among self-employed persons with disabilities in Nairobi Kenya, Ayallo (2008), concluded that financial requirements remains a constraint in access to financial services which may inhibit business creation and improvement.

In Kenya, firms have difficulties in accessing both credit and equity. Memba *et. al.,* (2005) 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 (Allen *et. al.,* 2011). Another argument by Saleemi (2009), 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)

In another study on determinants of access to external finance, evidence from Spanish firms Lopez *et. al.,*(2007), 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 Wilson *et. al.,* (2004), 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. Bougheas *et. al.,* (2006), carried out a study on a firm access to external finance using data from UK 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 (2006) 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.

World Bank (2008) 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 2007).

Beck *et. al.,* (2006) 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.

In Kenya firms may access credit through government financing programes such as the youth fund, the women fund and other government sponsored programes 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. 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 month of 2009 the portfolio of non-performing loans according director youth Enterprise Funds, stands 40 percent and is about eight percent of 738bilions of the commercial loans defaulters (ICPAK, 2010).

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. 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, 2007). 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, 2010).

Measurement of financial performance
Financial performance is a subjective 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).

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) is the ratio of net income after taxes divided by total assets and 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. 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.

Return on equity (ROE) is a frequently used variable in judging top management performance, and for making executive compensation decisions. ROE is defined as net income (income available to common stockholders) divided by stockholders equity. Return on equity (ROE) indicates the return

on owners' equity, hence the higher the better. Earnings per share (EPS) indicate the dollar amount earned on behalf of each common share, thus the higher the better. Price/earnings (P/E) ratio is the amount investors are willing to pay for each dollar of earnings, that is indicates investors' confidence (Herrmann, 2008). Liquidity is also a measure of financial performance. Liquidity measures the ability to meet financial obligations as they fall due without disrupting the operations of the firm (Mwirie *et. al.,* 2015).

Organizational 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). Moullin (2007) 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, 2009, Goddard *et. al.,*2004). 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 *et. al.,* 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. Sales revenue has an effect on financial performance and since asset turnover is related 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, 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 calculation and that definitions are agreed worldwide.

Traditionally, the success of a manufacturing system or company has been evaluated by the use of financial measures (Tangen, 2013). According to Cornett *et. al.,* (2006), analyzing financial statement using ratio analysis is one way of identifying weaknesses and problem areas of firms as well as evaluating financial performance. Brigham and Ehrhardt (2010), 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.

Regression analysis is the most common methodology of relating the measures of financial performance to variables posited to be the determinants of financial performance (Capon *et. al.,* 2006). 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 (discriminants, cluster and factor analysis, canonical correlation).

Performance measures play a critical role not only in evaluating the current performance of a firm but also in achieving high performance and growth in the future (Khalifa *et. al.,* 2013). Performance measurement provides useful information related to flow of fund, the use of fund, effectiveness, and efficiency. Besides, the information can also motivate the managers to make the best decision (Yassin & Ahmed 2012). 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 (Okelo, 2015). Additionally, Uzel (2015) argues that for an organization to be successful it has to record

high returns and identify performance drivers from the top to the bottom of the organization. As competition intensifies due to changes in the industry structure and the emergence of new technologies, organizations are determined to reduce their operational costs while enhancing their profitability (Kiaritha, 2015).

The Manufacturing Industries

The manufacturing industries sector is one of the most important economic sectors, because of their role and high impact in the development of the economy at the local and global level. The manufacturing sector in the developed nations is large and contributes significantly to the economic development. 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 *et. al.,* 2013). It 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 2013 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.

In Africa, manufacturing sector is equally important. In Namibia, the sector accounts for an average of 10.3% of the GDP and 8% of the total employment and 34.8% of its exports. 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 and the exports

(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 (Njoroge, 2008). 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. 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, 2008). The sector leads in foreign exchange earning accounting for 34% of the total earnings (Kenya Association Manufacturing [KAM], 2013). There are about 2071 manufacturing firms in Kenya according to the ministry of industrialization data bank. Majority of manufacturing firms in Kenya, employ up to 100 workers (GOK, 2009). There were 870 manufacturing firms in the directory of Kenya association of manufacturers (KAM, 2013). 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).

Hypothesis of the Study

The researcher tested the following null hypothesis:

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

RELATED LITERATURE

Theoretical Framework

Capital Structure Theory

The Modigliani-Miller theorem, 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 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, that is, a company's value is affected by the capital structure it employs.

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.

Miller and Modigliani 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. These studies include Farma and French (2012), Avramov, Chordia & Jostova, (2009). Kumar (2008) 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.

Trade-off Theory

Trade-off theory suggested by Jensen and Meckling (1976), allows bankruptcy cost to exist. 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. 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 (Jensen, 1976). Stulz (1990) like Jensen 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. 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.

Pecking Order Theory

Pecking order theory discussed by Meyers (1984), Myers and Majluf (1984) and Fama & French (2002), describes a firm's debt position as the accumulated outcome of past investment and capital decisions. This theory points out that because of information asymmetry between managers and investors about the firm's investment opportunities, the market may undervalue a firm's new shares relative to the value that would be assessed if managers' information about their firm's investment opportunities were revealed to 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, then 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 (equity would mean issuing shares which meant 'bringing external ownership' into the company). Thus, the form of debt a firm chooses can act as a signal of its need for external finance. The pecking order theory is popularized by Myers (1984) when he 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.

Agency Theory

Agency relationship is one in which one or more persons (the principal (s)) engages another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. Jensen and Meckling (1976) developed agency theory where 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).

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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, 2009). The agency theory focuses on the divergence of interests between managers and stockholders. Okiro (2014) postulates that stockholders are wealth maxmizers while managers maximize a utility function that include remuneration, power, job security and status.
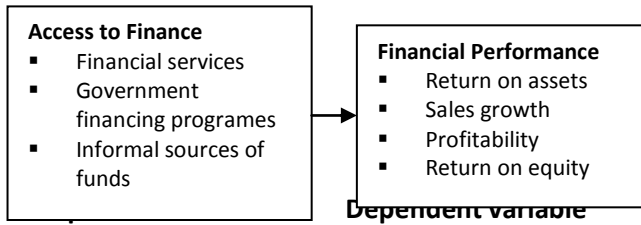
Conceptual Framework

Access to Finance
- Financial services
- Government financing programes
- Informal sources of funds

Financial Performance
- Return on assets
- Sales growth
- Profitability
- Return on equity

Dependent variable

Figure 1: Conceptual framework

RESEARCH METHODOLOGY

The study adopted a mixed research design where both quantitative and qualitative data collection techniques and analytical procedures are used in same research design (Saunders *et. al.,* 2009). The study used a survey design that is quantitative in nature in order to gather primary data. Quantitative research made use of variety of quantitative analysis techniques that range from providing simple descriptive aspects of the variables involved, to establishing statistical relationships among variables through complex statistical modeling (Saunders *et. al.,* 2009). The descriptive aspect described the characteristics of the respondents to include gender, age, occupation and education.

The methodology used in this study compared favourably with that of previous empirical studies (Njoroge 2008, Bhunia 2012, Fitzimos *et. al.,* 2005, Githae, 2012 and Gupta *et. al.,* 2010). 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.

The study focused on manufacturing firms in Kenya (KMA, 2014) with the sample being manufacturers from Nairobi County. The study's target population was 413 manufacturing firms operating in Nairobi county and its environs. The respondents were the chief finance officers of manufacturing firms registered with KAM and were in KAM's 2013

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.

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 interviews were used to collect data with an interviewer-administered questionnaire. Qualitative data collected through interviews was first edited and response rate calculated. The data was then classified into different categories according to variable. Descriptive statistics such as mean, standard deviation and frequency distribution was used to analyze the data. According to Kothari (2012) descriptive statistics measures the point about which items items have a tendency to cluster and also describes the characteristics of the data collected. Data was presented in form of tables, graphs and pie charts.

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 Scientific Programme 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. The model to be used was adopted from the study by Wanyama (2012) which he used to analyze the effects of corporate governance on financial performance of insurance firms in Kenya.

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 FP 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.

RESEARCH FINDINGS AND DISCUSSIONS

Analysis on Financial Performance

Means 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 . 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. 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.

Factor Analysis of Financial Performance (FP)

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. Uzel *et. al*., (2015) 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 policy, investment policy 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, 2010). Pandey (2011) 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. Tables 1 shows the results of factor analysis for financial performance.

Table 1: KMO and Bartlett's Test for financial performance.

KMO and Bartlett's Test

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 were compact and hence the Factor Analysis was reliable and appropriate for the study. KMO measures on financial performamnce had 0.815 which represented great acceptability of the use of factor analysis and sufficient intercorrelations.

Bartlett's test of Sphericity was 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 FP constructs was explained in table 2.

Table 2: Total Variance Explained for Financial Performance measures.

Total Variance Explained

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.

Extracted Component Matrix for Financial performance measures.

The analysis of variance identified the Eigen values which was 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 included 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 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 financial performance variables that had the highest influence on manufacturing firm's performance. Component one had the highest variance of 3.933

which accounted for 39.335 % of the variance. Component 2 had the second highest variance of 1.284 contributing 12.84% of the variance. The cumulative results showed that there was one critical factor driving financial perfromance 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. 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 this one factor. Using the factor a scale was created using the average means of each construct. A scale of 1-5 was created and all the means of all the items in each component were analyzed. Factor one which was named financial performance had an average mean of 3.7183.

Linear Regression Model of Financial Performance/ Access to Finance

Table 3: Regression of Financial Performance and Access to Finance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810[a]	.656	.654	.61237

a. Predictors: (Constant), ACCESS TO FINANCE

The aggregate mean score of the determinants of access to finance (independent variable) were regressed on the aggregate mean scores of financial performance (dependent variable) and the results were presented in table 3. 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. The 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

$$FP = \beta 0 + \beta 1(AF)$$

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 financial performance 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.

Table 4: ANOVA of financial performance and access to finance

Model	Sum of Squares	df	Mean Square	F	Sig.
	ANOVA[a]				
Regression	100.142	1	100.142	26.704	.000[b]
Residual	52.500	140	.375		
Total	152.642	141			

a. Dependent Variable: FINANCIAL PERFORMANCE
b. Predictors: (Constant), ACCESS TO FINANCE

In table 4 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 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. This is depicted by linear regression model

$$FP = \beta 0 + \beta_1(AF)$$

where FP is financial performance and AF is access to finance. 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.

Table 5: Model of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Coefficients[a]				
		B	Std. Error	Beta		
1	(Constant)	.375	.165		2.276	.002
	ACCESS TO FINANCE	.780	.048	.810	16.341	.000

a. Dependent Variable: FINANCIAL PERFORMANCE

To assess the effect of access to finance on the financial performance of manufacturing firms, the study had set the following null hypothesis; **Ho1:** There is a no significant effect of access to finance on financial performance of manufacturing firms in Kenya. The individual regression results in Table 5 reveal statistically significant positive linear relationship between access to finance and financial performance ($\beta = 0.810$, P-value = 0.000). Hence, Ho1: 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).

DISCUSSION OF KEY FINDINGS

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).

Summary

The study found out that access to finance significantly and positively affected manufacturing firm performance. This resulted from the fact that access to finance was 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.

Conclusions

The conclusions were based on the objectives of the study that access to finance 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. 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.

Recommendations

The researcher recommends the adoption of access to finance in order to improve financial performance of manufacturing firms. The study findings support the view that access to finance has a significant effect on firm performance. 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.

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.

Areas of Further Research

The results of the study found out that access to finance improved manufacturing firm performance. However the study did not come up with any optimum point at which the firms should employ it. It is on the above basis that this study recommends further studies to establish other determinants of financial performance. Further studies could be carried out to identify the effect of access to finance 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.

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