# FIRM CHARACTERISTICS AND FINANCIAL PERFORMANCE OF MANUFACTURING AND CONSTRUCTION ALLIED FIRMS LISTED INNAIROBI SECURITIES EXCHANGE, KENYA

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**JUNE, 2022**

## DECLARATION

I declare that this proposal is my original work and has not been submitted for an award of a degree in any other University.

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

**GRACE M. MWENDWA**

**D53/CTY/PT/39038/2017**

I confirm that the proposal was submitted for examination with my approval as the University supervisor.

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

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## DEDICATION

My parents: Mr. and Mrs. Mwendwa Mutto, and the rest of the household members enjoy the dedication of this worksince they never fell short of encouraging me to soldier on even when the next step seemed impossible.I ask for unconditional blessings from God for always coming through for me when I needed your support.

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FirstlyI extend my gratitude to God for seeing me through my academic expedition, not forgettingDr. James Gatauwa'scontribution and guidance to this far.Kenyatta University's chance that it granted me to pursue my postgraduate degree cannot go unnoticed too. Finally,my acquaintances and family members' contribution to this success cannot go unnoticed. Salute guys.

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## OPERATIONAL DEFINITION OF TERMS

| | |
|---|---|
| **Asset Structure** | Refers to the structure of the firm's asset base (all balance sheet assets). Asset structure shows the distribution of the total asset base, by proportion or percentage, across major asset categories. |
| **Asset Structure Ratio** | This ratio is the basic ratio of assets structure, calculated during the vertical analysis of the balance sheet. The level of the ratio depends on the industry branch in which the company operates. |
| **Asset to Equity Ratio** | Is the ratio of total assets divided by stockholders' equity. The asset/equity ratio indicates the relationship of the total assets of the firm to the part owned by shareholders. |
| **Financial Performance** | This construct determinesthe efficiency for revenue generation by an entity using its fundamental business model assets. |
| **Firm Characteristics** | These are the firm's demographic and managerial variables which, in turn, comprise part of the firm's internal environment. |
| **Leverage** | Is an investment strategy of using borrowed money specifically, the use of various financial instruments or borrowed capital to increase the potential return of an investment. |
| **Liquidity** | Refers to the efficiency or ease with which an asset or security can be converted into ready cash without affecting its market price. |
| **Liquidity Coverage Ratio** | Is the requirement whereby banks must hold an amount of high-quality liquid assets that's enough to fund cash outflows for 30 days. |
| **Return on Investment** | Is a profitability measure that evaluates the performance or potential return from a business or investment. |

## ACRONYMS AND ABBREVIATION

| | |
|---|---|
| **GDP** | Gross Domestic Product |
| **NSE** | Nairobi Securities Exchange |
| **ROA** | Returns on Assets |
| **ROE** | Returns on Equity |
| **ROR** | Rate of Return |
| **ROS** | Returns on Sales |
| **SACCO** | Savings and Credit Cooperation Organization |
| **SASRA** | Sacco Societies Regulatory Authority |
| **UK** | United Kingdom |
| **US** | United States |

## ABSTRACT

A company's financial performance reflects its efficient combination of policies, operations, and characteristics to achieve a competitive advantage and also shows how much of a company's income it pays out to investors. In the past, firm characteristics have not been extensively considered major influencers on how various firms perform either in service delivery or financially. The current research's objective was to examine the effectsfirm attributes had on manufacturing and allied as well as construction companies listed on Nairobi Securities Exchange financial performance. This research's main goal was the examinationof the effects firm attributes had on manufacturing and construction companies' financial performance. This research projects'particular objectives were; to examine the effectasset structure had on the NSE-listed companies'returns on investment,to examine the effect financial leverage had on the NSE-listed companies' returns on investment, and to examine the effect liquidity had on the NSE-listed companies' returns on investment. This Research reviewed theories were liquidity preference, trade-off, and pecking order. A descriptive research design was used in this research in describing the characteristics of the phenomenon being studied. The study's targetpopulation was nine manufacturing as well as five construction and allied NSE-listed firms. Data on the financial statements were obtained from the various company websites and the NSE website. Diagnostic testing precededdata analysis for data reliability and validity determination, which included; bi-variate correlation analysis, Multicollinearity tests, normality tests,unit root tests, heteroskedasticity tests, autocorrelation test and Haussmann specification tests. Results from the data analysisindicated that assets structure had a significant negative correlation with firms' financial performance in the manufacturing and allied firms. In contrast,it was observed that asset structure had an insignificant positive correlation with the firms' financial performance for the construction and allied firms. The study's results also indicated that the leverage ratio had a significant negative correlation with the financial performance of manufacturing and allied firms. For the construction and allied firms', financial leverage had an insignificant positive correlation with the financial performance.Liquidity had an insignificant negative correlation with the manufacturing and allied firms'performance, while for the construction and allied firms, financial performance correlation with liquidity was positive and significant.The study recommended that further Research be carried out in the same sectors and the other listed onesto capture firm attributes' effects on financial performance.

# CHAPTER ONE
# INTRODUCTION

## 1.1.Background of the Study

Acknowledging effects ofcompany characteristics on firms' performance is paramount, whether the returns on investments, equity, assets or profitability. Financial performance has proved to be a diverse construct, especially in its definition and measurement. The settled relevant measure depends on the organizations' type under evaluation and the anticipated objectives. Sentiments by Naser and Makhtar (2004) indicated that higher performance levels reflected management effectiveness and efficiency in utilizing the organization's resources, which contributed to the country's economic growth. Assessment of financial performance determinants for manufacturing companies has gained much interest lately in the corporate finance literature since the government introduced the Big Four Agenda. Industrialization is one of the agendas as the government purports to encourage industrialization to create employment for the many jobless graduates and hasten the economic growth that comes hand in hand with an excellent financial performance by these firms.

Therefore, Kaguri (2013) added that the "financial performance construct had been attracting a high level of awareness by researchers in different fields such as that of strategic management as well as that of business." Firm Performance has a significant part to play not only in a firm's market value increment but also in determining its level in the industry's growth; thus, this also translates to economic growth. Therefore, the performance of all firms should be monitored closely. The goal of every manufacturing company is to be efficient, innovative, and flexible as much as possible. Effective manufacturing operations offer customers a more comprehensive range of products and

services, consider employee well-being, have healthy financial indicators, and adapt to the changing environment (Peasy, 2019). There is a great significance to businesses as well as individuals from mass production firms since they contribute primarily to the economic growth and well-being of individuals in the society, i.e., they increase the number of employment opportunities. Nevertheless, manufacturing companies continue to face challenges ranging from the rising quality of offshore manufacturing, changing regulations, shortage of skilled workers, and rapidly advancing technology. Lowering the prices of the company's most profitable products and cutting waste through lean manufacturing techniques should lead to increased cash flow, market share increment, and high profitability in the manufacturing sector.

Manufacturing firms in Scandinavian indicated that the economic crisis did not affect them and recorded a 22.2% growth rate of sales. The same firms in Europe recorded a 10% average sales growth rate (Lemonakis et al., 2016). European and Scandinavian manufacturing firms' gross profit margin growth rate was approximately 10% for that period, while their returns on assets growth rates were 10.62% and 30.12%, respectively. These continents also recorded growth in their total assets by 22.70% and 13.84%, respectively (Lemonakis et al., 2016).

Efuntade and Akinola (2020) noted an average return on assets (ROA) of 4.569 for manufacturing firms quoted at the Nigerian securities exchange, which deviated by 3.6178 while studying the impacts of firm attributes on Nigeria quoted manufacturing firms'. The deviation means that values of the profitability of the quoted firms vary across the manufacturing firms. Rwanda has seen an 8% growth of its gross domestic product in the recent past, resulting from an increase in manufacturing sector output by 15%. The

share of investment and finance channelled to manufacturing has seen Rwanda attain a GDP of 24%, higher than average investment in other low-income countries in sub-Saharan Africa (Calabrese et al., 2017).

In Kenya, robust manufacturing and construction sector growth has proved challenging, with economic growth being driven primarily by service and agriculture sectors. Premature industrialization was experienced in the country with a decline in domestic product contribution from these two sectors, partly 8.4% in 2017 from 9.2% in 2016 (KAM Report, 2018). The rising share of the service sector is attributable to premature industrialization, which has fuelled a debate as to whether the service industry can replace the manufacturing sector as an engine for economic growth.

In Ghana, Agyei and Marfo-Yiadom (2011) noted a 24.65% dividend payout by banks between 1999 and 2003. Also, they added that the banks that paid dividends to their shareholders increased their performance in a study that sought to interrogate the correlation between dividend policies with Ghana's commercial banks' financial performance. The inferences in this study were derived from panel data of 16 commercial banks that were operational in Ghana for five years. The findings attested to other studies that bank size, financial leverage, and bank growth influenced their financial performance.

### 1.1.1. FirmCharacteristics

Firm characteristics, according to Bannier and Hänsel (2007), are the managerial and demographic aspects that make up the company's interior environment. Several attributes linked with organizational accomplishments, especially financially, include; asset

structure, liquidity, financial leverage, and many others. There are diverse findings on what influences firm performance, one viewpoint being that firm attributes greatly impact financial achievement (Galbreath & Galvins, 2008). These characteristics were measured using data available on the Nairobi Securities exchange website on manufacturing and construction firms listed.

Masika (2019) researched the impact firm characteristics had on financial performance, which depicted a positive correlation between firm attributes such as financial leverage and the firm's size growth liquidity with the SACCOs financial performance. In Nigeria, similar Research was carried out by Egbunike and Okerekeoti (2018) to examine firm attributes and macroeconomic factors' influence on quoted manufacturing firms in Nigeria's Financial Performance. They established that firm attributes were significantly different correlated to financial performance. Gatauwa J.M (2022) Researched on private equity financing and financial performance and concluded that firm factors have a moderating influence on the link between private equity and financial performance in firms.

Asset structure comprises the ratio between current as well as fixed assets of a firm. Industries in which firms' operates dictates the level of its asset structure. Liquidity measures a firm's preparedness in responding to opportunities in the operating environs, which enhances its financial performance and is computed through the current ratio. This ratio indicates that a firm can manage working capital by measuring its capability to change assets into cash when kept at normal levels. The firm's liquidity helps improve the firm operating financial Performance (Subrahmanyam & Titman, 2001). However, a sky-high liquidity level can signify a lot of cash lying around in the firm, probably due to the

lack of skilled managers who can place this resource into use. On the other hand, low liquidity implies that the firm may face difficulties meeting the current liabilities.

Manufacturing companies that own many current assets have a minimal chance of capsizing since cash is realizable when needed than those with less liquid assets. The firm leverage ratio can be defined as a ratio used to signify how company assets and business operations are financed using equity or debt financing. The current study will measure leverage through the asset to equity ratio. When the financial leverage increases, its dependency on external debt financing increases, resulting in high-interest rates. Jensen and Meckling (1976) arbitration linking debt with agency costs of equity, Grossman and Hart's (1983) disciplining debt effect, as well as Brander and Lewis's (1989) limited liability debt effect cumulative depict a positive efficacy of leverage on the financial performance. Highly leveraged manufacturing companies face a bankruptcy risk, especially when unable to settle their obligations, and they also face the challenge of finding lenders.

### 1.1.2. Financial Performance

This construct can be explained as quantifying monetary terms of a firm's outcomes from its operations. Financial performance is described by Fatihudin and Mochklas (2018) as a company's capacity to manage its resources and measurements, such as solvency, capital adequacy, and profitability. The outcomes are usually depicted in the form of a company's value-addition, returns on investment, and ROA. Measuring productivity attains these purposes; to act as significant business objectives and enable the management of finances (Nelly, 2011). In their balanced scorecard measurement of performance, Kaplan & Norton (2001) identified four specific financial, non-financial,

learning, and growth. According to Mahfoudh (2012), firms used to rely mainly on accounting measures of performance which have been criticized due to perceived inadequacies. As a result, firms have increasingly begun to utilize other performance measures such as economic value measures and non-financial measures (Liargovas & Scandalis, 2010). There are several non-financial performance measures: employee turnover, market share, customer turnover, new product innovation, and time. This study used ROA in measuring the financial Performance since ROA aids investors in measuring how the management is utilizing the organization's assets or resources to generate income for their investments.

Financial reports from the Nairobi Securities Exchange and those published by the various companies on their websites as stipulated by the law have indicated variance in the firms under study's performance. For instance, BAT limited company reported a drop in its profits after tax from 4.084 billion shillings in 2018 to 3.885 billion shillings in 2019. BOC gases also reported a rise in earnings from 0.394 billion shillings in 2017 to 0.656 billion shillings in 2018, while Mumias sugar company keeps on recording an increase in its loss-making wherein 2016 it had recorded a 1.762 billion shillings loss which appreciated to 3.188 billion shillings in 2017.

On the other hand, Eveready had recorded a profit of 0.267 billion shillings in 2017 and a loss of 0.116 billion shillings in 2018, while Bamburi cement had recorded a yield of 1.973 billion shillings dropped to 0.572 billion shillings in 2018, among others (NSE, 2019). These reports have depicted discrepancies in the financial performance amongst the various companies from the two sectors, with some facing severe financial problems;

hence, further examination of the influence firm characteristics have on the construction and manufacturing firm's financial performance is necessary, guiding this Research.

### 1.1.3.Manufacturing and Construction and Allied Companies Listed at the NSE

The construction sector is under the regulation of the national construction authority, which was enacted under an act of parliament number 41 of 2011 that regulates all the construction activities ranging from buildings, roads, railways, and bridges, among others. The construction sector recorded growth on GDP contribution of 0.5% from 2014 to 2015, which resulted from the standard gauge railway and Thika Road projects that the government was undertaking amongst other similar projects both in the national and county levels according to an Economic Survey (2016). The manufacturing and allied sector, on the other hand, recorded an 8.4% contribution dropping from 10% contribution experienced during the preceding period and therefore the reason for the drive by the government to necessitate its GDP contribution to increase to around 15% in the next ten years or so as per the governments big four agenda. According to Kimondo (2014), manufacturing and construction, and allied firms vary in terms of their experience in the industries they are based at because they have been operational for varied periods. This study targeted 14 companies, which entail five construction and nine manufacturing NSE-listed companies.

## 1.2. Problem Statement

Review of literature on manufacturing and allied, as well as construction and allied firms, has indicated that they have been experiencing a declining financial performance for the past few years. A good example is demonstrated by a report that showed a decline in the

GDP from the manufacturing sector from 11.9 billion shillings in the third quarter of the year 2019 to 11.3 billion shillings in the fourth quarter of 2019 (NSE, 2019). This can be attributed to the challenging economic condition that the country has been facing. These two sectors have been battling poor governance, capital inadequacy, inadequately skilled labour, poor asset quality, slow adoption of technology, and operational inefficiency. This is as per the report of a study that Strathmore Business School carried out in conjunction with SYSPRO (2020). This has seen the firms suffer a reduced financial performance since their environment has proved to be highly dynamic. Examples are Mumias Sugar Company, Bamburi cement, Eveready, BOC gases, and BAT.

Financial results that are registered within a given financial period of any company operating in any given industry at a given time are highly influenced by firm characteristics. Advantages of operating on a large scale in companies are as a result of; division of labor and specialization in organizations, better interest and discount rates, and splitting of the costs that are fixed in various denominations. There have been mixed results on the evaluated writings on the topical scope, with some in support of a positive relationship with others, not in support that this correlation exists. Usman and Zahid (2011) further indicated that older firms benefit loyal customers who have been transacting with them for a long time and would be reluctant to switch to the competitor. Pandey (2010), in their study, noted that an organization's size is determined through assets number that it controls or the proportion of a market that it controls in a given industry determines the proportion of customers it is likely to serve hence determining the financial outcome.

In the Kenyan context, influences of various firm characteristics on performance researches were conducted. Audax (2018) examined the aspects that influenced the NSE-listed manufacturing firms' financial performance by factoring financial leverage, liquidity, and firm size as the independent elements influencing the dependent variable. This Research adopted a longitudinal research design, which is generally perceived as a theory-testing tool. The study revealed a significant correlation linking the size of a firm and liquidity with listed firms' financial performance. However, this study only used three firm characteristics to evaluate their influence on the dependent variable. Still, this study will consider asset structure as an additional firm characteristic and broaden the scope by studying the manufacturing, construction, and allied sectors.

Shimenga and Miroga (2019) studied the effects of liquidity and leverage on NSE-listed manufacturing firms' financial performance. The study utilized primary data acquired via structured questionnaires to the targeted respondents. The study reflected a notable correlation amid liquidity and financial leverage predictor variables with these listed manufacturing firms' financial performance. As noted in this study, the researcher only factored in two predictor variables mentioned above as the characteristics influencing performance. Therefore the current Research will introduce asset structure as crucial firm characteristics that impact financial performance.

Most Research studies on firm characteristics and their influence on NSE-listed firms' financial performance have generalized all firms. From a financial point of view, the results from these studies cannot be applied in all the sectors since they are performing very differently based on the annual reports they publish every financial year. Some of these studies are such as that of Nyamiobo, Muturi, Okibo, and Olweny (2018),

Rosemary (2017), Akuno and Kariuki (2019), and that of Wangige (2016), among others. Therefore, this research project addressed the literature gaps that exist in this topical area. This Research addressed this question: What efficacies do the selected firms' characteristics have on the abovementioned firms' financial performance?

## 1.3. Research Objectives

### 1.3.1. General Objective

Theresearch project'sgeneralobjectivewas to determinethe effects of firm characteristics on the performance of NSE-listed construction and manufacturing and allied firms in Kenya.

### 1.3.2. Specific Objectives

i. To investigate the effect ofasset structureon the financial performance of NSE-listed construction and manufacturing and allied firms in Kenya.
ii. To determine the effects of financial leverage on the returns on investment of construction and manufacturing and allied NSE-listedfirms' in Kenya.
iii. To determine theeffect of liquidityon the financial performance of construction and manufacturing and allied listed firms in Kenya.

## 1.4 Research Hypothesis

The research tested the following null hypothesis:

i. $H0_1$: Asset structure has no significant effect on the financial performance of manufacturing and construction and allied companies listed in Nairobi Securities

Exchange, Kenya.

ii. $H0_2$ :Financial leverage has no significant effect on the financial performance of manufacturing and construction and allied companies listed in Nairobi Securities Exchange, Kenya

iii. $H0_3$ : Liquidity has no significant effect on the financial performance of manufacturing and construction and allied companies listed in Nairobi Securities Exchange, Kenya.

### 1.5. The Study's Significance

The current research examined the relationships linking these selected firm attributes to NSE-listed construction and manufacturing financial performance. Findings from thisResearch shall also be a footing for further Research by scholars in similar topics. The government should adopt the results from the research in formulating regulations that can aid in improvingthe running of these two sectors in addressing the indifferences in the industries. To achieve this, the government should enact a bill that offers stipends to the upcoming companies in the sectors to caution them from hardships prone to forthcoming companies. Firm managers can use findings from this studyto detect sources of performance discrepancies.

### 1.6. Scope of the study

This project mainly scrutinized the impactasset structure, financial leverage, and liquidity have on NSE-listed manufacturing and construction and allied firms' financial

performance. The target population was focused on NSE-listed manufacturing and construction firms. A 5 year time scope from 2014-2018 was adopted in this paper. The reason for selecting this time scope is because of the data availability constraint.

### 1.7. Organization of the study

This projectencompassesfive sections. Section one is an introduction that provides a relevant study's background. The second section presentsthe reviewed literature, empirical and theoretical literature reviews, and a literature review summary. The third section comprises a research methodology used by this paper, which entails ethical considerations, model specification, definition, and measurement of variables and data source, among others, as illustrated in this paper. Section four comprises the outcome of both the diagnostic tests and the statistical analysis. The last part discusses the research findings as well assuggestions by theresearcher.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1. Introduction

The underlying evaluation ofwritings gives discussions of both the empirical as well as theoreticalassessment.

## 2.2. Theoretical Review

General theories related to firm characteristics and ideas advanced on selected ones are discussed, but this study will only focus on three theories.

### 2.2.1. Pecking Order Theory

Myers and Nicolas (1984) introduced the theory but was later modified by Donaldson (1991). According to the theory, hierarchy is observed by the management in consideration of finance sources. Some sources are most preferred, including equity, debt, and retained earnings financing. Companies' first use retained earnings to finance their projects because they do not incur floatation costs or require additional disclosure. This theory assumes the inexistent target capital structure.

This theory proposes that high profitability firms make use of minimal debt financing compared to firms with lower profitability because high profitability firms don't need to source finances from external sources (Agnes, 2013). The choice of financial leverage in terms of debt financing adopted by the organization signifies outside investors that the firm needs to source funds externally and is the management can also use this to strategize for inabilities of making investment decisions (Farooq, 2015).

However, criticism of this theory indicates that it seizes to be helpful, mainly to small organizations, since the lack of equality in access to information is seen as a big problem. Charles (2017) added that shares are undervalued and end up attracting additional subscribers due to the low prices hence diluting the firms control if a huge amount of equity is assigned to capital funding rather than funding through debts which results in the loss of confidence in the management by the directorsparticularly in declining prices of stocks. It is therefore appropriate to this Research because it indicates the leverage level of a company, i.e., whether it is highly levered or not, and also provides a framework of how the assets of the company and business operations are financed and also because of the solvency variable that determines financial leverage.

### 2.2.2. Trade-off Theory

Kraus and Litzerberger (1973) brought up this theory, which was later improved by Myers (1984). It is a capital structure theory, and it states that firms balance their benefits and costs when choosing the amount of equity and debt financing to utilize. Kraus and Litzerberger (1973) attested to this by noting companies identify an ideal structure of capital that balances the costs associated with financial distress against interest tax benefits.

Oruc (2009) noted that trade-off theory emphasizes a footing betwixt a decline in bankruptcy and agency costs, financial distress costs, and tax savings realized through debt. "An interest tax shield is likely to enhance the value of the firm; however, this only happens to a certain level as an increase in leverage increases the risk of default which in turn results in financial distress costs" (Mabinda & Iravo, 2018). Myers (1999), in

analysis to establish the connection the firm numerical quantity has with leveraging, noted that leverage is paid by the firm's profits earned, which has a decreasing effect on the leverage. The amount of leverage determines a firm'sperformance hence the theory's relevance in this research paper.

### 2.3.3. Liquidity Preference Theory

Keynes (1936)proposed this idea and according to this theory, the currency is the best easily convertible asset, and highly volatile investments are easy to liquidate. Based on this conjecture, the demand for cash arises from the desire to remain liquid and not because an individual intends to borrow the desired funds. The proposer of the conjecture assumed that the growth in the amount of savings depended on the inflation of the rates in interest.

According to Ankintoye (2000), the income velocity variance is attributable to liquidity preference, interest rate levels, money substitute's availability, income changes, the number of non-bank financial institutions, and the scale of anticipated expenditures. There are three reasons for holding money based on Keyne (1936): speculative, transaction, and precautionary reasons. The rate of interest based on Uchendu (2010), plays the following roles; it helps in retaining the credit supply availability, guaranteeing that the current savings shall flow into investments which will promote economic growth, balances money supply with money demand policies, and provides fillablefinances to high remittance investment projects. Highly liquid firms always have a competitive edge when it comes to the other players in the same sector; therefore this theory is relevant to the current study.

### 2.3 Empirical Review

The effects company attributes have on financial performance are discussed. Various kinds of literature related to this study are considered.

#### 2.3.1 Asset Structure and Financial Performance

Tanui et al. (2021) surveyed corporate governance, capital structure, and asset structure impacts on Kenyan NSE-listed manufacturing and construction firms. Thissurveyexamined 12 listed firms at the securities market. Both inferential and descriptive statistics were applied. Based on the results from this study, both current and noncurrent assets had a positive statistical significance on the Kenyan listed manufacturing as well as construction firms' financial performance. However, the Research only tested the effect of one firm attribute on financial performance, i.e., asset structure. The current study will factor in other firm attributes such as financial leverage in testing how they influence the two sectors' financial performance.

Ngunya and Mwangi (2018) examined the impacts asset structure had on all Kenyan manufacturing entitiesperformance. This survey adopted a causal research design bycarrying out a census for all eight firms. An insignificant negative impact of tangible fixed assets on return on assets was established from the study. On the contrary, an insignificant positive effect of intangible fixed assets on the return on assets was also depicted from the survey. The study only factored in the asset structure predictor variable's effect on performance. The current project factored in additional firm attributes and test their effects on financial performance.

Similarly, Nyamasege et al. (2014) investigated what impacts asset structure had on the value of companies listed at the NSE. Results in thesurvey revealed a significant effect of the firms' asset structure on their value. This study, however, tested the impact of this attribute on firms' value. In contrast, the current study will examine the effect on performance and factor other attributes apart from asset structure, i.e., liquidity and financial leverage.

### 2.3.2 Financial Leverage and Financial Performance

Rosemary (2017) interrogated the impacts of company attributes on financial accomplishment of companies whose shares are traded on NSE. This researcher observedanefficacious but weak notable correlation of leverage on the firms'performance. However, results from this study may not be universally applicable in the other sectors under investigation since some industries are doing very well in terms of financial performance, for instance, the telecommunication sector, so it would be biased to apply the same results in the manufacturing and construction and allied sectors.

Kithandi and Katua (2020) examined the influence Financial Leverage had on Kenyan NSE-listed Energy and Petroleum Sector Companies' Financial Performance. The research did a census on five NSE-listed companies. Findings from thisproject reflect an opposite correlation betwixt the dependent and independent variables, with an increase in the financial leverage leading to a decline in the ROA for these firms. However, this studytargeted NSE-listed Petroleum and Energy Sector entities. Thus, these results cannot be applied in the construction and manufacturing sectors, hence the current study.

Similarly, Akhtar et al. (2012) investigated what effects financial leverage had on Pakistan'senergy and fuel industry financial performance. Thestudy's objective was testinghypothesis that was formulated. Findings in this paper indicated a positive correlation betwixt the firms' financial leverage and their performance. However, the researchers only reviewed the fuel sectors. Thus, the results cannot be applied in the construction and manufacturing sectors, hence the current study.

Hillison, Marlett, and Pacini (2008) investigated the influence board size had on financial performance. These researchers made use of the following control variables; firm's leverage and firm size. These researchers adopted a multivariate regression analysis, and from their study, concluded that leverage was inversely correlated with all other performance measures. However,the Research was on US-based companies; therefore,its results are inapplicable in Kenya based on the diversity in the two nations' economies, hence the reason for the current study.

### 2.3.3 Liquidity and Financial Performance

Although this study will only use the quick ratio, a firm's liquidity is measured via acid test and cash ratio. Ochingo and Muturi (2018) studied the impacts ofcompany attributes on Kenyan SACCOs and used 2013 and 2015. These researchers made use of descriptive statistics like mean, panel regression, and standard deviation. From this research paper, a significantly positive relationship between firm attributes was selected for the study and Kenyan SACCOs'Performance. However, this study disregarded financial leverage, and asset structure as essential characteristics influencing financial performance; the researcher intends to fill the existing literature gap.

A study done in India by Panigrah (2014) studied the influence firm attributes had on the risk of Bankruptcy. This study was conducted between 2000 and 2009, and the researcher used an exploratory research design. This study indicated a negative effect of working capital, which resulted from an aggressive capital policy, and the researcher recommended that an adequate level of liquidity and profitability be maintained.

### 2.4 Summary of Literature Review and Literature Gaps

**Table 2.1: Summary of Literature Review and Literature Gaps**

| **Author (years)** | **Research Objective** | **Key Findings** | **Research Gaps** | **Focus of the Current Study** |
|---|---|---|---|---|
| Tanui **(**2021**)** | An examination of corporate governance, capital structure, and asset structure impacts on Kenyan NSE-listed manufacturing and construction firms | Both current and noncurrent assets had a positive significance on the financial performance | The study did not factor in financial leverage and liquidity as firmcharacteristics | The study will factor in financial leverage and liquidity. |
| Ngunya (2018) | Asset Structure and Financial Performance of Listed Manufacturing and Allied Companies in Kenya | Liquidity for the construction and the allied sector had a significant positive correlation | This study did not factor in financial leverage | This study will factor in asset structure, liquidity and financial leverage. |
| Gladys (2010) | An examination of the impacts of firm size on commercial banks financial performance | Firm size was significantly and positively correlated to Kenyan commercial banks'performance | The study only recognized firm size as the firm characteristic influencing performance. | Liquidity, leverage, and asset structure will be factored in the current study |
| Jennifer | Examination of the impacts of | A negative impact of solvency on | The study didn't factor in asset | This study will factor in asset |

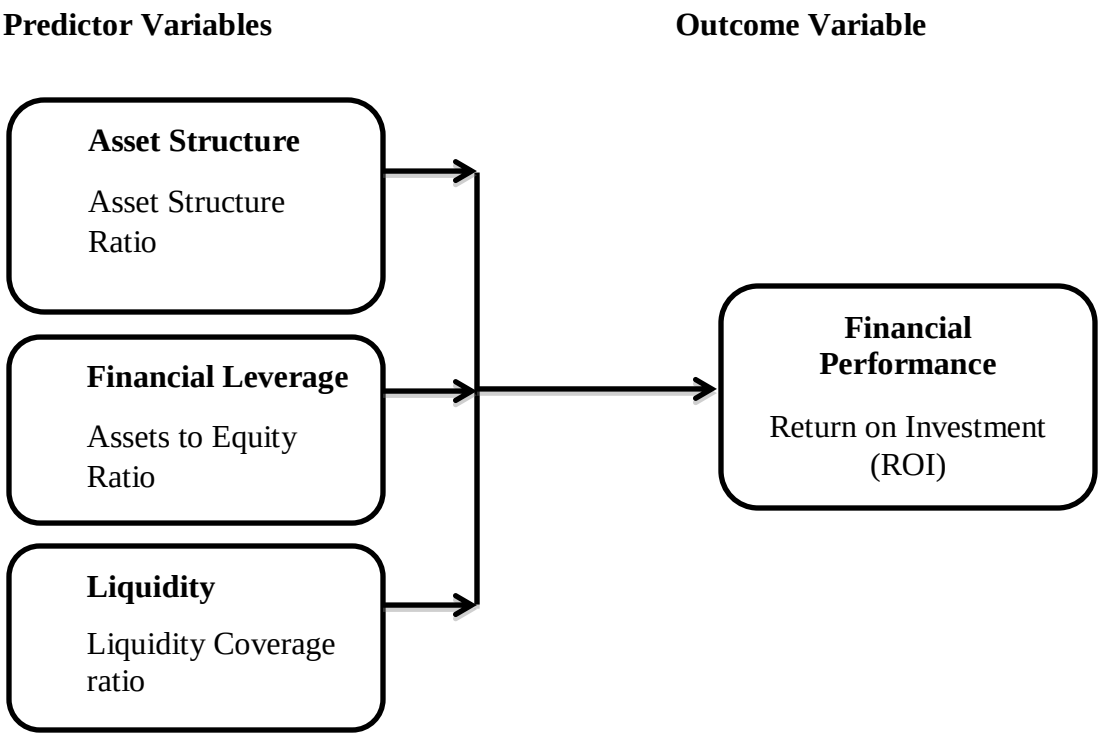
| | | | | |
|---|---|---|---|---|
| (2015) | firm characteristics on the returns on investment of listed companies | performance was observed | structure as well as financial leverage firm characteristics. | structure and financial leverage. |
| Jane (2017) | An examination of the influence management efficiency had on Kenyan SACCOs financial performance | Efficiency has no significant influence on the outcome variable | This study focused on one aspect, which is management efficiency. | This current Research will factor leverage, liquidity, and asset structure firm attributes |
| Rosemary (2017) | Impacts of selected firms' attributes on the performance of NSE-listed entities. | Listed firms should strive to remain liquid through efficient working capital management and set up strategies of growth and expansion in sizes, e.g.,development in market segments and shares. | The study was generalized to all NSE-listed firms. | The current survey shall be focused on construction and manufacturing firms |
| Ochingo & Muturi (2018) | Determination of the efficacy of firm attributes on Kenyan SACCOs performance | The firm attributes under study significantly influenced the Kenyan SACCOs accomplishments | The study did not factor in asset structure and financial leverage that affect financial performance. | This survey will useasset structure as well as financial leverage, which are crucial influences on financial performance |

**Source: Researcher (2021)**

## 2.5 Conceptual Framework

This construct presents interactions between the study parameters diagrammatically. This caseillustrates the relationship between asset structure, financial leverage and liquidity firm characteristics and ROI.

**Figure 2.1: Conceptual Structure**




**Source: Researcher (2021)**

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1.Introduction

Thisresearch studyendorsed procedure is discussed here. These entail; the survey design, the target population, the sampling technique, the method used in data collection, diagnostic tests, data presentation, and examination,and moral contemplation.

## 3.2. Research Design

Creswell (2013) described this construct as a layout of the ploy employed while generating answers that address a study's problem. A descriptive research design wasused in this paper.Descriptive study tries to characterize a population, situation, or phenomenon in a methodical and precise manner. It can answer the questions of what, where, when, and how, but not why.As per the sentiments by Cooper and Schindler (2006), descriptive studies describe the general characteristics of the study population in a research study. Creswell et al. (2003) narrated descriptive design to be an exploration of who, what, and the how of phenomenon that forms the basis of this study.

## 3.3. Target Population

Asiamahet al. (2017) described a target population as a group of individuals with one or more attributes of interest. This study targeted14 companies, which entail five construction and nine manufacturing NSE-listed companies. This study's period is between 2014 and 2018.

### 3.4. Data Collection Procedures

This criterion enables researchers to obtain information to make statistical inferences in a study (Warner, 1965). This research paper utilizedsubsidiary information drawn from financial statements from the NSE website, specific company websites. Thisinformationwas gatheredin a five year duration from 2014 to 2018.

### 3.5. Data Analysis

The researcher used descriptive analysis,which comprised of numerous regression models. The drawn information was analyzed using Stata. Quantitative data analysis involves using relative frequencies, i.e., mean, mode, median, and standard deviation (Kothari, 2009).

#### 3.5.1.Construction and Allied Model

$$Y= \beta_0+ \beta_1X_1+\beta_2X_2+ \beta_3X_3+ \varepsilon$$

Where: Y- Financial Performance, $\beta_0$ –Constant, $\beta_1$ to $\beta_3$– Coefficients, $X_1$ –Asset Structure, $X_2$ –Financial leverage, $X_3$ –Liquidity, and E- Error term

#### 3.5.2.Manufacturing and Allied

$$Y= \beta_0+ \beta_1X_1+\beta_2X_2+ \beta_3X_3+ \varepsilon$$

Where: Y- Financial Performance, $\beta_0$ –Constant, $\beta_1$ to $\beta_3$– Coefficients, $X_1$ –Asset Structure, $X_2$ –Financial leverage, $X_3$ –Liquidity, and E- Error term

### 3.6. Invocation and Computation of Parameters

**Table 3.1 Invocation and Computation of Parameters**

| Classification | Parameter | Invocation | Computation | Scale |
|---|---|---|---|---|
| Independent Variables | Asset Structure | Asset Structure Ratio | Fixed Assets/ Current Assets | Ratio |
| | Liquidity | Working Capital ratio | Current Assets/ Current liabilities | Ratio |
| | Leverage | Assets to Equity Ratio | Total Assets /Total Equity | Ratio |
| Dependent Variable | Financial performance | Return On Investment | Net profit Before Tax/ Total Equity | Ratio |

**Source: Researcher (2021)**

### 3.7. Diagnostic Tests

The researcher conductedseveraldistinctive tests,including normality testing, Haussmann specification tests, among others.

#### 3.7.1. Bi-variate Correlation Analysis

Bivariate correlation is a type of study that calculates distinct correlation coefficients to determine the strength of a relationship between two variables (Perinetti, 2019). Pearson, Kendall, Spearman, and the point-biserial correlation coefficients are the most popular. The right coefficient is chosen based on the type of data to be analyzed and, in some cases, the presence of assumptions for parametric tests.A negative correlation coefficient

indicates a negated association between the two parameters, while a positive correlation implies a positive correlation between the study parameters.

### 3.7.2. Multicollinearity Test

In a multivariate regression model, multicollinearity occurs when there are high inter-correlations between two or more independent variables. When a researcher or analyst tries to figure out how well each independent variable can be utilized to predict or comprehend the dependent variable in a statistical model, multicollinearity can lead to skewed or misleading conclusions.Variance inflation factor (VIF) identifies relationships between predictor parameters as well as the strengths of the relationships.

### 3.7.3. Normality Test

A normal distribution, often known as the Gaussian distribution or the bell-shaped curve, is a type of statistical distribution. The mean and standard deviation of the data define the normal distribution, which is a symmetrical continuous distribution.Normality testing is considered a prerequisite for all statistical analysis. This is because all parametric testing assumes all the data to follow a normal distribution. Tests of Normality can either be graphical or numerical, depending on the type of study.

### 3.7.4 Unit Root Test

Unit root tests are tests for stationarity in a time series. Time series has stationarity if a shift in the time doesn't cause a change in the shape of the distribution, and unit-roots are one cause for non-stationarity. Unit root tests have low statistical power, and many exist in part because none stand out as having the most ability (Stephanie, 2016). They include; the Dickey-Fuller Test, which is based on linear regression; the Elliot-Rothenberg-Stock

test, the Schmidt-Phillips Test, which contains the coefficients of the deterministic variables are null and alternate hypotheses; and the Phillips-perron test, which corrects the autocorrelation and Heteroscedasticity in their errors.

### 3.7.5.Heteroskedasticity Test

Heteroskedasticity can be determined through the White test as a general model, Breusch Pagan Godfrey test, and can also be checked visually for cone-shaped data.Heteroskedasticity in this study was assessed using the Breusch Pagan Godfrey test. Heteroskedasticity occurs when the assumption that the errors in ordinary least square regression have the same but unknown variance is violated.

### 3.7.6 Autocorrelation Test

Wooldridge (2012) derived a simple autocorrelation test in panel data modelling as we can't use the likelihood test ratio procedure in generalized least squares. Simulations results that show that the test has good power and size properties in reasonably sized samples were provided (Drukker, 2003).

### 3.7.5.Model Specification Test

The model specification comprises of the procedure used to determine the predictor variables to encompass or eliminate in the regression model.Model specification necessity arises when analysts have to define the correlations between predictor and outcome parameters mathematically.

## 3.8. Ethical Consideration

Moral contemplations in Research entail compliance with the institution's guidelines and regulations, ensuring that the Research is conducted ethically and does not deviate from the intended purpose. This study was undertaken under the observation of all guidelines

and regulations of Kenyatta University and according to research requirements in Kenya and Globally.

# CHAPTER FOUR

## DATA ANALYSISAND INTERPRETATION

### 4.1 Introduction

Outcomes of thisstudy's investigation are bestowed in this part. The information for statistical examination for this section was obtained from nine manufacturing and allied and five construction companies. Stata was used to conduct a descriptive analysis of the study variables. Diagnostic tests preceded the actual data examination to develop data reliability and suitability. After that, regression analysis was conducted using the regression equations provided in chapter three, an interpretation of the findings was interpreted using inferential statistics.

### 4.2. Descriptive Analysis

#### 4.2.1. Outputfor Manufacturing and Allied Firms

This part is a presentation of the results of the examination of the research particulars that illustratetheir mean, standard deviation, their maximum and minimum values, andthe observations for manufacturing firms.

**Table 4.1 Descriptive Statistics**

| Parameter | Observations | Mean | Std. Deviation. | Minimum | Maximum |
|---|---|---|---|---|---|
| ROI | 45 | -0.1007 | 1.963389 | -12.5977 | 0.951793 |
| Asset Structure | 45 | 2.348468 | 4.216238 | 0.216863 | 24.04705 |
| Leverage | 45 | 3.392568 | 5.079595 | -2.19847 | 31.8421 |
| Liquidity | 45 | 2.055334 | 1.909134 | 0.029041 | 9.428015 |

**Source: Study Data (2021)**

The table above illustrates that for the period between 2014 and 2018, the number of observations were 45, implying that nine manufacturing and allied firms were being

studiedforfive years. The ROI for the firms' had an average value of -0.1007while its minimum value was-12.5977with its maximum value being0.951793.Thatis an indication that these firms had difficulty in converting their investments into profit. The current ratio of the companies' average value was 2.05533 with a 0.029041 minimum value and a 9.428015 maximum value, which implied that the firms could quickly liquidate their assets to meet the short-term debts when and as they fell due.

A leverage ratio mean of 3.39257 was observed with a -2.19847 minimum value and a 31.8421 maximum value,indicatingthe firms'risk of external borrowing reliance was low. Figure 4.1 also illustratedthe firm's asset structure ratio, whichshowed a mean of 2.348468 and a 0.216863 minimum value. A 24.04705 maximum value implies that the firms'asset base was properly constituted.

### 4.2.2. Descriptive Analysis Output for Construction and Allied Firms

This part is a presentation of the results of the examination of the research particulars that illustrate their mean, standard deviation, their maximum and minimum values, and the observationsfor construction firms.

**Table 4.2 Descriptive Statistics**

| Parameter | Observations | Mean | Std. Deviation. | Minimum | Maximum |
|---|---|---|---|---|---|
| ROI | 25 | 0.025706 | 0.293799 | -0.5416 | 0.531665 |
| Asset Structure | 25 | 4.857675 | 5.318517 | 0.291778 | 18.15128 |
| Leverage | 25 | 2.51996 | 1.109457 | 1.275142 | 5.332463 |
| Liquidity | 25 | 0.879832 | 0.564357 | 0.216551 | 2.696565 |

**Source: Research Data (2021)**

Table 4.2 illustrates that for the period between 2014 and 2018, the observations were 25, implying five construction firms were studiedforfive years, and the ROI for the

companies'average value was0.025706, with a -0.5416minimum value and a 0.531665 maximum value.This was an indication that these firms had difficulty in converting their investments into profit. The current ratio of the companies' average was0.87983 with a 0.216551minimum value and a 2.696565 maximum value, which implied that the firms could quickly liquidate their assets to offset current debts.

A leverage ratio with a 2.51996 mean,1.275142minimum value, and a 5.332463 maximum value indicated that the firms faced lower risk if they relied on external borrowing. Figure 4.2 also illustrated the firm's asset structure ratio,revealing a 4.857675 mean, 0.291778 minimum value, and an 18.15128 maximum value, which implied that the firm's asset base was properly constituted.

### 4.3. Diagnostic Tests

The researcher conducted several distinctive tests, including normality testing, Haussmann specification tests, among others.

#### 4.3.1. Bi-Variate Correlation Analysis

A Bi-variate tests determine the relationships betwixt two parameters, X and Y. Theiroutcomes are illustrated in the figure below.

**Table 4.3 Bi-VariateInteraction Coefficients**

| | **ROI** | **Asset Structure** | **Leverage** | **Liquidity** |
|---|---|---|---|---|
| ROI | 1 | | | |
| Asset Structure | -0.3507 | 1 | | |
| Leverage | -0.7669 | 0.2045 | 1 | |
| Liquidity | 0.0661 | -0.1711 | -0.2385 | 1 |

**Source: Research Data(2021)**

The coefficient value for asset structure, as illustrated in Table 4.3,is -0.3507, which implies that the correlation between asset structure and ROI is negative, but it is significant. The same case applies to the leverage ratio, whose correlation coefficient is -0.7669,implying that leverage had a significant negated impact on ROI. Conversely,liquidity has a0.0661 correlation coefficient and thusthat means the liquidity effect on ROIis positive though insignificant.

### 4.3.2. Multicollinearity Test

Test for multicollinearity between asset structure, liquidity, and leverage is illustrated below.VIFs have no maximum limit and start at 1. A value of 1 denotes that there is no relationship between this independent variable and any other variables. VIFs between 1 to 5 indicate a moderate association, but not one severe enough to justify corrective action. VIFs larger than 5 indicate critical levels of multicollinearity, with poorly calculated coefficients and doubtful p-values.

**Table 4.4 Collinearity Statistics**

| Variable | VIF | 1/VIF |
|---|---|---|
| Leverage | 1.09 | 0.915508 |
| Liquidity | 1.08 | 0.92749 |
| Asset Structure | 1.06 | 0.942334 |
| Mean VIF | 1.08 | |

**Source: Research Data(2021)**

From Table 4.4, the collinearity level was observed to demonstrate no problem with the multicollinearity of the independent variables.There would have been multicollinearity if there was a linear association between two or more of the predictor parameters.

### 4.3.3. Normality Test

The formula adopted in this project was because the sample size was small, i.e., 14 firms listed in the NSE. The null hypothesis (Ho) states that your data is not out of the ordinary while the alternative or alternative hypothesis (Ha) is that the data is out of the ordinary.If the p-value is less than 0.05, you will reject the null hypothesis. This permits you to assert that your data deviates from a normal distribution statistically. If your p-value is more than 0.05, on the other hand, you can say that your data does not deviate statistically from a normal distribution.

**Table 4.5 Tests of Normality**

| | **Shapiro-Wilk W test for normal data** | | | | |
|---|---|---|---|---|---|
| **Variable** | **Obs** | **W** | **V** | **z** | **Prob>z** |
| ROI | 70 | 0.30165 | 42.985 | 8.178 | 0 |
| Asset Structure | 70 | 0.50610 | 30.401 | 7.425 | 0 |
| Leverage | 70 | 0.48610 | 31.632 | 7.511 | 0 |
| Liquidity | 70 | 0.66655 | 20.525 | 6.571 | 0 |

**Source: Research Data (2021)**

Results of the normality test are illustrated in figure 4.5 below. They indicate a P-value of 0.00 for the dependent and independent variables. Thus, we reject the null hypothesis since the value is below 0.05 and conclude that the data is not normally distributed. The researcher in this case accepted the data as is, despite the fact that it was not routinely dispersed, because changing the data would have raised ethical concerns.

**Table 4.6 Skewness/ Kurtosis Test for Normality**

| Variable | Skewness/Kurtosis tests for Normality ------- joint ------ Obs | Pr(Skewness) | Pr(Kurtosis) | adj chi2(2) | Prob>chi2 |
|---|---|---|---|---|---|
| ROI | 70 | 0.0000 | 0.0000 | | 0.0000 |
| Asset Structure | 70 | 0.0000 | 0.0000 | 67.93 | 0.0000 |
| Leverage | 70 | 0.0000 | 0.0000 | | 0.0000 |
| Liquidity | 70 | 0.0000 | 0.0000 | 39.18 | 0.0000 |

**Researcher(2021)**

Probability distributions above show that particulars of all the variableswere not normally distributed in the Skewness test based on P-values of 0.00. For the Kurtosis test,all the variables data is also not normally distributed. In the joint probabilities, the data for all variables is also observed not to be normally distributed.The researcher in this case accepted the data as is, despite the fact that it was not routinely dispersed, because changing the data would have raised ethical concerns.

### 4.3.4 Unit Root Test

Dickey-Fuller Test was used in testing the unit root test in this study, and the results are as shown below.The null hypothesis is defined by the absence of a unit root in a time series, while the alternative hypothesis is defined by the presence of a stationary time series.

**Table 4.7 Dickey-Fuller Test for Unit Root**

| **Dickey-Fuller test for unit root** | | | **Number of obs. =** | **70** |
|---|---|---|---|---|
| **---------- Interpolated Dickey-Fuller ---------** | | | | |
| **Test Statistic** | **1% Critical Value** | **5% Critical Value** | **10% Critical Value** | |
| Z(t) | -5.015 | -3.621 | -2.947 | -2.607 |
| MacKinnon approximate p-value for Z(t) = 0.0000 | | | | |

| **D.ROI** | **Coef.** | **Std. Err.** | **t** | **P>t** | **[95% Conf. Interval]** | |
|---|---|---|---|---|---|---|
| ROI | | | | | | |
| L1. | -.7273517 | .1450453 | -5.01 | 0.000 | -1.020065 | -.4346384 |
| _cons | .045443 | .0351977 | 1.29 | 0.204 | -.0255888 | .1164748 |

**Source: Research Data(2021)**

Based on the critical value at 10% in Table 4.7of-2.607 to the left side, which does not surpass the critical value of -5.015.Therefore, we do not reject the null hypothesis of the unit root, which implies that our sequence is non-stationary in terms of different stationarities. Therefore if mean values rise over time, we expect value changes.

### 4.3.5Heteroskedasticity Test

The outcome is as shown below.

**Table4.8Breusch-Pagan-Godfrey Test**

| **Breusch-Pagan / Cook-Weisberg test** | **for Heteroskedasticity** |
|---|---|
| Ho: Constant variance | |
| Variables: Asset Structure | Leverage Liquidity Liquidity |
| chi2(3) = 166.64 | |
| Prob > chi2 = 0.0000 | |

**Source: Research Data(2021)**

Table 4.8 above illustrates test results forthe Breusch-Pagan test for Heteroscedasticity. A chi-square distribution with three degrees of freedom representing the three parameters tested, i.e., asset structure, financial leverage, and liquidity excluding the intercept, are produced when produced the null hypothesis of no Heteroscedasticity is satisfied. The test statistic, in this case, is 166.64 with a P-value of 0.0000, which makes the researcher reject the null hypothesis of homoscedasticity.

### 4.3.6 Autocorrelation Test

Wooldridge (2012) derived a simple autocorrelation test in panel data modelling as we can't use the likelihood test ratio procedure in generalized least squares. Simulations results that show that the test has good power and size properties in reasonably sized samples were provided (Drukker, 2003).

**Table 4.9 Cochrane-Orcutt AR (1) regression -- Iterated Estimates**

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| | | | | Number of obs = | 69 |
| | | | | F( 3, 65) = | 68.95 |
| Model | 158.478741 | 3 | 52.8262469 | Prob > F = | 0 |
| Residual | 49.8021639 | 65 | .766187138 | R-squared = | 0.7609 |
| | | | | Adj R-squared = | 0.7499 |
| Total | 208.280905 | 68 | 3.06295448 | Root MSE = | 0.87532 |

| ROI | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| Asset Structure | -.0123067 | .037161 | -0.33 | 0.742 | -.0865224 | 0.061909 |
| Leverage | -.3341692 | .0238331 | -14.02 | 0.000 | -.3817672 | -0.28657 |
| Liquidity | -.0600527 | .0379559 | -1.58 | 0.118 | -.1358558 | 0.01575 |
| _cons | .9899224 | .2910026 | 3.40 | 0.001 | .4087501 | 1.571095 |
| rho | .5212081 | | | | | |

Durbin-Watson statistic (transformed) 2.049336
Durbin-Watson statistic (original) 1.485527

**Research (2021)**

If you have no autocorrelation and the Rho term equals zero, the Durbin-Watson statistic will be equal to two. For a perfect positive autocorrelation, the Durbin-Watson statistic will be zero as Rho goes to one. As illustrated in Table 4.9, the Durbin-Watson test statistic = 2.049336, there is no autocorrelation in the statistical data.

### 4.3.7 Model Specification Test

The model specification comprises of the procedure used to determine the predictor variables to encompass or eliminate in the regression model.Hausman Specification Test was used in testing the model in this study.

**Table 4.10 Hausman Specification Test**

| | ---- Coefficients ---- (b) fe | (B) re | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E. |
|---|---|---|---|---|
| **Asset Structure** | -.0792506 | -.0792506 | 0 | 0 |
| **Leverage** | -.3025406 | -.3025406 | 0 | 0 |
| **Liquidity** | -.0604514 | -.0604514 | 0 | 0 |

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(0) = (b-B)'[(V_b-V_B)^(-1)](b-B)
166.64

Prob>chi2 = 0.0000

**Source: Research Data(2021)**

This project's null hypothesis was;the random effect model was appropriate while its alternative hypothesis is fixed effect model is appropriate. Table 4.10 shows that we got a P-value of 0.0000, and thus we have to reject the null hypothesis and conclude that the fixed effects model is appropriate for this study.

### 4.4. Panel Regression

Regression analyses were carried out in the research to establish the relationships between thisstudy'sparameters,whose findings are discussed below.

#### 4.5.1. Manufacturing and Allied Firms

**Table 4.11 Regression Results**

| **Source** | **SS** | **df** | **MS** | Number of obs = | 45 |
|---|---|---|---|---|---|
| | | | | F( 3, 41) = | 29.04 |
| Model | 115.3318 | 3 | 38.4439277 | Prob > F = | 0 |
| Residual | 54.28362 | 41 | 1.32399078 | R-squared = | 0.68 |
| | | | | Adj R-squared = | 0.6565 |
| Total | 169.6154 | 44 | 3.85489557 | Root MSE = | 1.1506 |

| **ROI** | **Coef.** | **Std. Err.** | **t** | **P>t** | **[95% Conf.** | **Interval]** |
|---|---|---|---|---|---|---|
| Liquidity | -0.08586 | .0960783 | -0.89 | 0.377 | -.2798904 | 0.108178 |
| Leverage | -0.2997 | .0357792 | -8.38 | 0.000 | -.3719573 | -0.22744 |
| Asset Structure | -0.09411 | .0433216 | -2.17 | 0.036 | -.1815969 | -0.00662 |
| _cons | 1.313523 | .3278133 | 4.01 | 0.000 | .651491 | 1.975556 |

**Source: Research Data(2021)**

Table 4.11 summarizes the model summary and coefficients for manufacturing and allied firms' panel data regression. An $R^2$ value of 0. 0.68 implies a combined impact of firm attributes of 68% on performance. A 0.0000 P-value isless than the tabulated 0.05 significance level. Thus, the researcher rejects the null hypothesis, implying a difference between the sample data and the given data; hence, the model was fit in explaining the correlation between the predictor and outcome parameters.

The table also illustrates the coefficients of the three independent variables with their corresponding P-values values whereliquidity had a 0.377 P-value,more substantial than the 0.005 significance level. Thus, the study fails to reject the null hypothesis that there is

no significant effect of liquidity on the firms'performance hence concluding that liquidity had no significant effect on the manufacturing and allied firms'performance. A coefficient value of -0.08586 for the liquidity ratio means that for every unit increase in the liquidity ratio, ROI decreases by 0.08586 for the manufacturing and allied firms.Increasing the number of current assets has a positive effect on the current ratio, and thus the firms should work on expanding their current asset base.

On the other hand, financial leverage posted a 0.000 P-value of less than 0.005 significance level; thus, this study rejects the null hypothesis that leverage has no significant effect on the firms'performance. A conclusion was made that financial leverage significantly affected the manufacturing and allied firms'performance. A coefficient value of -0.2997 for the leverage ratio meant that ROI declined by 0.2997 for the manufacturing and allied firms whenthe leverage ratio increased by one unit. This implies that for these firms' to realize the increment of the share-holders value, they have to seek alternative financing modes other than debt financing.

Similarly, the Asset Structure ratio posted a 0.036 P-value that is less than 0.005 significance level; thus, the researcher rejected the null hypothesis that asset structure had no significant effect on the firms'performance. A conclusion was made that asset structuresignificantly affected the manufacturing and allied firms'performance. A coefficient value of -0.09411 for asset structure ratio implied that asasset structure increased by a single unit, ROI declined by 0.09411 for the manufacturing and allied firms. The amount of a firm's fixed assets indicates its value and growth, showing how big the asset structure can be placed as collateral supporting the firms' growth, value, and profitability.

### 4.5.2. Construction and Allied Firms

**Table 4.12Regression Results**

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| | | | | Number of obs = | 25 |
| | | | | F( 3, 21) = | 2.66 |
| Model | 0.571007 | 3 | .190335711 | Prob > F = | 0.0743 |
| Residual | 1.500626 | 21 | .071458394 | R-squared = | 0.2756 |
| | | | | Adj R-squared = | 0.1722 |
| Total | 2.071633 | 24 | .086318058 | Root MSE = | 0.26732 |

| ROI | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| Leverage | 0.038552 | .0745476 | 0.52 | 0.610 | -.1164782 | 0.193582 |
| Liquidity | 0.381652 | .1630556 | 2.34 | 0.029 | .0425596 | 0.720745 |
| Asset Structure | 0.020655 | .0191919 | 1.08 | 0.294 | -.0192564 | 0.060567 |
| _cons | -0.50757 | .3881203 | -1.31 | 0.205 | -1.314711 | 0.29957 |

**Source: (Research Data, 2021)**

Table 4.12summarizes the model summary and coefficients for construction and allied firms' panel data regression. An $R^2$ value of 0.2756 implies that all the firm characteristics combined had a 27.56% effect on the construction and allied firms' financial performance. The 0.0743 P-value is more than the tabulated 0.05 significance level. Therefore,the researcher fails to reject the null hypothesis, implying that there is no difference between the sample data and the given data; hence, the model did not explain the correlation between this predictor and outcome variables.

The table also illustrates the coefficients of the three independent variables with their corresponding P-values values where liquidity had a 0.029 P-value that is less than 0.005 significance level. Thus, the researcher rejected the null hypothesis that liquidity had no significant effect on the firms'performance. A conclusion was made that liquidity had a significant impact on the construction and allied firms'performance. A coefficient value

of 0.381652 for the liquidity ratio implied that ROI increased by 0.381652 for the construction and allied firms for every unit increase in the liquidity ratio. Increasing the amount of current would be a boost for the firms' returns on investment.

On the other hand, financial leverage posted a 0.610 P-value,which is more than 0.005 significance level; thus, the researcherdid not reject the null hypothesis that the financial leverage had no consequentialimpact on the firms'performance. A conclusion was made that leverage has no consequentialimpact on construction and allied firms'performance. A coefficient value of 0.038552 for the leverage ratio meant that ROI increased by 0.038552 for the construction and allied firms;the leverage ratio increased by one unit. These firms should increase their gearing ratio to increase the share-holders value creation.

The asset Structure ratio posted a 0.294 P-value,which is more than 0.005 significance level; thus, the researcher did not reject the null hypothesis that asset structure had no consequentialimpact on the firms'performance. A conclusion was made that asset structure had no significant impact on the construction and allied firms'performance. A coefficient value of 0.020655 for asset structure ratio implied that ROI increased by 0.020655 for the construction and allied firms for every unit increase in the asset structure.The amount of a firm's fixed assets indicates its value and growth, showing how big the asset structure can be placed as collateral supporting the firms' growth, value, and profitability. Thus these firms should invest in more fixed assets to improve their returns.

### 4.6. Discussion of Findings

Key discoveries from this researchproject revealed that the manufacturing and allied sector asset structurecorrelation to ROI was-0.09411which was negative but significant, while construction and allied sector findings depicted that asset structure had an insignificant positive correlation of 0.020655 with the ROI.Tanui et al. (2021),in a similar study, established that both current and noncurrent assets had a positive statistical significance with the Kenyan manufacturing and construction firms' returns on investment. Ngunya and Mwangi (2018) notedthat the study established an insignificant negative impact of tangible fixed assets on return on assets. On the contrary, an insignificant positive effect of intangible fixed assets on the return on assets was also depicted from the study. The discrepancy in this study's results from the ones discussed is attributable to variance in the sectors and the methods used to determine the firms' financial performance.

Liquidity for the manufacturing and the allied sector had an insignificant negative correlation of -0.08586with the ROI. Liquidity for the construction and the allied sector had a significant positive correlation of 0.381652 with the ROI. Ochingo and Muturi (2018), in a similar study,noteda significantly efficacious correlation betwixt firm attributes selected and Kenyan SACCOs' Performance which were in line with the results from the construction and allied sector. Panigrah (2014)indicated a negative effect of working capital, which resulted from an aggressive capital policy that was in line with the results from the manufacturing and allied sector. Companies need to stay liquid at all times for them to be able to offset their current debts when they fall due hence the explanation for the similarity in the findings.

In contrast, financial leverage for the manufacturing and allied sectors had a significant negative correlation of -0.2997 with the ROI. Financial leverage for the construction and the allied sector had an insignificant positive correlation of 0.038552 with the ROI.Kithandi and Katua (2020) examined the influence Financial Leverage had on Kenyan NSE-listed Energy and Petroleum Sector Companies' Financial Performance.Results from thisresearch reflected an indirect correlation betwixt financial leverage and performance, for the firms in line with the manufacturing sector results. Akhtar et al. (2012) investigated whateffects financial leverage had on financial performance.This study indicated that firms' financial leverage influenced financial performance positively, which is in line with the construction and allied sector results. This similarity in the results is because the companies need to be highly levered to stay afloat. Gatauwa J.M (2014) conducted a survey on private equity investments in Kenya and concluded that private equity is a suitable alternative in financing organizations at various stages of growth.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1. Introduction

A detailed summary of thisResearch's main findingsis presented here, proceeded by conclusions that are arrived at from the study, and finally, the recommendations by the author for further Research in areas similar to this study.

## 5.2. Summary of findings

ThisResearcherinterrogatedwhateffects firm attributes had on manufacturing as well as construction NSE-listed companies' financial performance. Results in this research were based on the effects of three predictor variables, namely asset structure, financial leverage, and liquidity, and their impact on financial performance.From these findings, manufacturing companies' firm characteristics were observed to negatively influence performance, with two variables' influence being significant while one of the variables having an insignificant negative effect on performance. The construction and allied firms' characteristics affected their performance positively, with only one variable having a significant impact on their performance.

The first objective was to examine the effect asset structure had on NSE-listed construction and manufacturing and allied firms in Kenya's financial performance. From these results, assets structure had a significant negative correlation with firms' financialperformance in the manufacturing and allied firms. In contrast,it was observed that asset structure had an insignificant positive correlation with the firms' financial

performance for the construction and allied firms. This variation can be attributed to the difference in the environmental factors where the sectors operate.

The second aim of the research was the determination of the impacts financial leverage had on NSE-listed construction as well as manufacturing companies' financial performance. ThisResearch's findings depicteda significant negated correlation of financial leverageon the manufacturing and allied companies' financial performance. For the construction and allied firms', financial leverage had an insignificant positive correlation with the financial performance of the construction and allied firms listed at the Nairobi Securities Exchange.

The last objective of this research was to examine the influence liquidity had on NSE-listed construction as well as manufacturing companies' financial performance. Results illustrated that liquidity had an insignificant negative correlation with the manufacturing and allied firms'performance. On the other hand, the construction and allied firm's financial performance correlation with liquidity was positive and significant.

### 5.3. Conclusion

Firm characteristics take part in the shaping of firms' financial performance, hence the author's motivation to carry out a study to investigate the influence the selected firm characteristics in this study had on returns on investment for manufacturing and construction firms. From thisresults,the researcher concludes that these attributes do influence the financial performance of firms, although not entirely in isolation, and their effects, as noted in the study, vary based on the sectors that the firms are based.

Financial leverage is an essential guidefor potential investors who wish to pump capital in various sectors. Therefore, the findings in this study can play a pivotal role for potential investors who want to turn the financial performance of the firms studied around. The manufacturing sector in Kenya is part of the government's big four agenda, as noted in the financial statements used to extract the data for this study.Some firms are sinking into serious financial problems and the current pandemic period is not a picnic for them either. Thus, a closer look has to be made to determine the financial performance problems these firms face, whether financial mismanagement or poor debt financing methods.

A firm's strong liquidity implies that it can settle its current obligations when they fall due. Therefore, this raises how the firms studied to balance their current assets and their current liabilities. Investing in more current assets enables a firm to easily convert its current assets into liquid cash to pay either a creditor or make an urgent purchase. The manufacturing sector was observed to have the worst liquidity. Thus the management should interrogate its investment decisions keenly if they are to start adding value to the shareholders' investments.

The amount of a firm's fixed assets indicates its value and growth, showing how big the asset structure can be placed as collateral supporting the firms' growth, value, and profitability. The balance between a firms' fixed and current assets dictates how big its asset structure will be. The challenge is now on the management of both sectors to maintain a balance between their investment in both the current and fixed assets and also be able to generate profits that will foster growth and value addition to the shareholders' investments.

### 5.4. Recommendations

Firm characteristics need to be interrogated now and then since they form part of firms' macro-economic environment. Thus they do have an influencing factor on the financial performance.

#### 5.4.1. Recommendations for Practice

Mangers of numerous firms in these sectors can use the recommendationsto identify the root causes of financial fluctuations and devise measures to respond to those fluctuations. Careful interrogation of firm characteristics can significantly boostreturns on investmentof the firmsby makingsound decisions regardingfinancing modes to be adopted.

#### 5.4.2. Recommendation for Policy

The government should adopt the results from the study in formulating regulations that can aid in improving the running of these two sectors in addressing the indifferences in the industries. To achieve this, the government should enact a bill that offers stipends to the upcoming companies in the sectors to caution them from hardships prone to forthcoming companies.

### 5.5. Suggestion for Further Research

Firm characteristics are vast and cannot be researched enough. They also differ concerning a firms' sector. Thus this area needs to be investigated in depth from time to time based on the dynamism of the industries.

## REFERENCES


Agyei, S. K.& Marfo-Yiadom, E. (2011). Dividend Policy and Bank Performance in Ghana. *International Journal of Economics and Finance*, 3(4), 202-210.

Akhtar, S., Javed, B., Maryam, A., & Sadia, H. (2012). Relationship between Financial Leverage and Financial Performance: Evidence from Fuel & Energy Sector of Pakistan. *European Journal of Business and Management*, *4*, 13.

Ankintoye, I.R. (2000). *Investment decision: Concepts, analysis management*. Lagos: Unique Educational Publishers.

Akuno, M. O.& Kariuki, M. I. (2019). Effect of Firm Characteristics on the Financial Performance of Energy and Petroleum Firms Listed In the Nairobi Securities Exchange, Kenya.

Allen, M. (2017). The SAGE Encyclopedia of Communication Research Methods. *SAGE Publications*, Inc. https://doi.org/10.4135/9781483381411

Audax, A. (2018). Factors affecting the financial performance of manufacturing firms listed in the Nairobi securities exchange in Kenya. 68.

Bannier, C. & Hänsel, D. (2007). Determinants of banks' engagement in loan securitization.

Brander, J. A., & Lewis, T. R. (1989). Oligopoly and financial structure: The limited liability effect. In A. F. Daughety (Ed.), Cournot oligopoly (pp. 421–444).

Bryman, A. & Bell, E. (2007). *Business Research Methods*, 2nd Edition. Oxford University Press.

Bibow, J. (2005).Germany in Crisis.The Unification Challenge, Macroeconomic Policy Shocks and Traditions, and EMU. *IRAE* 19 (1): 29-50.

Calabrese, L., Papadavid, P., & Tyson, J. (2017.). *Rwanda: financing for manufacturing*. 28: 7-12.

Campello, M. (2006). Asset Tangibility and Corporate Performance under External Financing. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.889682

Charles, O. O. (2017). Capital structure and financial performance of listed companies at the Nairobi securities exchange market: a case of commercial banks in Kenya. 62: 7-32.

Chmelarova,V. (2007). The Hausman test, and Some Alternatives, with Heteroskedastic Data. Louisiana State University and Agricultural & Mechanical College.

Cooper, D. R., & Schindler, P. S. (2006).*Business Research Methods* (9th Edition). USA: McGraw-Hill.

Creswell, J. W. (2013). Research design: Qualitative, quantitative, and mixed methods approach. Thousand Oaks, California: *Sage publications*.

Drukker, D. M. (2003). Testing for Serial Correlation in Linear Panel-data Models. *The Stata Journal*, 3(2), 168–177. https://doi.org/10.1177/1536867X0300300206

Efuntade, A. & Akinola, A. (2020). Firm characteristics and financial performance in quoted manufacturing companies in Nigeria. *The International Journal of Business and Finance Research*. 7. 25-32.

Egbunike, C.F. & Okerekeoti, C.U. (2018), Macroeconomic Factors, Firm Characteristics, and Financial Performance: A Study of Selected Quoted Manufacturing Firms in Nigeria, *Asian Journal of Accounting Research*, 3 (2) 142-168.

Eurofound (2019). The future of manufacturing in Europe, Publications Office of the European Union, Luxembourg.

Fatihudin, D., Jusni, & Mochklas, M. (2018). How to measure financial performance.

Galbreath, J.& Galvin, P. (2008). Firm Factors, Industry Structure, and Performance Variation: New Empirical Evidence to a Classic Debate. *Journal of Business Research*. 61. 109-117.

Gatauwa, J.M. (2014). A survey of private equity investments in Kenya. *European Journal of Business and Management*, 6(3), 15 - 20.

Gatauwa, J.M. (2020). Does fiscal stance affect public expenditure: Evidence from Kenya. *International Journal of Public Finance*, 5(2), 295 - 310.

Gatauwa, J.M. (2022). Private equity financing and financial performance: A Review of the literature. *African Development Finance Journal*, 1(2), 95 - 103.

Goergen, M.(1999).Corporate Governance and Financial Performance: A Study of German and UK Initial Public Offerings. *Marc Goergen, Edward Elgar Publishing, Ltd.*, Available at SSRN: https://ssrn.com/abstract=168570.

Hicks, J. R. (1937).Mr. Keynes and the.Classics: A Suggested Interpretation. *Econometrica* 5(1): 147-159.

Issa, O. M. (2013). Effect of selected firm characteristics on the financial performance of firms listed in the agricultural sector at the Nairobi securities exchange. 70, 10-25.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3, 305-360.

Johnson, B. & Turner, L.A. (2003). Data Collection Strategies in Mixed Methods Research. In: Tashakkori, A.M. and Teddlie, C.B., Eds., Handbook of Mixed Methods in Social and Behavioral Research, *SAGE Publications,* Thousand Oaks, 297-319.

Kaguri, A. W. (2013). Relationship between firm characteristics and financial performance of life insurance companies in Kenya. 67, 7-15.

Kaplan, R. S.& Norton, D. P. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I. *Accounting Horizons*, 15(1), 87–104.

Kaldor, N. (1983). Keynesian Economics after Fifty Years. In G. D. N. Worswick and J. A. Trevithick (eds.), Keynes and the Modern World. Cambridge: Cambridge University Press.

Keynes & John, M. (1936). The General Theory of Employment, Interest, and Money. 190.

Kithandi, C., & Katua, C. (2020). Financial Leverage and Financial Performance of the Energy and Petroleum Sector Companies Listed in The Nairobi Securities Exchange. *International Journal of Scientific and Research Publications (IJSRP)*, *10*(3), p9972. https://doi.org/10.29322/IJSRP.10.03.2020.p9972

Kothari, C.R. (2009). Research Methodology: Methods and Techniques. *New Age International*, 401 p.New Delhi: New Age International (P) Ltd., ©2004

Kraus, A.& Litzenberger, R. H. (1973). A State-Preference Model of Optimal Financial Leverage, *Journal of Finance, American Finance Association*,28(4), 911–922

Lemonakis, C., Vassakis, K., Garefalakis, A., & Partalidou, X. (2016). Manufacturing Firms' Performance and Productivity: Evidence from North and South European, Scandinavian and Balkan Countries. *Theoretical Economics Letters*, *06*(04), 789–797. https://doi.org/10.4236/tel.2016.64083

Liargovas, P.& Skandalis, K. (2010). Factors Affecting Firms. Financial Performance: The Case of Greece. *Global Business and Management Journal*. 2. 184-197.

Mahfoudh, I.O. (2013). Effect Of Selected Firm Characteristics On Financial Performance Of Firms Listed In The Agricultural Sector At The Nairobi Securities Exchange. 50

Masika, D. (2018). Effect of firm characteristics on the financial performance of deposit-taking Sacco's licensed by SASRA in Nairobi County, Kenya. 92. 9-20

Muema, F. M., & Abdul, D. F. (2021). Firm Characteristics and Financial Performance of Commercial Banks Listed On the Nairobi Securities Exchange. 13.

Mwaniki, G., & Omagwa, J. (2017). Asset Structure and Financial Performance: A Case of Firms Quoted Under Commercial and Services Sector at the Nairobi Securities Exchange, Kenya. *Research Journal of Finance and Accounting*, 9.

Myers, S. C., Dan N. S.& Majluf (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have, *Journal of Financial Economics* 13, 187-221.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39(3), 574–592.

Mwangi, L. W., Makau, M. S., & Kosimbei, G. (2014). Effects of Working Capital Management on Performance of Non- Financial Companies Listed In NSE, Kenya. *European Journal of Business and Management*, 6(11), 195-203.

Myers, M. D. (1997). Qualitative Research in Information Systems. MIS Quarterly, 21, 241-242.

Naser, K., & Mokhtar, M.Z. (2004). Firm Performance, Macro- economic Variables and Firm Size, Journal of Finance, 543-679.

Nelly, K. M., Jagongo A.& Kosimbei G.(2019). Bank Size and Financial Risk Exposure on Financial Performance of Commercial Banks in Kenya. *International Journal of Financial Research* 10(6), 250-263

Ngunya, G., & Mwangi, L. (2018). Asset Structure and Financial Performance of Listed Manufacturing and Allied Companies in Kenya.

Nyamasege, D., Okibo, W. B., Nyang'au, A. S., Sang'ania, P. O., & Momanyi, C. (2014). Effect of Asset Structure on Value of a Firm: A Case of Companies Listed In Nairobi Securities Exchange. *Research Journal of Finance and Accounting*, 8.

Nyamiobo, J. K., Muturi, W., Okibo, W. B., & Olweny, T. (2018). Effect of Firm Characteristics on Financial Performance of Listed Firms in Nairobi Securities Exchange. 16.

Omondi, E. (2018). Effects of asset structure on the Financial Performance of Listed Companies at Nse. 7. 12-32.

Oruç, E. (2009). Behavioral Dimension of Cross-Sectoral Capital Structure Decisions : ISE (Istanbul Stock Exchange) Application, 28(28).

Pacini, C., Hillison, W. & Marlett, D. (2008). Board size and firm performance in the property-liability insurance industry, Chen, A. (Ed.) Research in Finance (Research in Finance, Vol. 24), *Emerald Group Publishing Limited*, Bingley, pp. 249-285.

Perinetti, G. (2019). StaTips Part VI: Bivariate correlation. *South European Journal of Orthodontics and Dentofacial* Research. 6. 2-5. 10.5937/sejodr6-21664.

Rosemary, M. (2017.). Effect of Selected Firm Characteristics on Financial Performance of Firms Listed in the Nairobi Securities Exchange. 70(1) 8-56.

Shapiro, S., & Wilk, M. (1965). An Analysis of Variance Test for Normality (Complete Samples). *Biometrika*, 52(3/4), 591-611. doi:10.2307/2333709

Shimenga, M. A., & Miroga, J. (2019). Influence of financial leverage and liquidity on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange. *The Strategic Journal of Business & Change Management*, 6 (2), 799 –814.

Shyam-Sunder L. & Myers S. C.(1999). Testing Static Trade-off against Pecking Order Models of Capital Structure. *Journal of Financial Economics* 51, 219-244.

Stephanie, G. (2016). Unit Root: Simple Definition, Unit Root Tests From StatisticsHowTo.Com: Elementary Statistics for the Rest of Us! Https://Www.Statisticshowto.Com/Unit-Root/.

Subrahmanyam, A.& Titman, S. (2001). Feedback from Stock Prices to Cash Flows. *The Journal of Finance*, 56(6), 2389–2413.

Too, I. C.& Simiyu, E. (2018). Firms characteristics and financial performance of general insurance firms in Kenya. 1(39), 672-689.

Uchendu, O. A. (2010). *Interest Rate Policy, Savings and Investment in Nigeria*. Economic and Financial Review, 31(1).

Verbeek, M. (2012). A Guide to Modern Econometrics. Applied Econometrics,8. 125-132

Wangige, G. J. (2016). Effect of firm characteristics on financial distress of non-financial firms listed at Nairobi securities exchange, Kenya. 72.

Wooldridge, J. (2012). Introductory Econometrics: A Modern Approach. 20.

## APPENDICES

### APPENDIX I: Secondary Data Schedule/ Matrix

| YEAR | Liquidity (High-Quality Liquid Assets Amount/ Total Net Cash Flow Amount) | Financial Leverage (Total Debts/Total Assets) | Asset Structure (Fixed Assets/Current Assets) | Return on Investments (ROI) |
|---|---|---|---|---|
| **2014** | | | | |
| **2015** | | | | |
| **2016** | | | | |
| **2017** | | | | |
| **2018** | | | | |
| **2019** | | | | |

**Source: Company Annual Reports**

**APPENDIX II: List of Companies**

| **Manufacturing Companies** | **Construction and Allied Companies** |
|---|---|
| British American Tobacco Kenya Ltd | Athi River Mining Ltd |
| B.O.C Kenya Ltd | Bamburi Cement Ltd |
| Carbacid Investments Ltd | Crown Paints Kenya PLC |
| East African Breweries Ltd | EA Cables Ltd |
| Mumias Sugar Co. Ltd | EA Portland Cement Ltd |
| Unga Group Ltd | |
| Eveready East Africa Ltd | |
| Kenya Orchards Ltd | |
| Flame Tree Group Holdings Ltd | |

**Source: (NSE Website)**

## APPENDIX III: Budget

| Item | Cost (KShs) |
|---|---|
| Traveling expenses | 5,000 |
| The hiring of a research assistant | 10,000 |
| Computer/typing services | 1,500 |
| Printing and Photocopying of proposal | 3,000 |
| Binding of proposal | 1200 |
| Data analysis | 8,000 |
| Printing and Photocopying of Project | 7,000 |
| Hard binding | 2,000 |
| Miscellaneous | 5,000 |
| Total | 42,700 |

**Author (2021)**

**APPENDIX IV: Work Plan**

| **Month /Activity** | March 2021 | April | May | June | July | August 2021 |
|---|---|---|---|---|---|---|
| Proposal Writing | | | | | | |
| Corrections | | | | | | |
| Data Collection | | | | | | |
| Data Analysis | | | | | | |
| Project Writing | | | | | | |
| Submission of Project | | | | | | |

**Author (2021)**