

**FIRM CHARACTERISTICS AND VALUE ADDED TAX COMPLIANCE ON  
CONSTRUCTION FIRMS IN KENYA  
A SURVEY OF STAREHE SUB-COUNTY, NAIROBI KENYA**

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**POST GRADUATE DIPLOMA  
[TAX ADMINISTRATION]**

**JOMO KENYATTA UNIVERSITY OF  
AGRICULTURE AND TECHNOLOGY**

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KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**2019**

**DECLARATION**

This research project is my original work and has not in the past been presented for a degree/postgraduate diploma in any other University.

Signature: ..... Date: .....

**SUSAN MWIKALI MUMO**

**HDB336-C016-2098/2016**

**Approval**

This research project has been presented for examination with my approval as the appointed University Supervisor:

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

**KALUNDU KIMANZI**

## **ACKNOWLEDGEMENT**

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## **DEDICATION**

This research project is dedicated to my child for her numerous sacrifices that played a major role in the completion of this research project as well as my studies. Their support, encouragement, care, concern and love inspired me in the achievement of the goal of pursuing this postgraduate diploma.

## ABSTRACT

In countries all over the world, tax is considered an important source of revenue for financing development projects and hence governments must make sure that tax revenue is efficiently and accurately collected. One of the main challenges that face tax authorities is the inability to make sure that taxpayers comply fully with tax system regulations. Therefore, to develop strategies to improve tax compliance, governments need to understand the main factors contributing to noncompliance. As such, the main objective of the research is to establish the effect of firms' characteristics on VAT compliance among the construction firms in Nairobi County. The research sought to examine the effect of firm ownership, firm age and firm size on VAT compliance in construction firms in Kenya. This research employed a descriptive research design. The target population for the research was therefore 480 construction firms within Nairobi County. Sample size was determined through the Slovin's Formula. The sample size was selected from the target population through use of stratified random sampling. Secondary time-series data was used in the present study and covered a period from 2014 to 2018. Data on firm age, firm size and firm ownership was obtained from the individual construction firms, which data on VAT tax payment was gathered from KRA. A data extraction checklist was adopted in gathering the second hand data. The research then used both descriptive and inferential statistics with the help of Statistical Package for Social Sciences version 24 for data analysis. Descriptive statistics included computation of frequencies, mean, standard deviation and percentage. The association between the study variables was determined using correlation and regression analysis (inferential statistics). Correlation analysis was employed to establish the strength of the association between dependent and independent variables while multivariate regression analysis determined the relationship between the elements or variables under investigation. The results were shown in form of graphs, charts and tables. The study found that firm size (total assets) has a positive and significant effect on VAT compliance in construction firms in Kenya. The study found that firm age (number of years in existence) has a positive and significant effect on VAT compliance in construction firms in Kenya. The study revealed that firm ownership (composition of share ownership of directors) has a positive and significant effect on VAT compliance in construction firms in Kenya. The study recommends that the management of Kenya Revenue Authority should develop training programs on appropriate and extensive record keeping, financial management as well as an optimal coordination of their resources so as to improve their compliance. In addition, Kenya revenue Authority should create awareness on the VAT compliance among startups and young businesses in the construction industry. The owners and managers in should understand that their ownership structure is relevant and therefore concentrate on legal avenues to manage their VAT tax burdens.

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## **ABBREVIATIONS AND ACRONYMS**

<b>CBD:</b>	Central Business District
<b>GDP:</b>	Gross Domestic Product
<b>KIPPRA:</b>	Kenya Institute for Public Policy Research and Analysis
<b>KRA:</b>	Kenya Revenue Authority
<b>NACOSTI:</b>	National Council of Science and Technology Innovation
<b>NCA:</b>	National Construction Authority
<b>OPEC:</b>	Organization of the Petroleum Exporting Countries
<b>SMEs:</b>	Small & Medium Enterprises
<b>US:</b>	United States
<b>VAT:</b>	Value Added Tax

## OPERATIONAL DEFINITION OF TERMS

**Tax compliance:** This is the degree to which tax payers comply with tax rules and regulations in their countries and it can be measured in terms of timely payment of tax, or the honesty in income declaration (Moore & Burrus, 2019).

**Firm Size:** this is the firm's magnitude, dimensions or proportions that might include a corporation, partnership or limited liability firm. The size is measured in terms of the number of staff it has employed, its net assets together with its capital base (Pagone, 2015).

**Firm age:** This is the period of time an organization has been in operation. It is the duration (years) of time between the commencement date of the organization and the present date (Inasius, 2019).

**Firm ownership:** This is the full mandate to control an organization as far as the operations of the business entity area concerned. It can be indicated by the number of directors in proportions of ownership in a firm (Acheampong, Debrah & Yeboah, 2016).

**Value added tax:** This is the amount of tax added on a commodity as a result of addition in value at each and every production or distribution stage (Chau & Leung, 2018).

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the Study

Tax refers to the mandatory levy on income, spending, or even on capital assets which is imposed by the state or the tax authority on tax payers upon which no specific return is received by the tax payer. Alternatively, tax can be referred to as an expense by a corporate organization or a taxpayer (Fauziati & Kassim, 2018). Nevertheless, a conflict exist in taxation as to whether the taxpayer wishes to ensure minimum cost or to ensure maximum profit while the state tries to ensure maximum revenue through increasing the level of tax compliance, while government's desire is to maximize revenue through enhanced tax compliance. In order to ensure fairness between the tax collector and the taxpayer, better rules and procedure for tax payment should be laid down to ensure simplified requirements and procedures for tax payment. Such strategy should incorporate enhanced taxpayer education (D'Attoma, 2018).

Chau and Leung (2018) argued that tax compliance refers to the willingness of the taxpayer to adhere to the tax laws in order to achieve economic state of balance in a country. Inasius (2019) stated that tax compliance simply refers to the payment of tax by the tax payer in a willingly and honest manner. Tax compliance is a problem facing many countries around the world. In Malaysia, Sinnasamy, Bidin and Soffian (2015) found that excise tax compliance was a serious problem and smuggling of products such as cigarettes, liquor and imported vehicles have caused a great loss to the tax revenue. In Tanzania, Shekidele (2010) highlighted the low excise tax compliance among manufacturers.

In 2011, globally, tax evasion goes away with the governments GDP of about 5.1%. Even in the most developed countries, tax evasion hinders revenue collection to a great extent

(Rile, 2011). Among, Uganda, Tanzania and Kenya, less than 33% of businesses are known to be tax compliant (TJN, 2015). In Kenya, Due to the effects of tax evasion, the tax burden has increased up to 20.9 per cent (Gituru, 2017). For the Kenyan government to increase its social spending, then it must come up with a way to cut the tax evasion in the informal sector (Griffiths, 2005). Through tax evasion there is inefficiency in government expenditure due to reduced revenue collection which leads to minimized investments in the government sector. Tax compliance in any country is normally affected by many different factors. However, this research seeks to establish the effects of VAT compliance amongst them; firm age, firm ownership and firm size.

### **1.1.1 Global Perspective**

In the US alone, non- compliance is estimated to cost the federal government over \$300 billion per year and different factors are found to contribute to noncompliance. Kastlunger, Dressler and Mittone (2015) indicate that tax compliance was influenced by firm size and firm ownership. Tax compliance in bigger firms was higher as compared to compliance in smaller firms. In addition, Zimmerman (2018) indicates that organization ownership has a positive impact on corporate tax compliance in the United States. In the United Kingdom, Fauziati and Kassim (2018) argue that organization size sector does not influence tax compliance costs.

In Hong Kong, it is indicated that older business entities pay higher ta fees as compared to young business entities. This is as a result of increased tax complexities in older businesses as compared to younger businesses (Wong & Lo, 2015). Ugwu (2014) established that there is a direct relationship between organization ae and the internal tax paid. In Malaysia it is indicated that less old business entities have less stock conversion rate with no complex business structures. However, the business entities grows the rate of conversion cycle increases and the business owners tend to adopt complex business

structures with an aim of ensuring lower risk rate and reduced tax paid. This in turn leads to increased tax compliance cost as well as non-compliance costs

In Taiwan, Chung and Trivedi (2013) revealed that organization size is directly proportional to the costs associated with tax compliance. D'Attoma (2018) uncovered that increase in firm's conversion rate, number of staff and total asset value leads to increase in tax compliance cost. However it was reported that smaller business organizations are accompanied with high costs related to tax compliance due to the fact that the cost of tax compliance is fixed up to a certain level.

### **1.1.2 Regional Perspective**

In order to deal with the phenomenon of tax evasion, there is need for a better knowledge of the influence of firm characteristics on whether to comply or to evade taxes. Nevertheless, in developing countries there is little knowledge on tax compliance especially African countries. In Nigeria, Badara (2016) indicated that low costs associated with VAT compliance are registered in the manufacturing sector and the goods processing sector however high VAT compliance costs which incorporated the time burden were revealed in the construction sector. Furthermore, Alabede (2014) revealed that organization size is directly proportional to the tax compliance costs. It was further found that organization age and ownership also influenced tax compliance. This finding suggests that these firm characteristics significantly affect firms' compliance behaviour in Nigeria.

Mshana (2016) argues that tax compliance in South Africa, Ghana, Uganda and Morocco is highly influenced by firm ownership, firm age and organization size. Coolidge and Llic (2018) argue that growth in organization size is directly proportional to external tax compliance in South Africa. Organization size can be measured through number of staff,

the value of total assets and the organization turnover. In South Africa, Misra (2014) indicated that among the business characteristics that are expected to affect VAT compliance of companies, organization size is one of them. Bigger organizations are more exposed to VAT aggressiveness than smaller organizations due to their economic advantage as well as the political advantage over the smaller firms. In Tanzania, Machogu and Amayi (2016) revealed a negative influence of organization size on VAT compliance. It was indicated that companies with massive investment in tangible assets reduce their gross income through use of high value depreciation expenses hence ending up paying taxes on their income

### **1.1.3 Local Perspective**

In Kenya, Wanjala (2017) revealed that tax compliance is influenced by organization size, organization age and firm ownership; He further revealed that tax compliance cost is not in any way influenced by organization size, firm age and business sector. Wanjala further indicated that no tax costs are incurred by older and young businesses together with big and small businesses in meeting their tax obligations. It was further indicated that businesses falling in the category of SMEs rarely carry out calculations for tax payment and tax reporting. The research concluded that tax compliance costs can be influenced by risk management Gitaru (2017) revealed that tax compliance is highly affected by organization size, organization ownership and firm age. The research indicated that tax compliance cost is directly proportional to organization age. This means that older organizations incur higher costs associated to tax compliance as compared to young organizations. This is so because of the increased tax complexities in older firms as compared to the younger firms

VAT is a consumption tax introduced in January 1990 with an aim of increasing the revenue collection through expansion of the tax base. The Kenyan tax system has

undergone various reforms in a bid to enhance compliance levels of taxpayers. Some of these reforms include; the introduction of electronic tax registers to assist in recording of sales, the appointment of tax agents and audit firms to prepare accounts on behalf of taxpayers, and the introduction of online filing system (iTax) in 2014. There have also been subsequent changes to the tax laws (amendments) to introduce more taxable supplies. Tax non-compliance is a global phenomenon affecting both developed and developing nations like Kenya.

## **1.2 Statement of the Problem**

In many developing nations, policy makers currently more concerned with the low turn up in tax compliance. This is due to the limited capacity of the government to raise enough revenue for government recurrent expenditure and investments (Chung & Trivedi, 2013). This indicates that government revenue is directly proportional to government services in that increase in one leads to increase in the other hence improving the living standards of people.

Joint studies carried out by KIPPRA, KRA and the ministry of finance, showed that VAT compliance in terms of payment was 55% while return filing was 65% (Masinde and Makau, 2010). Tax noncompliance leads to an increase in tax debt, which increased by 26.4% from 2015 to 2016. The tax debt then increased by 32.5% in 2016 and 32.7% in 2017. Repercussions relating to noncompliance of raising enough tax revenue by the government to finance planned activities, has motivated researches and policy makers to put emphasis on tax noncompliance. Available information indicates that a significant percentage of registered construction firms are Nil, Credit or Non-filers. Construction firms like other registered taxpayers are by law required to comply with taxation laws. The National Construction Authority (NCA) is the regulator for the construction industry.

Information available from KRA on sector based economies indicated that the construction sector has shown low compliance rate. KRA records and reports on VAT nil, credit and non-filers indicates that the majority are construction firms and Small & Medium Enterprises (SME). According to Pratama and Padjadjaran (2016), tax compliance in terms of timely filing of returns and timely payments varies with firm characteristics. Mwangi (2014) indicate that firms characteristics include firm size, age of the firm and firm ownership. There is there therefore need to address the relationship between firm characteristics and VAT compliance in construction firms in Kenya.

Many studies have been conducted on firm characteristics and tax compliance in Kenya. Robin (2018) examined impacts of VAT compliance by SMEs in Naivasha Sub County and found that these factors include firm size, filing procedures and tax accountability. Mwangi (2014) examined the factors impacting tax compliance by SMEs in in Nairobi, Kenya and revealed that firm size, age of the firm and firm ownership. However, apart from the research being done to specific regions, these studies did not show the effect of organization size, organization age and ownership on tax compliance. Therefore, the research will seek to establish the effect firm characteristics on VAT compliance in construction firms in Kenya.

### **1.3 Objectives of the study**

The study objectives consist of both the general and specific objectives.

#### **1.3.1 General Objective**

The general objective was to determine the effect of firm characteristics on VAT compliance in construction firms in Kenya.

#### **1.3.2 Specific objectives**

The study was guided by the following specific objectives;

- i. To examine the effect of firm size on VAT compliance in construction firms in Kenya.
- ii. To determine the effect of firm age on VAT compliance in construction firms in Kenya.
- iii. To establish the effect of firm ownership on VAT compliance in construction firms in Kenya.

#### **1.4 Research Questions**

The study sought to answer the following research questions;

- i. What is the effect of firm size on VAT compliance in construction firms in Kenya?
- ii. What is the effect of firm age on VAT compliance in construction firms in Kenya?
- iii. What is the effect of firm ownership on VAT compliance in construction firms in Kenya?

#### **1.5 Justification of the Study**

The KRA is mandated with a duty to collect all the government revenue on behalf of the government. Therefore, the study informed policy makers in KRA and the relationship between firm characteristics and tax compliance and importance of tax compliance in improving the compliance levels in Kenya. Through the findings of the study, the policy makers can better understand how firm characteristics influence tax compliance concerned hence informing policy formulation that in tandem with new trends to ensure revenue performance in Kenya with introduction of new tax reforms.

The study findings help the KRA management in assessing the effect of firm characteristics and tax compliance in Kenya. To the management of KRA the study is of benefit as it provides information on how firm ownership, firm age and firm size affect tax compliance. This information was useful in reviewing the strategies or even in coming up with new strategies with an aim of improving tax compliance in KRA.

To other researchers and scholars, the research availed useful information that can be used as a literature review in studies related to the effect of firms' characteristics on VAT compliance on Construction companies in Kenya. The research added more information to the body of knowledge on the the effect of firm characteristics on VAT compliance in construction companies in Kenya. The research laid a foundation up on which further research can be done on the effect of firms' demographics on VAT compliance in other sectors of the economy.

### **1.6 Scope of the Study**

This research was anchored on the effect of firm characteristics on Value Added Tax compliance in construction firms in Kenya. These characteristics include firm age, firm size and firm ownership. The target population of the study was therefore 480 heads of finance departments in construction firms within Nairobi County, Starehe Sub-County, which are categorized as civil engineering, specialized construction activities and construction of buildings. The data was collected between 5<sup>th</sup> September 2019 and 12<sup>th</sup> September 2019.

### **1.7 Limitations of the Study**

The management of construction firms in Starehe Sub-County were unwilling to grant permission to carry out the research because information on tax compliance is considered confidential as it could be used by Kenya Revenue Authority to follow-up on tax compliance. However, the researcher obtained a data collection letter from the University to show that the study is meant for academic purposes only. In addition, the researcher assured the management of construction firms in Starehe Sub-County that they would be provided with a copy of the final report in need be. The respondents were also reluctant in giving the required information due to fear of victimization. The researcher however

worked at winning their confidence by informing them that the study would only be used for academic purposes only and assured them of confidentiality of any information given.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section ensures literature review regarding the relationship of tax compliance with different variables. The chapter has two sections; the first section presents theoretical reviews on tax compliance and the second section presents the empirical reviews and their impact on the different variables on VAT tax compliance behavior.

#### **2.2 Theoretical Review**

According to the tax compliance theories, there is an assumption that both morals and ethical considerations are very essential to taxpayers. Many theories have been developed to explain tax compliance. This study adopted two theories namely; the theory of planned behaviour, economic deterrent theory and Fischer tax compliance model.

##### **2.2.1 Theory of Planned Behaviour**

Human behaviour is explained by this psychological theory which tries to link firm age, size and behaviour. The concept was developed by Ajzen (1985) with an aim of improving the predictive power of the theory of reasoned action by incorporating behavioural control. As per the theory the way firms operate in a certain society is affected by definite factors originating from specific reasons and emerging in a planned way. The ability of a firm to behave in a certain manner depends on the purpose of that firm towards that behaviour (behavioural intention) (Piazza, Paschal & Usdan, 2019). The behavioural intentions depend on firm size, firm age and ownership. These three factors are also affected by the control beliefs, normative beliefs and behavioural beliefs. It can be noticed that when firms have full control over their behaviour they tend to implement their intentions as soon as opportunity arises (Moore & Burrus, 2019).

The theory of Planned Behaviour has high gap between intentions with behaviour. According to the theory, the intention would be consistent with their behaviour when the environment provides sufficient motivation and opportunity (Bachas & Jensen, 2017). Therefore, it takes factors among intention to obey and tax compliance. One factor that can serve as interrupters or moderating factor is the trust of taxpayers to the government. The continuity of the contract between the taxpayer and the government is heavily dependent on taxpayer trust on the government. If the taxes paid and public services provided by the government is considered by the taxpayer equally, taxpayers might be inclined to comply with tax laws and this has a positive effect on tax compliance, the taxpayer will change the intention to comply into a tax compliance behaviour (Zimmerman, 2018). Taxpayers tend to avoid paying taxes if they consider that the tax system is unfair. Small firms and young firms consider the government unfair in taxation as compared to large and old firms.

This theory therefore focuses on the firm's age and size. According to the theory a firm may comply even with the least chances of being detected. This theory opposes the economic theory that holds that, for increased tax compliance there must be increased audits and tax penalties. On the other hand planned behaviour theory holds that the solution to tax compliance making the young and small firms know the consequences of non-compliance (Moore & Burrus, 2019). Size and age are some of the most important tools of changing the behaviour of a firm. Young and smaller firms should be enlightened on the consequences of non-compliance and the ways of ensuring tax compliance.

### **2.2.2 Economic Deterrence Theory**

This theory was developed by Becker (1968). It's a theory under the criminology which is based on the concept that, if the punishment of committing a criminal offence outweighs

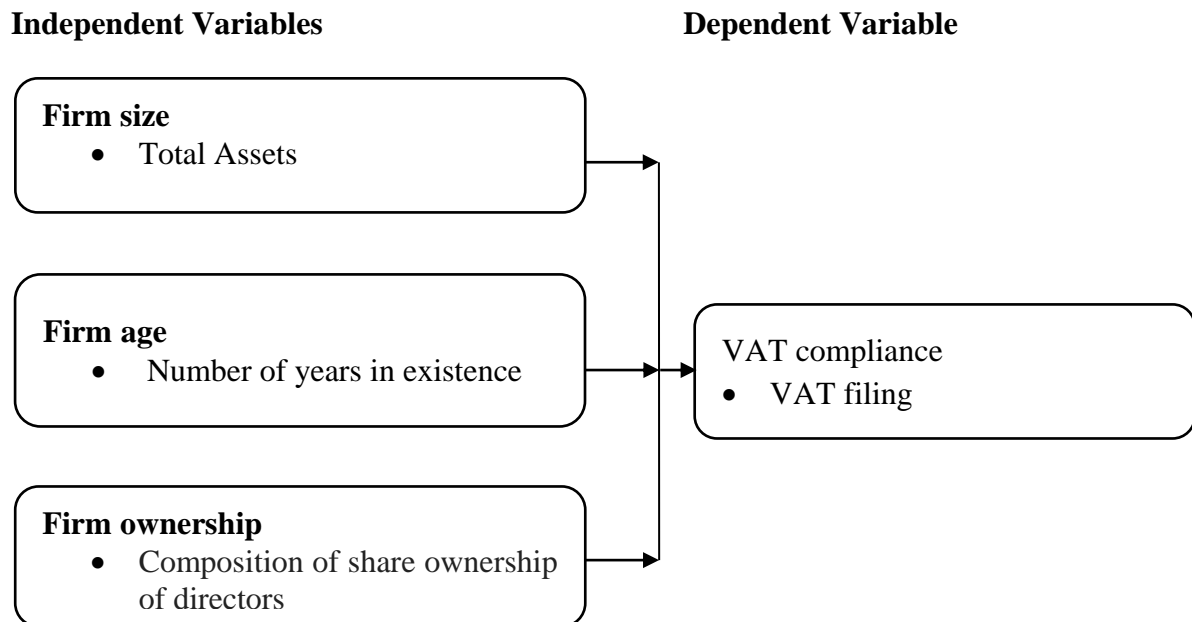
the benefit got from the crime action then the firm will prefer not to commit the crime. This comes from the idea that all firms have sound knowledge of what is right and what is wrong and the results associated with the wrong behaviour (Kim, 2019). Advocates of this theory hold that a firm decides whether to comply or not to comply with the law after having a calculation of the benefits and the consequences of their doings. Allingham and Sandom (1991) developed economic deterrence model. This was an extension of the utility model of criminal actions developed by Becker (1968) to the tax sector. This model supports the concept of a younger and smaller firm. It argues that this firm will evade taxation as long as the benefit is more as compared to the consequence of being caught (Kahan, 2016).

The economic deterrent theory, is regarded as one of the major theoretical areas that have an impact on tax compliance, however this theory has been impacted upon by the development of social and psychological models (Stamatopoulos, Hadjidema & Eleftheriou, 2016). The theory encompasses deterrence by punishment, which may be a retrospective interference. It holds out a threat of whenever there is a commitment of wrong by the taxpayer and can unleash the punishment (Pratama, 2013). The economic deterrent theory assumes that taxpayers are moral profit seeking and their actions are motivated by the calculation of costs and the opportunities that come with that. Emanating from the impact that economic deterrent theory has on taxpayers, in the management of their tax affairs, they make consideration of the probability of being caught against the cost of the offence (Eragbhe & Omoye, 2014). The taxpayer applies the economic rationale with the assumption that the taxpayer will evade taxation as long as the concomitant pay off of the tax evasion is greater in comparison with the expected cost of being caught.

This theory will be adopted in this theory to explain the influence of organization age, firm size and firm ownership on VAT tax evasion. In Kenya, the law requires all the firms to abide to various tax obligations including the VAT tax, but with an aim of facilitating tax compliance, the VAT Act outlines the available tax offenses and their penalties. Nevertheless, a large number of firms are aware of the tax penalties and the fines as a result of not complying with payment of excise duty tax and this knowledge varies with firm size, firm age and ownership.

### 2.3 Conceptual Framework

A conceptual framework is a diagrammatic explanation of the relationship between the independent variable and the dependent variable. The conceptual framework presented here shows the interaction between firm age, firm ownership and firm size as the independent variables and VAT tax compliance in Kenya being the dependent variable.



**Figure 2. 1: Conceptual Framework**

**Source: Author (2019)**

## **2.4 Empirical Review**

This section presents a review of literature on tax compliance and the effect of firm age, firm ownership and firm size on tax compliance.

### **2.4.1 VAT Compliance**

Tax authorities play an essential role in the in upholding VAT tax compliance by the tax payers through ensuring they adhere to the VAT tax rules and regulations. However there still exist a wide number of cases of VAT tax non-compliance despite the extreme compliance arrangements. Shekidele (2010) indicted that VAT tax non-compliance refers to the intentional or unintentional failure to comply with the VAT tax law by a tax payer. VAT Tax non-compliance is also referred to as the contrary behaviour to VAT tax compliance. Both tax evasion and tax avoidance are example of VAT tax non-compliance and they have a negative impact on both tax collection and compliance. Sinnasamy, Bidin and Soffian (2015) argued that tax evasion is the illegal act of reducing the real tax owed. On the other hand tax avoidance is a legal way of lowering the tax liability. Non-compliance in the customs view is determined by illegal businesses. The illegal businesses include; giving incorrect amount, for example giving false quantity and price, giving incorrect information on the description and the state of goods in a lesser manner. The common illegal operations in the business industry and customs fraud comprise of giving fake invoices, complicating transactions, dual invoicing, where the true invoice is used for record keeping and the fake one is used for declaration purposes, overstated valuations as well as understated valuations and shipment in addition to tariff code misclassification.

In Malaysia, Sinnasamy, Bidin and Soffian (2015) conducted a study on non-compliance behaviour and VAT tax compliance with tax agents acting as a moderating factor. The

study used a descriptive research design and simple random sampling method. Data was collected by use of survey questionnaires. The results indicated that VAT tax non-compliance remains as a serious issue around the globe. Noncompliance was characterized by untimely filing returns, incorrect declaration, untimely payment and registration of new taxpayers. In addition, there was a high loss in government revenue in Malaysia due to illegal activities of cigarettes, liquor as well as imported vehicles.

In Tanzania, Shekidele (2010) conducted a research to measure the compliance costs of value added tax for the years 2007-2008. Descriptive explanatory design was employed and only secondary data was used, which was obtained from tax authorities. The study found out that VAT tax compliance costs in developing nations are high compared to those in developed countries, a factor that led to high excise duty non-compliance. Compliance was measured in terms of timely filing returns, correct declaration, and timely payment and registration of new taxpayers. In addition, the study revealed that the VAT tax rate structure was regressive in nature falling more heavily on small firms.

#### **2.4.2 Firm size and VAT compliance**

In Canada, Tedds (2016) examined the impact of firm size on tax non-compliance. Descriptive research design was used. It was indicated that all the organizations practice non-compliance however the level of non-compliance varies with region. The study further showed that tax compliance in organizations is influenced by firm size, competition as well as audit controls. However the study established that age has no impact on tax compliance.

Bachas and Jensen (2017) examined firm size gradient in tax policy by use of firm-level survey data from 162,000 firms in 145 countries. The study found large and positive effects of firm size on tax enforcement and tax compliance, and a negative effect on

informal payments (bribes). These relations are non-linear with respect to firm-size: tax inspection and tax compliance are U-shaped, while formal tax payments appear to substitute informal payments as firms grow. Also, the size gradient in tax inspection is strongest at lower levels of development and nil in high income countries.

Fauziati and Kassim (2018) examined the relationship between business characteristics and tax compliance costs in Malaysia. Survey design was used. The target area comprised of the members of SMEs in Padang city. It was revealed that organization size does not affect tax compliance in any way. Furthermore age and sector had not impact on tax compliance. Tax compliance was significantly affected by risk management. the study concluded that not all business elements have an impact on tax compliance.

Zimmerman (2018) conducted a study on the relationship between firm size and tax compliance in US. The study was interested with oil and gas firms in USA. Findings observed that these organizations are accompanied with greater tax rates when put into consideration with other organizations. Results showed that the increased tax rates were realized after the adoption of US 1969 Tax Reform Act and after the OPEC countries increased their rates of tax on US oil producers. The results which showed little concern on the source of data, the other available measure of organization size and effective tax rate measures concurred with the previous research on organization size as source of organizations political costs.

Stamatopoulou, Hadjidemaa and Eleftherioua (2016) investigated on the impact of organization size on corporate income tax compliance in business organizations in Greece. The research used an explanatory research design. The study revealed that tax compliance is highly affected by organization size. Furthermore age affects tax compliance. Organization location and legal form influences tax compliance.

### **2.4.3 Firm age and VAT compliance**

In Greece, Stamatopoulos, Hadjidema and Eleftheriou (2016) researched on the effect of organization age on corporate income tax compliance. Cross-sectional survey design was used. The area of interest comprised of 23 public limited liability companies. The study findings revealed organizations characteristics influence the level of tax compliance in a different way. The research revealed that organization size influences tax compliance cost however the influence is not proportional. Furthermore the research showed that organization age was inversely proportional to VAT compliance cost. This means that the older the business the less the VAT compliance cost and vice versa. These results are in line with the saying “learning by doing” since older business organizations are in a position to carry out tax matters in an efficient way.

In Indonesia, Pratama (2013) investigated on the influence organization Characteristics, Corporate Governance on tax compliance. This research targeted on 70 companies in Indonesia. Cross-sectional survey design was adopted. Organization characteristics (organization size, firm age and profitability) were found to influence tax avoidance in a significant way. The research further showed that audit firm, board size and audit quality influenced tax avoidance. The research further showed that organization size and age are directly proportional to reputational risk. Furthermore the research indicated that organizations tend to lower risk and taking course of action associated with the minimum risk.

In Malaysia, Fauziati and Kassim (2018) researched on the impact of organization age on Tax compliance. The research used descriptive survey design. Target area of interest was 100 small business taxpayers. The result indicates that firm age does not influence VAT compliance cost. The research further indicated that older organizations and big firms needs no VAT cost to cater for their tax compliance. Nevertheless the research showed

that organizations size is directly proportional to VAT tax compliance fee. This means that older organizations pay more compliance fee as compared to younger firms. This is so due to higher tax complexity levels in older organizations

Eragbhe and Omoye (2014) researched on the influence of small and medium size enterprise characteristics on VAT compliance costs in Nigeria. The research used cross-sectional survey design. Target population comprised of 750 taxpaying SMEs across the six (6) geo-political zones of Nigeria. The research found that both organization size, organization age and size of the board has no significant influence on VAT compliance. This indicates VAT compliance is not influenced by SME characteristics in Nigeria. It was therefore concluded that VAT compliance cost is influenced by other factors different from organization attributes.

In Kenya, Abdul and Wang'ombe (2018) investigated on the influence of firm age on tax compliance behaviour in Kenya. The study relied on structural equation model made from 142 business entities. The research results showed that tax compliance behaviour is influenced by factors like organization size, perceived behaviour cost and measures of tax compliance costs. Nevertheless, it was found that increase in perceived tax payer behaviour control(which indicated limited opportunities for organizations to fil to disclose their income ) leads to better VAT compliance behaviour among the business tax payers in Kenya. It was further revealed that organization size is directly proportional to tax compliance. This means that increase in organization size leads to increase in tax compliance.

Kingoina (2016) conducted a study on the on the factors affecting VAT compliance in the construction sector in the county government of Kisumu. Kenya. The target area of interest comprised of all the registered construction companies in the county. The

research adopted descriptive survey design. The research found that business characteristics influence tax compliance costs. Organization size, organization age and size of the board significantly affect VAT tax compliance among the companies in the construction sector.

#### **2.4.4 Firm Ownership and VAT Compliance**

In Indonesia, Pratama and Padjadjaran (2016) investigated on the impact of the organization's size of the board of commissioners on tax compliance. Descriptive survey design was adopted. The area of interest comprised of 244 senior staff of the company. The research revealed no evidence that VAT avoidance is influenced by the organization's board size. It was found that most organizations in Indonesia have implemented a two-tier board system in their firms. The monitoring role and the execution role are separate in this system. The research revealed those commissioners are in charge of the monitoring function. Through this function the board is in a position to ensure the stakeholders' interests are protected.

Nevila (2016) conducted a study on the influence of business characteristics on tax compliance in United Kingdom. The research used cross-sectional survey design. Target population comprised of 34 listed companies in United Kingdom. Findings showed that the size of the board of commissioners influences tax compliance of a company. It was further revealed that the board can comprise internal and external commissioners. The research concluded that the size of the board is directly proportional to agency problems. This is so because the board commissioners have more power when it comes to issues affection majority of the shareholders.

Zemzem and Ftouhi (2013) conducted a study on the influence of the size of board of directors on VAT tax compliance in Tunisia. The research used descriptive survey design.

The research is based on a population of 73 organizations based in Tunisia. The research utilized data covering a period 2006-2010. The research employed regression analysis in establishing the influence of the independent variable on the depended variable. The study results showed that Tax compliance I influenced by the size of the board of commissioners together with the number of women in the board.

Adegboye, Alao-Owunna and Egharevba (2018) conducted a study on organization attributes and its influence on both tax compliance and tax administration in Nigeria. The study adopted survey research design. The research is based on micro level data from the World Bank Enterprise Survey data collected in Nigeria for 10 months from April 2014. The general outcome of the study reveals that business characteristics that involve organization ownership have a negative significant influence on tax compliance. The research also revealed that shareholders are very strict on monitoring as they have direct financial interests in the SMEs.

Boussaidi and Hamed (2015) investigated on the influence of organization's board diversity on VAT tax compliance in Tunisia. This research was interested with 45 listed companies in Tunisia. Data covering a period of 6 years from 2006 was used. It was found that board diversity influenced VAT compliance. The research showed that both gender diversity and managerial ownership and as well as concentration ownership were among the factors that positively influenced tax compliance. A positive relationship was found between gender diversity, managerial ownership and VAT tax compliance. On the other hand an inverse relationship was found between concentration ownership and VAT tax compliance. Nevertheless the research established no significant influence of the board size on VAT tax compliance. In addition tax compliance is not influenced in any way by external auditor profile.

Acheampong, Debrah and Yeboah (2016) carried out an investigation on the factors influence SME tax compliance in Ghana. The research used cross-sectional survey design. The target population comprised of 500 SMEs operating from Ghana. The research used Probit regression models in selection of the sample size. Results showed that tax compliance by SMEs in Ghana was negatively influenced by company ownership, poor record keeping and computational issues.

Mbuguah, Mwambia and Baimwera (2017) carried out an investigation on the impacts of tax compliance by SMEs in Kiambu County. Descriptive survey design was used. The area of interest was 1084 SMEs in Kiambu County. A sample of 325 SMEs was taken. The study findings revealed that firm ownership had a negative and significant influence on tax compliance. The study led to conclusion that the authorities had a weak capacity in detecting tax evasion, it was cheaper to bribe a tax official than pay full amount of tax, corrupt, fine and penalties deterred tax evasion and that degree of regulation deterred tax evasion, that tax system and rates affected the rate and amounts of tax evasion, nature and degree of regulations affected tax evasion, size and how the business was structured had a direct or indirect effect on tax evasion, location and focus of business affected tax evasion and that the type of business the tax payers were in affected tax evasion.

Gathiku (2015) conducted a research on the factors influencing tax compliance by SMEs operating from Nairobi north, Kenya. The area of interest comprised of 1500 SMEs whereby a sample of 150 SMEs was drawn. Through descriptive survey design, the research findings revealed that firm ownership has a negative influence of tax compliance. The SMEs owners are more reluctant to comply since they are directly affected by firm profits. In conclusion the study revealed that most of the MSEs in Nairobi North tax region are owned and run by the owners who are sole proprietors; most

of the firms are more than five years old and have less than two permanent employees and less than three casual workers.

## **2.5 Critique of the Existing Literature Relevant to the Study**

Various studies have been conducted all over the world on the effect of firm characteristics on VAT compliance. For instance, Pratama (2013), Fauziatia and Kassimb (2018), Aghoue and Moradi (2015), Eragbhe and Omoye (2014) and Zemzem and Ftouhi (2013) conducted studies in developed countries and due to differences in economic environment, legal framework on taxation and business environment the findings of these studies are not generalizable to Kenya.

In addition, studies on effect of firm characteristics on VAT compliance show mixed findings. For instance, Pratama (2013), Aghoue and Moradi (2015) and Zemzem and Ftouhi (2013) show that firm characteristics such as firm size, firm age and firm ownership have a positive influence on tax compliance. However, Fauziatia and Kassimb (2018) and Eragbhe and Omoye (2014) found that organization size, ownership and age do not have an impact on tax compliance. In studies conducted in Kenya, Mbuguah, Mwambia and Baimwera (2017) shows that firm size and firm ownership influences tax compliance in SMEs operating from Kiambu County while King'oina (2016) findings that firm size and firm ownership do not significantly influence tax compliance in Kisumu County Kenya. In addition, studies conducted in Kenya have focused on specific regions and Counties. For instance, Mbuguah, Mwambia and Baimwera (2017) was limited to SMEs in Kiambu County while King'oina (2016) study was limited to construction companies operating from the county government of Kisumu County, Kenya.

## 2.6 Research Gaps

Even though a lot of research has been done on; the influence of firm characteristics on VAT tax compliance, these researches focused on various countries, industries, sectors and factors that seem to affect compliance. In relation to firm size, Tedds (2016) examined the impact of firm size on tax non-compliance in Canada; Stamatopoulou, Hadjidemaa and Eleftherioua (2016) investigated on the impact of organization size on corporate income tax compliance in business organizations in Greece; and Zimmerman (2018) conducted a study on the relationship between firm size and tax compliance in US. However, all these studies were conducted in developed countries and hence the findings cannot be generalized to Kenya which is a developing country.

In regard to firm age, Pratama (2013) investigated on the influence organization characteristics, corporate governance on tax compliance in Indonesia; Fauziati and Kassim (2018) researched on the impact of organization age on Tax compliance in Malaysia; Eragbhe and Omoye (2014) researched on the influence of small and medium size enterprise characteristics on VAT compliance costs in Nigeria. However, different countries are characterised by varying economic environment and legal frameworks, and hence the findings from one country cannot be generalized to another.

In relation to firm ownership, Nevila (2016) conducted a study on the influence of business characteristics (ownership) on tax compliance in United Kingdom; Zemzem and Ftouhi (2013) conducted a study on the influence of the size of board of directors on VAT tax compliance in Tunisia; and Boussaidi and Hamed (2015) investigated on the influence of organization's board diversity on VAT tax compliance in Tunisia. However, different countries in different parts of the world are characterized by varying legal frameworks,

business environments, economic environment and hence findings from one nation cannot be generalized to another.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter covers the methodology and techniques that was employed in carrying out the research. It encompasses of the research design, target area of interest, sampling frame, sample size and sampling technique, method of data collection, pilot testing and data analysis and presentation of the findings.

#### **3.2 Research Design**

Research designs refer to the structures and plans or investigating a research problem and to answer the research questions (Bryman, 2013). They also refer to the way a research is designed, i.e. the method employed in conducting the study. Descriptive research design was employed; the design is preferred for this research because it shows the features related to the target area of interest. According to Creswell (2014), descriptive design enables the assessment of cause and influence of existing association between independent and dependent variables. Descriptive research establishes and provides a report of the state of things and provides the alternative possible behavior, attitudes, ideals and the attributes of the phenomenon. The research employed this design since through it the researcher was in a position to collect large volume of information concerning the target area of interest. In addition, the study sought to investigate the relationship between firm characteristics and tax compliance and hence descriptive research design was appropriate in showing the relationship between the independent variables (firm age, firm size and firm ownership) and the dependent variable, tax compliance.

### 3.3 Target Population

A population is generally defined as the whole number of items, objects or people with specific characteristics desired. The population of the research was all the registered construction firms within Nairobi County during the study period. Available information indicates that there are four hundred and eighty registered VAT constructors as at March 2019 (Kenya Revenue Authority, 2019). The target population was 480 registered construction firms within the county government of Nairobi.

**Table 3. 1: Target Population**

<b>Construction Firms</b>	<b>Target Population</b>
Civil engineering firms	157
Building construction firms	139
Specialized construction activities	184
<b>Total</b>	<b>480</b>

**Source: Kenya Revenue Authority (2019)**

### 3.4 Sampling Frame

Sampling frame is a list of items or individuals with desired features that define a population of interest. It also refers to the set of components or elements from which a sample of the target area of interest can be used. The sampling frame of this study was all the 480 construction firms offering civil engineering firms, building construction firms and specialized construction activities in Nairobi County.

### 3.5 Sampling Technique and Sample Size

A sample size denotes the selected area of concern for study to represent the whole area of interest and a sampling technique defines and explains the method and procedure of sample selection.

### 3.5.1 Sample Size

Kothari (2012) argues that a sample size should be considerably large to represent the universe population. The chosen sample size should have the capability of providing adequate data on the area of interest to ensure easy (Creswell, 2014). The sample size of this research was determined by use of Slovin's Formula. The formula was used in calculating the sample size (n) when the population size (N) and the margin error (e). This study used a 95% confidence level and hence the error margin was 5% (0.05). Slovin's Formula is a random sampling formula used in estimating the sample size. The advantage of the formula is that it puts into consideration the study's population size.

$$n = \frac{N}{1 + NE^2}$$

Where by:

n = number of samples

N = target population

E = margin of error (0.05), using 95% confidence interval

$$n = \frac{480}{1 + 480 * 0.05^2}$$

$$n = 218$$

The formulae that was employed to calculate the study's strata of the sample size is as follows:

$$nh = \frac{Nh}{N} * n$$

Where by nh connotes sample size for the stratum h, Nh is the population size for stratum h, N is total population size, and n is total sample size.

**Table 3. 2: Sample Size**

<b>Construction Firms</b>	<b>Target Population</b>	<b>Sample Size</b>
Civil engineering firms	157	71
Building construction firms	139	63
Specialized construction activities	184	84
<b>Total</b>	<b>480</b>	<b>218</b>

### **3.5.2 Sampling Technique**

Sampling technique describes the identification of specific processes used in the selection of entities in a sample (Sahu, 2013). Sample size selection from the target population was done by use of stratified random sampling. This method refers involves the classification of categorization of the population into smaller categories, generally referred to as strata (Sahu, 2013). The strata, in stratified random sampling, are developed on the basis of the common features of the objects, items or individuals in the area of interest. In this research the strata comprised of the three categories of construction firms in Nairobi County: civil engineering, construction of buildings and specialized construction activities. From each of the categories (stratum) a random sample is selected in a number proportionate to the size of the population. The sample size from each of the stratum is then combined to form a pooled sample (Kothari, 2012). Stratified random sampling was used as it helps in getting a sample size that represents the whole population being studied, appropriately. The benefits of stratified random sampling comprise of minimization of selection bias and making sure that certain segments of the population are not over-represented or under-represented.

### **3.6 Instrumentation**

Secondary time-series data will be used in the present study. Time series data is a dataset that is used in observing behaviour elements or entities within a stipulated time, period or

duration. Secondary data is defined as data that has been collected is readily available from diverse sources (Kothari, 2012). In the present study, secondary data covered a period from 2014 to 2018. Data on firm age, firm size and firm ownership was obtained from the individual construction firms, which data on VAT tax payment was obtained from KRA. The secondary data was gathered through a data extraction checklist. The data extraction checklists are used to guide reviewers on the type of information that ought to be extracted from secondary sources (Bryman, 2013). The data extraction checklist comprised of six columns covering year, firm, tax payment, firm size (total assets) firm age (number of years) and firm ownership (number of directors).

### **3.7 Data Collection Procedure**

Before data collection a research permit was applied from the National Council of Science and Technology Innovation (NACOSTI) and KRA. The study was also obtained a data collection letter from JKUAT. The construction firms were then visited to collect the data on size (total assets) firm age (number of years) and firm ownership (number of directors). Where the management was not available, an appointment was booked with them for the collection of the data. An approximate of two weeks was enough for the collection exercise.

### **3.8 Data Analysis and Presentation**

Secondary data that was used in the present research was in quantitative form. The quantitative data was collected, edited and coded into Statistical software known as Statistical Package for Social Sciences, for statistical analysis. Analysis of the quantitative data was based on descriptive and inferential statistics. Descriptive statistics focused on computation of frequencies mean, standard deviation and percentage. The association between the study variables was determined using correlation and regression

analysis (inferential statistics). Correlation analysis was employed to establish the strength of the association between dependent and independent variables while multivariate regression analysis established the relationship between the elements or variables under investigation.

Multiple regression analysis was used in the present study to model the linear association between dependent (VAT compliance) and independent variables (firm age, firm ownership and firm size). The research employed multiple regression analysis in the present research for several reasons: to determine the relationship between the each element under investigation and establish the relationship between dependent and independent variables (Russell, 2013). The findings were shown in form of graphs, charts and tables. At 95% confidence level or a significance level of 0.05 was used. This means that if an independent variable is to significantly affect the dependent variable the p-value would have to be lower than the level of significance (0.05).

The regression model was as follows;

$$Y_t = \beta_0 + \beta_{1t}X_{1t} + \beta_{2t}X_{2t} + \beta_{3t}X_{3t} + \varepsilon_t \dots\dots\dots(1)$$

$Y_t$  is the dependent variable (VAT Compliance),  $B_0$  is the y intercept (Constant),  $\beta_1$ -  $\beta_3$  are coefficients of determination,  $X_1$  is the Firm age,  $X_2$  is the Firm ownership,  $X_3$  is Firm size, and t represents time and  $\varepsilon_t$  is an error term.

Before conducting regression analysis, diagnostics tests were conducted and were used to determine the assumptions in linear regression by using five tests. The tests include multicollinearity, auto-correlation, linearity, homoscedasticity, normativity and heteroskedasticity test. Multicollinearity occurs when predictor variable in a particular model correlates with other variables. One variable can be predicted from the other with

some degree of accuracy (Kothari, 2012). In Perfect multicollinearity, the predictor is singular and cannot be inverted. In the current study, VIF will be used to test for Multicollinearity. Tolerance is used to determine how independent variable influences other independent variables. In case the VIF is greater than ten, it depicts the presence of multicollinearity. Otherwise when the VIF is less than ten, it depicts absence of multicollinearity.

Linearity test is used to assess whether the association between elements under investigation is linear. This entails assessing for outliers because linear regression is affected by the presence of outliers (Creswell, 2014). A scatter plot is used to test for the linearity assumptions. The x-axis in a scatter plot is used to plot standardized residuals while the y-axis is used to plot y value. When a scatter plot follows a linear pattern then it implies that the assumption in linearity is met.

Autocorrelation test is used to determine whether there is present or absence of autocorrelation among elements under investigation. In case residuals are dependent, it depicts presence of autocorrelation (Bryman, 2013). The current study will use Durbin-Watson test to determine the presence of autocorrelation. The test focuses on testing the null hypothesis that there is absence of linear correlation among tested residuals. The value of the test range between zero and four. Value that are greater than 2 depicts presence of autocorrelation while values less than 2 depicts absence of autocorrelation in a particular data set. Nonetheless, Durbin-Watson test strictly focuses on determining linear autocorrelation among elements under investigation by assessing first-order effect (Bryman, 2013).

Presence of heteroscedasticity in linear regression tends to affect results since it gives biased coefficients. The study used Cook-Weisberg or Breusch-Pagan test for heteroscedasticity

which is present if the error term variance varies across findings (Creswell, 2014).a constant variance occurs with respect to null hypothesis while on the case of alternative hypothesis it shows absence of variance. Violating homoscedasticity leads to increase in heteroscedasticity.

To fulfil the requirement of normal distribution, Shapiro Wilk test was used in the current research to determine whether the data was obtained from a population that is normally distributed (Kothari, 2012). The null hypothesis in Shapiro Wilk test is that area of interest is distributed normally. Henceforth, the null hypothesis is rejected in case the p value is less than alpha level: implying that that data is obtained from a target area that is not distributed normally.

## **CHAPTER FOUR**

### **RESEARCH FINDINGS AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter covers the presentation and interpretation of the findings. The general objective of this study was to determine the effect of firm characteristics on VAT compliance in construction firms in Kenya. The study also sought to examine the effect of firm size, firm age and firm ownership on VAT compliance in construction firms in Kenya. The results were presented in tables and figures. The study covered a period of 5 years starting from 2014 to 2018. The total number of observations was 275.

#### **4.2 Descriptive Statistics**

Descriptive statistics are a category of statistics that primarily describe the features and characteristics of a data set. The main aim of descriptive statistics is to provide summaries of a population as well as its measures. Further, descriptive statistics encompass, frequency distribution, percentage as a proportion of the population, measures of spread as well as measures of central tendency. Generally, the measures of spread comprise of minimum values, variance, and standard deviation and maximum values. The measures of central tendency in a data set include median, mean and mode.

In this study, descriptive statistics comprise of mean, standard deviation, minimum and maximum of the dependent variable (VAT compliance in construction firms in Kenya), the independent variables (firm size, firm age and firm ownership). From the findings, construction firms in Starehe Sub-County had paid an average of Ksh. 48.903 million to Kenya Revenue Authority as VAT for the period between 2014 and 2018. The standard deviation was Ksh. 26.4482 million. In addition, the firms had an average of Ksh. 389.669 million in total assets for the period between 2014 and 2018. Further, the

construction firms had an average age of 21.0 for the period between 2014 and 2018 and a standard deviation of 11.901 years. Further, most of the construction firms in Starehe Sub-County were partnership private companies.

**Table 4. 1: Descriptive Statistics**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
VAT Compliance	275	2.0	114.0	48.903	26.4482
Firm Size (Total Assets in millions)	275	89.0	722.0	389.669	176.193
Firm Age (Number of years in existence)	275	3.00	21.0	11.901	4.214
Firm Ownership	275	1.00	3.00	2.1636	.70875

### 4.3 Diagnostic Tests

The diagnostic tests include normality test (Shapiro-Wilk test), scatter plot, Multicollinearity test (VIF), Breusch-Pagan/Cook-Weisberg test for heteroscedasticity, Breusch-Godfrey LM Test for autocorrelation and unit root test (Augmented Dickey Fuller unit root test).

#### 4.3.1 Normality Test

Shapiro-Wilk W test was used to test the normality of the data. The null-hypothesis of this test is that the population is normally distributed. Thus, if the p-value is less than the chosen alpha level (0.05), then the null hypothesis is rejected and there is evidence that the data tested are not from a normally distributed population; in other words, the data is not normally distributed. On the contrary, if the p-value is greater than the chosen alpha level, then the null hypothesis that the data came from a normally distributed population cannot be rejected.

The results indicated that tax compliance (p-value=0.118), firm size (p-value=0.091), firm age (p-value=0.093) and firm ownership (p-value=0.090) were normally distributed. This is because the p-values were more than the significance level (0.05).

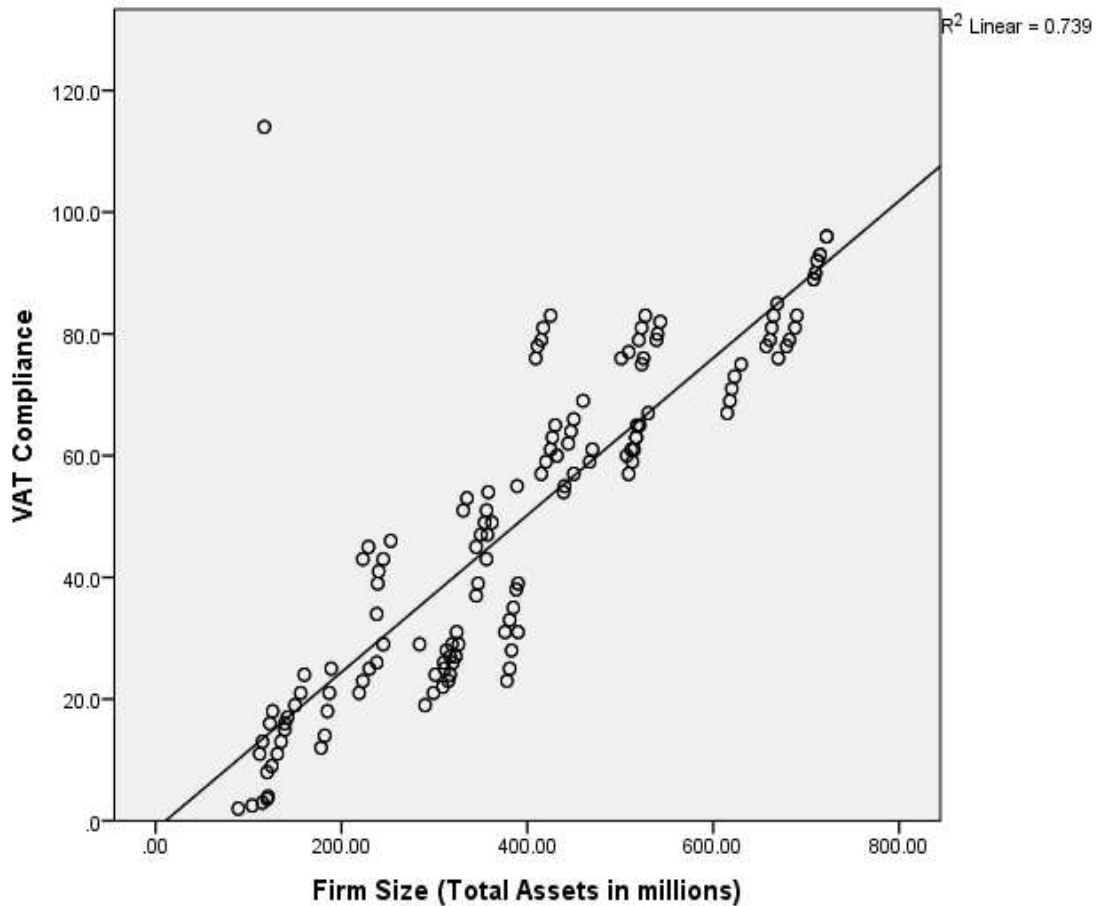
**Table 4. 2: Shapiro-Wilk W test**

	Shapiro-Wilk		
	Statistic	df	Sig.
Tax compliance	.662	275	.118
Firm size	.642	275	.091
Firm age	.648	275	.093
Firm ownership	.630	275	.090

#### 4.3.2 Scatter Plot

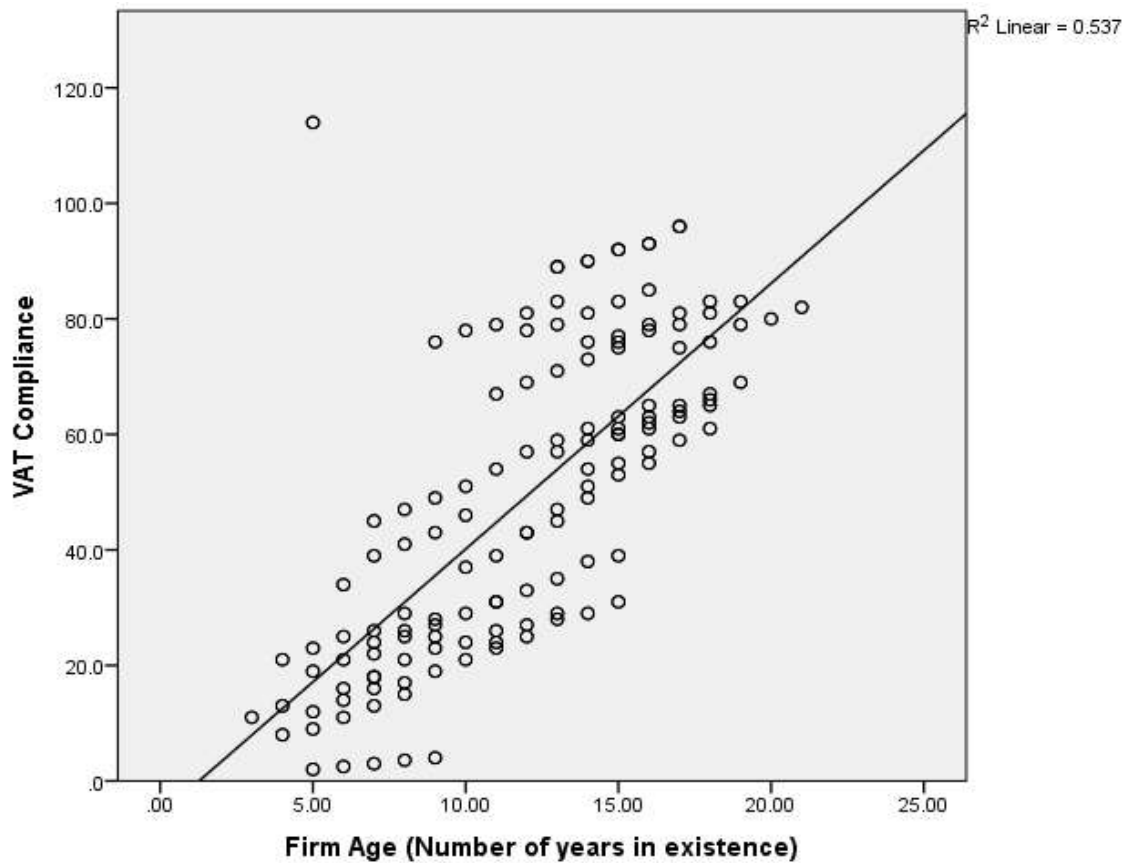
Scatter plots are similar to line graphs, in that they use horizontal and vertical axes to plot data points. However, they have a very specific purpose. Scatter plots show how much one variable is affected by another. A perfect positive correlation is given the value of 1. A perfect negative correlation is given the value of -1. The closer the number is to 1 or -1, the stronger the correlation, or the stronger the relationship between the variables. The closer the number is to 0, the weaker the correlation.

The scatter plot shows that there is a positive linear association between firm size (total assets in millions) and VAT compliance in construction firms in Kenya. In addition, firm size (total assets in millions) can explain 73.9% of the VAT compliance in construction firms in Kenya. In addition, Fauziati and Kassim (2018) indicated that organization size does not affect tax compliance in any way in Malaysia.



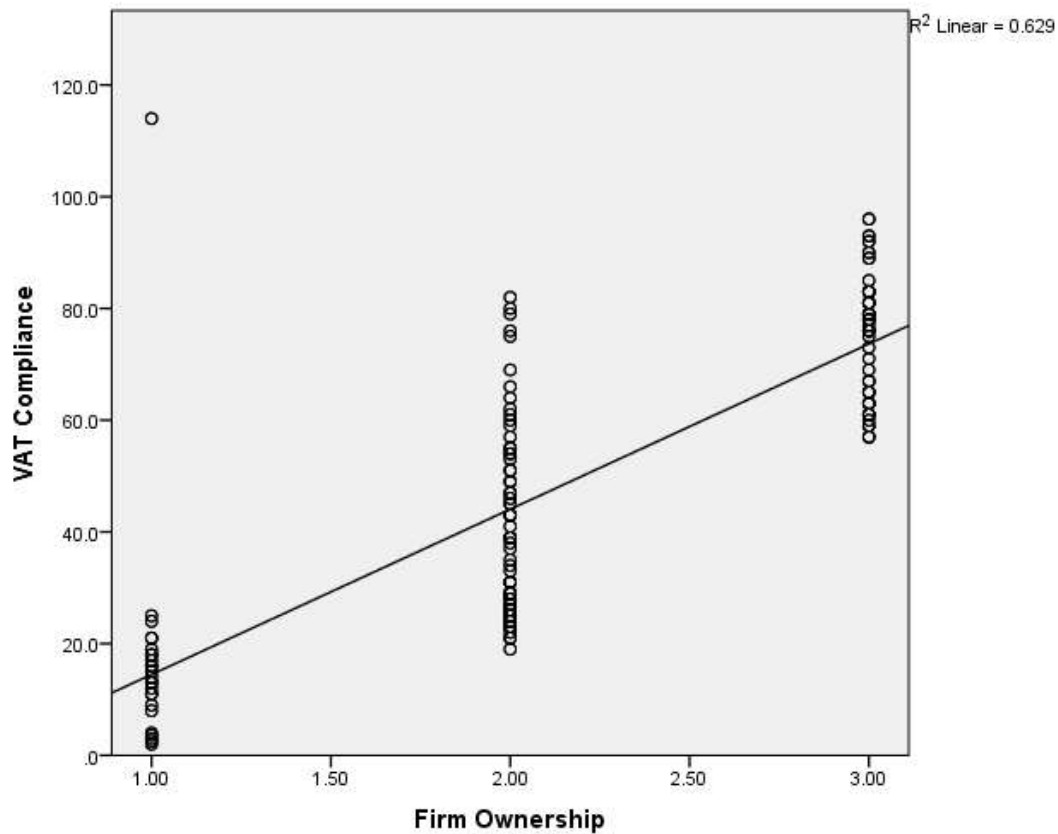
**Figure 4. 1: Firm Size and VAT Compliance in Construction Firms**

Figure 4.2 shows the scatter plot for the relationship between firm age (number of years in existence) and VAT compliance in construction firms in Kenya. From the findings, there is a positive linear association between firm age (number of years in existence) and VAT compliance in construction firms in Kenya. In addition, firm age (number of years in existence) can explain 53.7% of the VAT compliance in construction firms in Kenya. These findings are in line with Bachas and Jensen (2017) findings that firm size and VAT compliance in developing countries.



**Figure 4. 2: Firm Age and VAT Compliance in Construction Firms**

Figure 4.3 shows the scatter plot for the relationship between firm ownership and VAT compliance in construction firms in Kenya. From the findings, there is a positive linear association between firm ownership (composition of share ownership of directors) and VAT compliance in construction firms in Kenya. In addition, firm ownership (composition of share ownership of directors) can explain 61.9% of the VAT compliance in construction firms in Kenya. The findings conduct with Pratama and Padjadjaran (2016) findings that board composition and size have an effect on tax compliance in Indonesia.



**Figure 4. 3: Firm Ownership and VAT Compliance in Construction Firms**

### 4.3.3 Multicollinearity Test

The variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. A variable whose VIF value is greater than 10 may merit further investigation.

From the findings, the VIFs for the variables, firm size (6.43), firm ownership (4.21) and firm age (2.60) were less than 10. However, the VIF for agency banking was less than 10. This implies that there was no multicollinearity for firm size, firm ownership and firm age.

**Table 4. 3: Variance Inflation Factor**

Variable	VIF	1/VIF
FS	6.43	0.155461
FO	4.21	0.237568
FA	2.60	0.384190
Mean VIF	4.41	

#### **4.3.4 Breusch-Pagan/Cook-Weisberg test for heteroscedasticity**

The study used Breusch-Pagan/Cook-Weisberg test for heteroscedasticity. Homoscedasticity describes a situation in which the error term (that is, the “noise” or random disturbance in the relationship between the independent variables and the dependent variable) is the same across all values of the independent variables. Heteroscedasticity (the violation of homoscedasticity) is present when the size of the error term differs across values of an independent variable. The impact of violating the assumption of homoscedasticity is a matter of degree, increasing as heteroscedasticity increases.

From the findings, as shown in table 4.4, it was revealed that the p- value of 0.000 was more than the significance level (0.05) implying that the study rejects the null hypothesis of homoscedasticity.

**Table 4. 4: Breusch-Pagan/Cook-Weisberg test for heteroskedasticity**

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of VAT_complaine

chi2(1)      =      81.82
Prob > chi2  =      0.0000
```

### 4.3.5 Breusch-Godfrey LM Test for Autocorrelation

The study used Breusch-Godfrey Lagrange Multiplier test to test for autocorrelation between variables. Serial correlation is the relationship between a given variable and itself over various time intervals. The results were as presented in table 4.5. The results indicated that the p-value (0.15) is greater than the significance level (0.05) and hence we accept the null hypothesis. This implies that there is no serial correlation in the variables.

**Table 4. 5: Breusch-Godfrey LM Test for Autocorrelation**

```
Breusch and Pagan Lagrangian multiplier test for random effects
```

$$\text{VAT\_complaine}[\text{Year},t] = \text{Xb} + \text{u}[\text{Year}] + \text{e}[\text{Year},t]$$

```
Estimated results:
```

	Var	sd = sqrt(Var)
VAT_com~e	699.5081	26.44821
e	169.2436	13.00937
u	.173551	.4165945

```
Test: Var(u) = 0
```

```
chibar2(01) = 0.15
```

### 4.4 Correlation Analysis

Correlation coefficient is considered to be measure used in measuring the relationship between two variables, which can be both independent variables or an independent

variable and dependent variable. The correlation coefficients in a data set can range from positive one and negative one. A very weak association is considered present when correlation coefficients range from 0.0 to 0.19; weak association is present when the coefficients range from 0.20 to 0.39. In addition, moderate association is considered present when the coefficients range from 0.40 to 0.59 and a strong association is considered present when the coefficients range from 0.60 to 0.79. Further, a very strong relationship is considered present when the coefficients range from 0.8 to 1.0.

The results indicate that firm size (total assets in millions) has a positive and very strong association with VAT compliance in construction firms in Kenya ( $r=0.860$ ,  $p\text{-value}=0.000$ ). These findings disagree with Fauziati and Kassim (2018) findings that organizationn size does not affect tax compliance in any way. In addition, Zimmerman (2018) indicates that firm size has a positive effect on tax compliance in the United States.

The results also indicate that firm age (number of years in existence) has a positive and strong association with VAT compliance in construction firms in Kenya ( $r=0.733$ ,  $p\text{-value}=0.000$ ). These findings agree with Eragbhe and Omoye (2014) findings that small and medium size enterprise characteristics in terms of organizational age had no significant influence on VAT compliance in Nigeria. These findings agree with Pratama (2013) findings that firm age has a positive effect on tax compliance in in Indonesia.

The results further show that firm ownership (composition of share ownership of directors) has s strong association with VAT compliance in construction firms in Kenya ( $r=0.793$ ,  $p\text{-value}=0.000$ ). These findings concur with Nevila (2016) findings that the size of the board of commissioners influences tax compliance of a companies in the United

Kingdom. Further, the findings agree with Zemzem and Ftouhi (2013) findings that size of board of directors has a positive effect on VAT tax compliance in Tunisia.

**Table 4. 6: Correlations Coefficients**

		VAT Compliance	Firm Size (Total Assets in millions)	Firm Age (Number of years in existence)	Firm Ownership
VAT Compliance	Pearson	1	.860**	.733**	.793**
	Correlation		.000	.000	.000
	Sig. (2-tailed)		.000	.000	.000
	N	275	275	275	275
Firm Size (Total Assets in millions)	Pearson	.860**	1	.779**	.870**
	Correlation			.000	.000
	Sig. (2-tailed)	.000		.000	.000
	N	275	275	275	275
Firm Age (Number of years in existence)	Pearson	.733**	.779**	1	.632**
	Correlation		.000		.000
	Sig. (2-tailed)	.000	.000		.000
	N	275	275	275	275
Firm Ownership	Pearson	.793**	.870**	.632**	1
	Correlation		.000	.000	.000
	Sig. (2-tailed)	.000	.000	.000	
	N	275	275	275	275

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

#### 4.5 Regression analysis

The regression analysis was used to examine the weight of the relationship between the independent variables and the dependent variable. The independent variables include firm ownership (composition of share ownership of directors), firm age (number of years in existence) and firm size (total assets in millions) and the dependent variable was VAT compliance in construction firms in Kenya.

The regression model was as follows;

$$Y_t = \beta_0 + \beta_{1t}X_{1t} + \beta_{2t}X_{2t} + \beta_{3t}X_{3t} + \varepsilon_t \dots \dots \dots (1)$$

$Y_t$  is the dependent variable (VAT Compliance),  $B_0$  is the y intercept (Constant),  $\beta_1$ -  $\beta_3$  are coefficients of determination,  $X_1$  is the Firm age,  $X_2$  is the Firm ownership,  $X_3$  is Firm size, and t represents time and  $\varepsilon_t$  is an error term.

In the results, the R-squared shows the variation in the dependent variable that can be explained by the independent variables. From the findings the r-squared for the relationship between the independent variables (firm age, firm ownership and firm size) and the dependent variable, VAT compliance in construction firms in Kenya was 0.761. This implies that firm characteristics in terms of firm age, firm ownership and firm size explain 76.1% of the VAT compliance in construction firms in Kenya. This shows that other factors not considered in this study explain 23.9% of the VAT compliance in construction firms in Kenya.

**Table 4. 7: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.872 <sup>a</sup>	.761	.758	13.0073

a. Predictors: (Constant), Firm Ownership (composition of share ownership of directors)), Firm Age (Number of years in existence), Firm Size (Total Assets in millions)

The analysis of variance shows whether the model is a good fit for the data or not. The show that the F-calculated (287.282) was more than the F-critical (2.6049) and the p-value (0.000) was less than the significance level (0.05), which implies that the model was appropriate in predicting the effect of firm characteristics (firm age, firm ownership and firm size) and VAT compliance in construction firms in Kenya.

**Table 4. 8: Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	145814.937	3	48604.979	287.282	.000 <sup>b</sup>
	Residual	45850.272	271	169.189		
	Total	191665.208	274			

a. Dependent Variable: VAT Compliance

b. Predictors: (Constant), Firm Ownership , Firm Age (Number of years in existence) , Firm Size (Total Assets in millions)

The regression model was as follows;

$$Y_t = -13.387 + 0.078X_{1t} + 1.170X_{2t} + 8.223X_{3t} + \varepsilon_t$$

The results show that firm size (total assets in millions) has a positive and significant effect on VAT compliance in construction firms in Kenya as shown by a regression coefficient of 0.078. The p-value (0.000) was less than the significance level and hence the association was statistically significant. These findings are in line with Fauziati and Kassim (2018) findings that firm size has tax compliance costs in Malaysia. The findings also concur with Stamatopoulou, Hadjidemaa and Eleftherioua (2016) that on corporate income tax compliance in business organizations in Greece is highly affected by organization size.

The results also show that firm age (number of years in existence) has a positive and significant effect on VAT compliance in construction firms in Kenya as shown by a regression coefficient of 1.170. The p-value (0.000) was less than the significance level and hence the association was statistically significant. These findings agree with Pratama (2013) findings that firm age had a positive effect on tax compliance in Indonesia. However, these findings are in contrary to Tedds (2016) findings that firm age has no impact on tax compliance in Canada.

The study further established that firm ownership (composition of share ownership of directors) has a positive and significant effect on VAT compliance in construction firms in Kenya as shown by a regression coefficient of 8.223. The p-value (0.000) was less than the significance level and hence the association was statistically significant. These findings are contrary to Nevila (2016) findings that board of commissioners had an effect on tax compliance in United Kingdom. These findings disagree with Mbuguah, Mwambia and Baimwera (2017) argument that firm ownership had a negative and significant influence on tax compliance in Kiambu County.

**Table 4. 9: Regression Coefficients**

Model		Unstandardized		Standardized t	Sig.
		Coefficients			
		B	Std. Error	Beta	
1	(Constant)	-13.387	3.106		-4.310 .000
	Firm Size (Total Assets in millions)	.078	.011	.523	6.937 .000
	Firm Age (Number of years in existence)	1.170	.301	.186	3.888 .000
	Firm Ownership	8.223	2.275	.220	3.615 .000

a. Dependent Variable: VAT Compliance

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the study, limitations of the study, conclusions drawn from the findings, recommendation and suggestions for further studies. The study's recommendations and conclusions focused on addressing the purpose of the study and suggestions for the study.

#### **5.2 Summary of the Study**

##### **5.2.1 Firm Size and VAT compliance**

The study concludes that firm size (total assets in millions) has a positive and significant effect on VAT compliance in construction firms in Kenya. This shows that an increase firm size would lead to an increase in VAT compliance in construction firms in Kenya. The larger construction firms in terms of total assets are more VAT compliant as compared to smaller construction firms.

As the size of the business increases, the absolute external tax compliance costs also increase too. Large firms require more extensive record keeping as well as an optimal coordination of their resources, a fact that may lead to increased compliance. At the same time, as the firm size increases, the firm is more likely to invest in high fixed-costs solutions such as the acquisition of appropriate software or the partnership with specialized tax consulting firms. The reason that small businesses bear higher relative compliance costs can partly be described because compliance costs can be considered fixed up to a certain extent. Thus, large firms may enjoy economies of scale in their compliance expenses. Therefore, the study assumes that business size influences tax compliance costs.

### **5.2.2 Firm Age and VAT compliance**

The study also concludes that firm age (number of years in existence) has a positive and significant effect on VAT compliance in construction firms in Kenya. Therefore, an increase in the age of a firm would lead to an increase in VAT compliance. The older or more established construction firms are more tax compliant as compared to younger construction firms.

The more established businesses incur, the higher internal tax compliance fees compared with the younger businesses. This is due to the higher level of tax complexity compared with the less younger businesses. There is a simple link between the age of a business and internal tax. New businesses tend to generate small or low turnover with simple business structures. As businesses become more successful over time and their turnover grow, owners tend to favour more complex business structures, particularly incorporation, to minimize risk and tax. This can increase both tax and non-tax compliance costs. Hence, the study shows that business age influences on tax compliance costs.

### **5.2.3 Firm Ownership and VAT Compliance**

The study further established that firm ownership (composition of share ownership of directors) has a positive and significant effect on VAT compliance in construction firms in Kenya. This implies that increase in the number in board size and ownership increase VAT compliance in construction firms. The structure of a business has a different and unique agency conflict with reference to costs and benefits of tax compliance. The appointment of executives on the board of family businesses is largely influenced by the members for continuous maintenance of their relevance in the control of the firm. This influence suggests the congruence of interests of the firm's owners and that of the hired managers. To put differently, there is an alignment of both interests. Given this, tax

savings from the taxes avoided and/or rent extraction through managerial opportunism serves as benefits of tax avoidance for family firms.

### **5.3 Conclusions**

The study concludes that firm size (total assets) has a positive and significant effect on VAT compliance in construction firms in Kenya. This implies that compliance increases with the size (total assets) of the construction firms. Therefore, the larger construction firms in terms of total assets are more VAT compliant as compared to smaller construction firms.

The study also concludes that firm age (number of years in existence) has a positive and significant effect on VAT compliance in construction firms in Kenya. This implies that construction firms' compliance increases with the age of the firm. This implies that older construction firms are more tax compliant as compared to younger construction firms.

The study further established that firm ownership (composition of share ownership of directors) has a positive and significant effect on VAT compliance in construction firms in Kenya. This implies that construction firms' VAT compliance increases with increase in the number of directors and change in ownership type. The higher the number of directors, the more compliant are the construction firms.

### **5.4 Recommendations**

The study found that firm size has a significant effect on VAT compliance in construction firms in Kenya, which shows that small sized firms were less compliant. This study hence recommends that the management of Kenya Revenue Authority should develop training programs on appropriate and extensive record keeping, financial management as well as an optimal coordination of their resources so as to improve their compliance.

The study found that firm age has a significant effect on VAT compliance in construction firms in Kenya and hence older and established firms were more compliant than young firms. The study recommends that Kenya Revenue Authority should create awareness on the VAT compliance among startups and young businesses in the construction industry. This will help them understand the penalties accrued to non-compliance and thus compel them to comply.

The study found that firm ownership affects VAT compliance in construction firms. Therefore, the study recommends that construction firms in their quest to pay lower effective tax rates, they should understand that their ownership structure is relevant and therefore concentrate on legal avenues to manage their VAT tax burdens.

### **5.5 Suggestions for Further Studies**

This study sought to determine the effect of firm characteristics on VAT compliance in construction firms in Starehe Sub-County, Kenya. Having been limited to Starehe Sub-County, the findings of this study cannot be generalized to other firms in other sectors and other Sub-Counties and Counties in Kenya. This study therefore recommends further studies on the effect of firm characteristics on VAT compliance of firms in other sectors in Kenya like manufacturers, financial institutions or agricultural firms. In addition, the study found that firm characteristics explain 76.1% of the VAT compliance in construction firms in Kenya. Therefore, further studies should be conducted on other factors affecting VAT compliance in construction firms in Starehe Sub-County, Kenya.

## REFERENCES

- Abdul, F., & Wang'ombe, D. (2018). Income tax compliance behaviour in Kenya: an application of structural equation modelling. *Research Journal of Finance and Accounting*, 9(6), 59-67.
- Acheampong, O., Debrah, O. & Yeboah, I. S. (2016). An assessment of tax compliance level of small enterprises in Ghana. *European Journal of Business and Management*, 8(12), 81-99.
- Ajzen, I. (1985). *A planned behaviour Theory: From intentions to actions*. Heidelberg: Springer.
- Alabede, O. J. (2014). Demographic Differences and Impact on Individual Taxpayers' Compliance Behavior in Nigeria. *Journal of Taxation and Accounting*, 2(12), 139-164.
- Alao-Owunna, A. C., & Egharevba, I., & Egharevba, M. I. (2018). Business characteristics, tax administration and tax compliance by SMEs in Nigeria. *Oradea Journal of Business and Economics*, 4(4), 2-17.
- Allingham, M. & Sandom, H. (1991). Tax Compliance from a Global perspective. *Economic Literature Journal*, 36, 18-60.
- Bachas, P. & Jensen, A. (2017). *The firm size gradient in tax policy: global evidence*. Retrieved from <http://www.andersditlevjensen.com>
- Badara, M. S. (2016). *The effect of Social Orientation on Gender differences and compliance*. Retrieved from <https://www.econerstor.eu/bitstream/>
- Becker, G. (1968). *Discrimination, economic*. New York, New York: Macmillan.
- Bhattacharjee, A. (2012). *Principles, Methods and Social Science Practices*. New York: Free Press.
- Boussaidi, A., & Hamed, M. S. (2015). The impact of governance mechanisms on tax aggressiveness: empirical evidence from Tunisian context. *Asian Economic and Social Society*, 5(1), 1-12.

- Bryman, L. A. (2013). Application of Quantitative Research Technique. *Statistical Journal*, 6(1), 97 – 113.
- Bryman, W. A. & Cramer, J. D. (2012). *Statistical Analysis of Quantitative Data through the Aid of SPSS*. New York: Routledge.
- Chan, W. C., Troutman, S. C. & O'Bryan, S. D. (2012). Taxpayer Compliance Expanded Model in Hong Kong and United States. *International Auditing Accounting, & Taxation Journal*, 91(12), 183.
- Chau, K. K. & Leung, P. (2018). Fischer tax compliance model research synthesis. *Journal of Taxation and accounting*, 11(12), 134-140.
- Chung, D. J. & Trivedi, M. U. (2013). The Effect of Gender and Friendly Persuasion on Tax Compliance Behavior. *Business Ethics Journal*, 417(12), 33-45.
- Coolidge, Q. J., & Ilic, E. D. (2018). Formalization and Perception of Tax compliance of South African small businesses in South Africa. *Management Science Letters*, 8, 353–358.
- Creswell, W.J. (2014). *Quantitative Research Technique*. Thousand Oaks CA: Sage.
- D'Attoma, S. J. (2018). *Tax Compliance, Social Orientation and Gender*. Retrieved from [https://paperws.ssrn.com/solw3/papewrs.cfm?abstrwact\\_id=3338701](https://paperws.ssrn.com/solw3/papewrs.cfm?abstrwact_id=3338701)
- Derek, H. (2003). *Review of non-executive director's role and effectiveness*. London: Department of Trade and Industry.
- Deyganto, O. K. (2018). TVoluntary Compliance Attitude among Tax Payers with Tax System in Southern Ethiopia. *Finance and Accounting Universal Journal*, 16(3), 92-107.
- Eragbhe, E., & Omoye, A. S. (2014). SME characteristics and value added tax compliance costs in Nigeria. *Mediterranean Journal of Social Sciences*, 5(20), 614-620.
- Fauziati, P. L. & Kassim, E. A. (2018). The relationship between business characteristics and cost tax compliance. *Science Letters' Management*, 8, 353–358.

- Fauziati, P., & Kassim, A. Z. M. (2018). The effect of business characteristics on tax compliance costs. *Management Science Letters*, 8 (1), 353–358.
- Fischer, C. M. (1992). Detection Probability and Taxpayer Compliance: A Review of the Literature. *J. Acc. Lit.* 11, 1-46
- Gathiku, M. W., (2015). *Tax compliance by small and medium enterprises in Nairobi north tax region, Kenya*. Retrieved from; <https://ir-library.ku.ac.ke/bitstream/handle/123456789/14433/>
- Gitaru, E. K. (2017). *Taxpayer Education and Tax Compliance in Nairobi Central Business District's SME*. Retrieved from [https://mpsra.ub.uni-muesnchesn.de/80344/1/MPRA\\_paper\\_80344.pdf](https://mpsra.ub.uni-muesnchesn.de/80344/1/MPRA_paper_80344.pdf).
- Helhel, Y. & Ahmed, A. (2017). Tax Attitudes and its role in Tax Compliance in Yemen. *Business and Management in European Journal*, 61(2), 21-38.
- Inasius, D. F. (2019). SME Tax Compliance and factors affecting it in Indonesia. *Public Administration International Journal*, 412(15), 67-79.
- Joshi, S. A. (2016). *The role of tax in gender in developing countries*. Retrieved from; <https://opendocs.ids.dac.udk/opend>
- Kahan, M. D. (2016). The new path of tax deterrence covering sociology and economics. *Michigan Law Journal*, 9(18), 24-37.
- Kasipillai, W. J., Aripin, E. N., & Amran, A. M. (2013). The Relationship between Education and Tax Evasion and Tax Avoidance. *Tax Research Journal*, 11(12), 36-44.
- Kastlunger, W. B., Dressler, E. S. & Mittone, R. L. (2015). Tax compliance and impact of sexual differences: The impact of gender-role orientation, demographic sex, and prenatal masculinization. *Economic Psychology Journal*, 311(14), 42-52.
- Kenya Revenue Authority (2017). *Kenya Revenue Authority Annual Report 2016/2017*. Retrieved from <http://www.kra.go.ke>
- Kenya Revenue Authority (2019). *Online Portal of Kenya Revenue Authority*. Retrieved from <http://www.kra.go.ke/portal>.

- Kim, D. J. (2019). Economic Engagement and Economic Deterrence. *Foreign Policy Analysis, 15*(2), 176–186
- King’oina, J. O. (2017). *Value added tax compliance in the construction firms in Kisumu County, Kenya*. Retrieved from; <http://erepository.uonbi.ac.ke/>
- Kingoina, J. O. (2016). *Factors influencing value added tax compliance among the construction firms in Kisumu County, Kenya*. Retrieved from; <http://erepository.uonbi.ac.ke/bitstream/handle/11295/98921/King’oina>.
- Kothari, R.C (2012). *Business Research methodology*. New Delhi: New Age International (P) Limited Publishers.
- Kuug, N. S. (2016). *Tax Compliance of Small and Medium Enterprises in Ghana and related Factors*. Retrieved from <http://197.22355.638.203/handle/1233456789/21165>
- Kwok, Y. B. & Yip, R. E. (2018). Tax Education is Good or Evil in of Boosting Tax Compliance in Hong Kong. *Economic Journal in Asia, 312*(14), 59-86.
- Magiya, O. S. (2016). *Tax compliance Determinants among SMES in Nairobi East district*. Nairobi: University of Nairobi.
- Mbuguah, S. K., & Baimwera, B. (2017). Analysis of Factors Affecting Tax Compliance by SMEs in Kiambu County. *Journal of Accounting, 1*(1), 60 – 72.
- Mbuguah, S. M., Mwambia, & Baimwera, B. (2017). Analysis of factors affecting tax compliance by SMEs in Kiambu County. *Journal of Accounting, 1*(1), 60-72.
- Mengere, S. M. (2013). *The relationship between tax related education and PAYE tax compliance in Nairobi central business district*. Retrieved from; <https://pdfs.semanticscholar.org/141c/ewd3036913bwe43ffc1fb240w8f929ab2a89819.pdf>
- Moore, W. R., & Burrus, T. J. (2019). Theory of Planned Behavior Career Intentions. *Career Development Journal, 67*(2), 39–55.
- Mshana, V. (2016). *Tax Justice and Gender Equity?* Retrieved from <https://www.taxjustice.net>

- Musau, E. N. (2015). *Tax compliance Determinants among SMEs in Kenya*. Nairobi: University of Nairobi.
- Mwangi, P. C. (2014). *Factors Influencing Tax Compliance among Small and Medium Enterprises in Nairobi's Industrial Area, Kenya*. Retrieved from <http://erepository.uonbi.ac.ke/handle/11295/73605>
- Ndirangu, M. N. (2014). *The effect of tax payer education on value added tax compliance by motor vehicle part dealers in Nairobi central business district*. Retrieved from; <http://erepository.uonbi.ac.ke>
- Nevila, K., (2016). Factors affecting tax evasion. *International Journal of Economics, Commerce and Management*, 4 (2), 804-811.
- Newman,W., & Nokhu,M. (2018). Evaluating the impact of tax knowledge on tax compliance among small medium enterprises in a developing country. *Academy of accounting and financial studies journal*, 22(6), 1-14.
- Olowookere, J. K., & Fasina, H. T. (2013). Taxpayers' Education: A Key Strategy in Achieving Voluntary Compliance in Lagos State, Nigeria. *European Journal of Business and Management*, 5(10), 146-154.
- Pagone, G. T. (2015). Part Iva: The General Anti-Avoidance Provisions in Australian taxation Law. *Melbourne University Law Review*, 27(3), 770–799.
- Piazza, A. J., Paschal, A. M., & Usdan, S. (2019). Mobile device use while crossing the street: Utilizing the theory of planned behavior. *Accident Analysis & Prevention*, 127, 9–18.
- Pratama, A. (2013). Company characteristics, corporate governance and aggressive tax avoidance practice: A study of Indonesian companies. *Review of Integrative Business and Economics Research*, 6(4), 70-81.
- Pratama, A., & Padjadjaran, U. (2016). Company characteristics, corporate governance and aggressive tax avoidance practice: a study of Indonesian companies. *Review of Integrative Business and Economics Research*, 6(4), 70-81.

- Robin, M. A. (2018). *Factors Affecting Tax Compliance Among Small And Medium Enterprises In Nakuru County In Kenya: A Survey Of SMEs In Naivasha Sub County*. Retrieved from <http://repository.mua.ac.ke/2297/>
- Russell, B.R. (2013). *Quantitative Research Design*. Los Angeles: SAGE Publications.
- Sahu, K.P. (2013). *Agricultural Science Research Technique*. New Delhi: Tata McGraw Hill.
- Shekidele, M.S. (2010). Measurement of the compliance costs of taxation excise duties. *The African Journal of Finance and Management*, 7(2), 72-89.
- Sinnasamy, S., Bidin, Z. & Soffian, S. (2015). Non-compliance Behaviour Model and its impact on Excise Duty. *Behavioral Sciences Journal*, 211(25), 299-305.
- Stamatopoulos, I., Hadjidema, S. & Eleftheriou, K. (2016). corporate income tax compliance costs and their determinants: evidence from Greece. *Munich Personal RePEc Archive*, 75736, 1-30.
- Stamatopoulou, I, Hadjidemaa, S. & Eleftherioua, K. (2016). *Corporate Income Tax Compliance Costs and Their Determinants in Greece*. Retrieved from <https://mpira.ub.uni-muenchen.de/75736/>
- Tedds, M. L. (2016). *The Implication of Tax Non-Compliance in Corporate Governance*. Retrieved from <http://citesweex.ist.pswu.edu/>
- Vijil, A. L. A. (2017). *Incidence of the value- added tax on men and women in Nicaragua*. Retrieved from; <https://ecommons.cornell.edu/bit>
- Wanjala, B. (2017). *Relationship between Gender with Taxation and Value-Added Taxes Personal Income in Kenya*. Retrieved from <https://www.tqaxjusticeq.net>
- Zemzem, A. & Ftouhi, K. (2013). The effects of board of directors' characteristics on tax aggressiveness. *Research Journal of Finance and Accounting*, 4(4), 140-147.
- Zimmerman, L. J. (2018). Effect of Taxes on firm size. *Accounting and Economics Journal*, 15, 19-49.

## APPENDICES

### Appendix I: Data Extraction Tool

Name of the firm				
Year of incorporation				
Year	Tax payment	Firm Size (Total Assets) NCA/CA	Firm Age (Year of incorporation )	Firm Ownership (Composition of share ownership of directors)
2014				
2015				
2016				
2017				
2018				

## Appendix II: List of construction firms

1	Aptly Africa Enterprises Limited	241	Neossat Solutions Limited
2	Agrotech Power Fencing (E.A L)Limited	242	Burunet Business Solutions Limited
3	Franmax Investment Company Limited	243	Hereford General Suppliers
4	Henan Hansheng International Engineering Construction Company Limited	244	Deluxe Interiors Limited
5	Kimpah Associates Limited	245	Demassin Technologies Limited
6	Varu Enterprises Limited	246	Masterpiece Electricals Limited
7	Mekib General Contractors Limited	247	Rawlcom Investments Limited
8	Hebei Water Conservancy & Hydropower (Kenya) Company Limited	248	Contell Africa Limited
9	Jacone Enterprises Limited	249	Thomsons Construction Limited
10	Nagashaki Construction Company Limited	250	Practical Investments Limited
11	Marec Ventures Limited	251	Eurecca Developers Limited
12	Tidal Enterprises Limited	252	Cilneod Kenya Limited
13	Stima Investment Projects Development Company Limited	253	Mukarimu Company Limited
14	M.D. And Sons Construction	254	Motkens Limited
15	Dectin Construction Company Limited	255	Beijing Lanchuangying Science And Technology Co., Limited
16	Leawan Enterprises Limited	256	Waytop Contractors Limited
17	Jemkos Investments Limited	257	Line Enterprises Company Limited
18	Yashinoya Trading And Construction Company Limited	258	Arcades And Palnners Construction Company Limited
19	Idcg Engineering Management Services(Proprietary)Limited	259	Best Serve Technologies Limited
20	Jocarlec Enterprises Limited	260	Athi River Construction Company
21	Dongsheng Construction Engineering Limited	261	Sahjanad Construction Limited
22	Nateloj Enterprises Co . Limited	262	Mukaro Outlets Limited
23	Astech Company Limited	263	Vidson System Engeneering (Kenya) Limited
24	Zeyana Enterprises Limited	264	Karumande Contractors Limited
25	Star General Contractors (E.A) Limited	265	Ujenzi Machinery Co. Limited
26	Kilburn Enterprises Company Limited	266	Regional Consmaintor Limited
27	Wacon Construction Company Limited	267	Decotech Enterprises Limited
28	Ligav Co Limited	268	Anabra Enterprises Limited
29	Liojidi Enterprise Limited	269	Mulabwa Enterprises Limited
30	Jeyen Limited	270	Petcom Investments Limited
31	Randy Agencies Limited	271	Belfast Engineering Works Limited
32	Jay Bharat Construction Co. Limited	272	Frantony Construction Limited
33	Relax Holdings Limited	273	Synergy Fits Construction Company Limited
34	Moneywise Trading Company Limited	274	Firstenergy Services Company Limited
35	Maluminium Fabricators Limited	275	Daksh Enterprises
36	Karima Communications Limited	276	Davmos Limited
37	Draft And Develop Engineers Limited	277	Halyard Ventures Limited
38	Wellcon Builders & Renovators Limited	278	Flexo Concepts Limited
39	Phase Engeering Works Limited	279	The Edge Developers Limited
40	Powermed Enterprises Limited	280	Sentimental Innovations Limited

41	Votive Engineering Services Limited	281	Dumack Enterprises Limited
42	Danmark Services Limited	282	Vin Construction Co. Limited
43	Shaker Group Kenya Limited	283	Kraft Revolution Limited
44	Big Spanner International Limited	284	Calla Limited
45	Cancy Electrical Services Limited	285	Grand Hydraulics Limited
46	Josian Enterprises Limited	286	Congon Builders And Renovators Limited
47	Terrazzo Enterprises Limited	287	Soskah Building Contractors Limited
48	Gidcom Limited	288	Prime Constel Co Limited
49	Kobe Concrete Limited	289	Diju Interior Design Limited
50	Kokan Electrical (Nairobi) Limited	290	Kolida Survey (Kenya) Company Limited
51	Tykim Enterprises	291	Flotsam Limited
52	Joswam Suppliers & Transporters Limited	292	Danke Solutions Limited
53	Poly Company Limited	293	Indesign Interiors Company Limited
54	Jasper Company Limited	294	Avic International Project (Kenya) Limited
55	Jasper Company Limited	295	Gramics Power Systems Limited
56	Fairview Business Park Limited	296	F-Eight Enterprise Limited
57	Elevonic Lifts Services Limited	297	F-Eight Enterprise Limited
58	Confiance Networks Limited	298	Laxminarayan Builders Limited
59	Fabec Investments Limited	299	Katsran Limited
60	Gradwin Enterprises Limited	300	Value Innovation Solutions Centre
61	Joseki Engineering Works Limited	301	Penjiwa Enterprises Co. Limited
62	Waltom Company Limited	302	Indra Construction
63	Palu Investments Company Limited	303	Hexagon Alluminium & Steel Limited
64	Durhas Construction And Supplies Limited	304	Jipan Limited
65	Temco Building Contractors Company Limited	305	Euler Consultants Limited
66	Total Network Solution Limited	306	Axis Engineering Servcies Limited
67	Kyanite Construction Company Limited	307	Visible Energy Solutions Limited
68	AcsI Limited	308	Knauf Kenya Limited
69	Purushottam Enterprises Limited	309	Jito Glass Work Limited
70	Ndifam Limited	310	Eleganza Enterprises Limited
71	Rocosa Enterprises Limited	311	Alaknanda Builders Limited
72	Vimag Limited	312	Midspan Limited
73	Blackmann Limited	313	Anap Builders Limited
74	Starlight Global Supplies Limited	314	Beuem Systems And General Merchants Limited
75	Turkish Construction And Supply Solution Limited	315	Safeline Solutions Limited
76	Decent Work Services Limited	316	Joman Contractors
77	Neoscape Arch Systems Limited	317	Premier Builders Limited
78	Entison Construction Company Limited	318	Athi Link Services Limited
79	Bitnac Building Contractor Limited	319	Lizley Communications Limited
80	Tahrir Limited	320	Choele Enterprises Limited
81	Edka Engineering Services	321	Livewell Plumbing & Construction Works Limited
82	Bentha Enterprises Limited	322	Kaula Company Limited

83	The Engineers Board Of Kenya	323	Mycal General Services Limited
84	Fuschini Construction Limited	324	Stepal Builders Company Limited
85	Janjos Services & Supplies	325	Draspo General Suppliers Limited
86	Abam Consulting Limited	326	Stallion Construction Limited
87	Twang Technologies Limited	327	Protean Constructions Limited
88	Fontana Tradings	328	Rokab Enterprises Limited
89	Two Calves Investments Limited	329	Zhuo Heng Building Limited
90	Lave Builders Limited	330	Hikmat Construction And General Supplies Company Limited
91	Globalmark Constructions And Co. Limited	331	Rammy Civil & Building Contractors Limited
92	Danaken Company Limited	332	Jopema Africa Limited
93	Roma Drillers And Construction Company Limited	333	Fleet Works Limited
94	Balance Construction Company Limited	334	Faidi Limited
95	Josovina Enterprises Limited	335	Seruji Contractors And General Suppliers Limited
96	Silver Construction Company Limited	336	Con-Star Trading Company Limited
97	Amafhh Contracts Limited	337	Kamjo Africa Limited
98	Urpida Services Limited	338	Morodz Services Limited
99	Jomcon Construction Co. Limited	339	Amazing Quality Building Materials Limited
100	Dada Paver Limited	340	Star Glazing & Aluminium Limited
101	Dakes Construction Company Limited	341	Shamko Construction Company Limited
102	Hf Development & Investment Limited	342	Dee & El Construction Limited
103	Ombkeru Limited	343	Eagle Realty Limited
104	Seyiai Company Limited	344	Muchama Limited
105	Handyman Ventures Limited	345	Master Flow Plumbing
106	Central Techniques Limited	346	Briken East Africa Limited
107	Global Works Engineering Co. Limited	347	Gigawave Service Limited
108	Bridgeways Construction Limited	348	Boston Cosmetics Thika Limited
109	Princesoul Trading Limited	349	Ritzwell Consulting And Power Engineering Co. Ltd
110	Gradvis Limited	350	Afritrack Investments (E.A) Limited
111	Exclusive Living East Africa Limited	351	Daima Civil Engineering Works
112	Digdreamer Limited	352	Geojan Constructors Limited
113	Norb Agencies Limited	353	Powercell Techniques Limited
114	Grand Top Solutions Limited	354	H & A Industries Limited
115	Rift Rollers Construction Limited	355	Koto Housing Kenya Limited
116	Eagle Sky Contractors Limited	356	Patridge Construction Company Limited
117	Fuji Systems And Solutions Limited	357	Jm Kariuki Consultants Limited
118	Compleat Construction And Engineering Company Limited	358	Gokul Builders Limited
119	Darsan Building & General Contractor Limited	359	Robin And Robins Construction Limited
120	Purefix Plumbers Limited	360	Maxguard Electrical Contractors Limited
121	Aljama Company Limited	361	Tsavo Architects Limited
122	Japhis Construction Company Limited	362	Aqua Boil Contractors Limited
123	Interworks Solutions Limited	363	Fame Services Limited
124	Gamesa Kenya Limited	364	Inexpa Building Systems Limited

125	Kitololo Consultants Limited	365	Pidngich Technologies Limited
126	Nav World Limited	366	Parquet Craft Enterprises
127	Stejossam Investment Company Limited	367	Khumji Limited
128	Kamax Plumbing Works Limited	368	Nginje Builders & Construction Limited
129	Dakito General Contractors And Suppliers Limited	369	Lean Ventures Limited
130	Sihaam Limited	370	Trinado Enterprises Limited
131	Jenco Investments Limited	371	Trapoz Contractors Limited
132	Wings Enterprise Limited	372	Faybu Engineering & Construction Company Limited
133	Darsh Contracts Limited	373	Rising Electrical Services Limited
134	Laymak General Contractors Limited	374	Samaton Enterprises Co. Limitd
135	Powan Construction Company Limited	375	Konark Electricals Limited
136	Gold Seed Ventures Limited	376	Hamad Construction And Transport Company Limited
137	Dictours Limited	377	Kam- Range Enterprises Limited
138	Rockmanns Building Systems Limited	378	Millad General Contractors Limited
139	Mukesh Technical Services Limited	379	Mashtech Engineering And Supplies Limited
140	Ruby Interiors Ltd	380	Saig Communication Agency Limited
141	Chance Aluminium And Glassmart Contracrors Limited	381	Topfix Construction Limited
142	Pacalnet Engineering Enterprisesmlimited	382	Rexler Limited
143	Murli Construction Limited	383	Maya Builders Limited
144	Mountion And River Kenya Limited	384	Manage Contractors Limited
145	Mavkan Construction (Kenya)	385	Markom Company Limited
146	Diamondgate General Traders Limited	386	Family Signature Limited
147	Bontec Enterprises	387	Uganda Electricals (Kenya) Limited
148	Happiness Company Services Limited	388	Estim Enterprises Limited
149	Naiishi Limited	389	Aqua Maintenance Team Limited
150	Mau West Company Limited	390	Flex Construction Solutions Limited
151	Solitaire Corporation Limited	391	Amanta Construction Company Limited
152	Alpha Refri-Technical Services	392	Rocks Construction Company Limited
153	Bills Partnership Limited	393	Jagin Electricals Limited
154	Team Management Services Limited	394	Kedra Enterprises
155	Biwali Company Limited	395	Galaxy Heritage Limited
156	Vision Media And Displays Limited	396	Questek Limited
157	Coldstone Investment Company Limited	397	Stellar Builders Limited
158	Luwema Enterprises Limited	398	Haad Enterprises Limited
159	Askay Plumbings Limited	399	Hydro Water Well (Kenya) Limited
160	Diskat Limited	400	Hari Krupa General Hardware Limited
161	Disny Limited	401	Bgsb Concrete Africa Limited
162	Shree Hari Construction And Transport Company Limited	402	Petus Investment Limited
163	Kebrin Limited	403	Mbashalink Traders Company Limited
164	Jamsee Investments Limited	404	Jenan Construction And Works Limited
165	Abba Construction Co. Limited	405	Jenan Construction And Works Limited
166	Ephstacia Limited	406	Young Tech Holdings Limited

167	Arc & Dyam Limited	407	High Star Life Limited
168	Semc Limited	408	Raesh Engineering Services
169	Morben Technical Agencies Company Limited	409	Ecopace Technologies East Africa Limited
170	Quantycosts Consultants Limited	410	Pet-Pump Services Limited
171	Sucoen Company Limited	411	Mwovas Contractors Company Limited
172	Jefran Enterprises Limited	412	Kanaiya Builders Limited
173	Blacksea Electric Limited	413	Krupau Constraction Limited
174	Adsa Interiors Limited	414	Hari Krishna Construction Co
175	Mosmok General Suppliers Limited	415	Antap Builders Limited
176	Pathan Limited	416	Hybrid Contracting Limited
177	Contrast Bridge Ltd	417	Clasico Builders Kenya Limited
178	Yagni Enterprises	418	Strategic General Contractors Limited
179	Bikeri Electricals Limited	419	Erryford Company Limited
180	Mbaku Construction Co Limited	420	Seastone System Technologies Limited
181	Riset Investment Company Limited	421	Impel Design Limited
182	Eco Space Technologies Limited	422	Tuff Bitumen Limited
183	Waterwise Services Limited	423	Cementers Limited
184	Perfect Engineering Works	424	Serenity Construction And Engineering Limited
185	Ndoshma Enterprises Limited	425	Emkay Builders Limited
186	Fabtech Engineering Services Limited	426	Devwatts Electricals Limited
187	Savare Construction Company Limited	427	Firm Equipment Solutions Ltd
188	Eleflex Controls Limited	428	Vision On The Go Limited
189	Ulfy Enterprises Limited	429	Prolash Ltd
190	Concordia Building And Civil Engineering Company Limited	430	Tar-Rick Enterprises Limited
191	E.A. Electrical Company Limited	431	Njosa Contractors Limited
192	Duo-Tech Fire Services	432	Geo Consultants Limited
193	Amelco Limited	433	Sim Building Contractors Limited
194	Pointmarc Holdings Limited	434	Neat Construction Limited
195	Solid Front Investment Limited	435	Gimatech Developments & General Engineering Limited
196	Kanyichula Limited	436	Darynton Ventures Limited
197	Gepan Limited	437	Hydrobuild Limited
198	Shreeji Power System Limited	438	Stylus Solutions Limited
199	Petvic Enterprises Limited	439	Harikrushna Joiners Limited
200	Frejed Engineering Services Limited	440	Kaka General Investments Limited
201	Juleslucienne Limited	441	Due Time Properties Limited
202	Purvi Sneha Builders Limited	442	Compass Services Limited
203	Varsani Enterprises	443	Vinayak Enterprises Ltd
204	Lemye Investments Company	444	Tram Technical Services Limited
205	Sasita Ventures Limited	445	Niceways Engineering Limited
206	World Star Trading Limited	446	Jogenkush Enterprises Limited
207	Zooch Industrial International Limited	447	Quadtraders Company Limited
208	Palace Consultants Limited	448	Managi Construction Works Limited
209	Pewawa General Merchants Limited	449	Territorial Works (K) Limited

210	Dalab Construction Limited	450	Nashcom Solutions Limited
211	Kihumo Property Developers (K) Limited	451	Smatt Interiors & Builders (K) Limited
212	Power Engineering International Limited	452	Wananchi Electrical Engineers And Contractors Limited
213	Dina Builders Limited	453	Amboni Engineering And Construction Limited
214	Kim Enterprises Limited	454	Houseman General Contractors Limited
215	Nirav Enterprises Limited	455	Benmoore Civils Limited
216	Patel Kalyanji Premji Company	456	Aggregate Construction Limited
217	Elevation World Limited	457	Mudecon Limited
218	Pickaxe Eneterprises Limited	458	Mudecon Limited
219	Ken Stone Limited	459	Tebodin Construction Limited
220	Parth Creative Enterprises Limited	460	Top Earthworks (K) Limited
221	Locus Development Partners Limited	461	Gathii Construction Limited
222	Paltech Communications Limited	462	Abn Security Systems
223	Telesat Limited	463	Korean Roofing Tiles Limited
224	Rame Construction Co Limi	464	County Builders Limited
225	Majitec Limited	465	Universal Link Engineering And Trading Company Kenya Limited
226	Tridev Builders Company Limited	466	Howard Construction Company Limited
227	Ultratech Building Solution Limited	467	Mellorian Enterprises
228	Boslika Construction Company Limited	468	Dieu Donne Company Limited
229	Shalimar Limited	469	Bosko Engineering Consultants Limited
230	Roshni Builders Limited	470	Mcbuilders Limited
231	Precision Link Technologies Limited	471	Sheetal Interiors Limited
232	Kifaru Flooring Works Limited	472	Pamon East Africa Limited
233	Webcon Technical Services Limited	473	Techno Aid Limited
234	Radha Krishna Builders Limited	474	China Railway Twenty First Bureau Group (Kenya) Company Limited
235	Jimak Supplies And Construction Limited	475	Elinns Electronics And General Suppliers
236	Monsoon Electrical Engineering Company Limited	476	Jeff Civil Engineering & Construction Co. Limited
237	Priority Electrical Engineering Limited	477	Tenacious Company Limited
238	Geomet Company Limited	478	Nikam Builders And Renovators (K) Limited
239	Giriraj Builders Limited	479	Bowmans Enterprises Limited
240	Ricbert Limited	480	Imagematters Communication Limited