

**Factors Influencing Value Added Tax Compliance In The Construction Industry In
Thika Sub County-Kiambu County: Moderating Effect Of Technology.**

Yego Jepkemboi Jane

122597

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

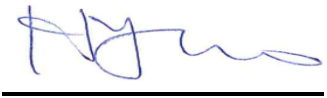
Yego Jepkemboi Jane



16th May 2024

Approval The thesis of Yego Jepkemboi Jane was reviewed and approved for examination by the following:

Name of Supervisor: Dr. Hellen Otieno



Faculty Affiliation: School of Business

Institution: Strathmore University

ABSTRACT

Taxation constitutes a significant revenue stream for governments in both developing and developed nations. Tax compliance is influenced by several factors, and this study sought to investigate the factors that influence VAT compliance in the construction industry. The objective of this research was to investigate the factors that influence Value Added Tax compliance within construction companies and contractors operating in Kiambu County, with a particular emphasis on Thika Sub-County. This research was grounded in both the economic deterrence theory and the ability to pay theory. The moderating variable under consideration was technology, specifically the degree of automation within the firm. The positivism research philosophy guided the research which employed survey research design. The study sample was the 60 actively registered contractors and construction companies. Descriptive statistical analysis included mean and standard deviation while Inferential statistical analysis included Correlation analysis(r) and multiple regression which helped in establishing the relationship between variables. The research findings indicated that all the five examined factors i.e tax knowledge, compliance costs, tax enforcement measures, taxpayer attitudes and perceptions and technology as a moderating factors had an impact of value added tax compliance. The Cost of compliance and enforcement measures had a negative but significant effect while Tax knowledge, and attitude and perception together with use of technology as a moderating factor had a positive significant effect on the VAT compliance in the construction sector. The research recommended that the government should look at ways of reducing compliance costs by looking at other affordable alternatives to ETR machines, and to upload more relevant and useful educational resources online. This research suggests that further study be carried out to understand the uniqueness of the construction industry as far as tax enforcement measures are concerned, as the findings of this study were not consistent to earlier studies done on the same.

Key Words:

Tax Compliance, Compliance Cost, Enforcement measures, Tax Compliance, Tax non-compliance, Taxpayer Services, Taxation Knowledge.

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LIST OF ABBREVIATION

| | | |
|--------------|---|-------------------------------------|
| HMRC | : | Her Majesty Revenue and Customs |
| IRS | : | Internal Revenue Services |
| KNBS | : | Kenya national bureau of statistics |
| KRA | : | Kenya Revenue Authority |
| MST | : | Medium and Small Taxpayers |
| MTO | : | Medium Taxpayers Office |
| SAS | : | Self-Assessment System |
| TPA | : | Tax Procedures Act |
| VAT | : | Value Added Value |
| WHT | : | Withholding Tax |
| WHVAT | : | Withholding Value Added Tax. |

OPERATIONAL DEFINITIONS OF TERMS

In this research, the following concepts were operationally used and had the meanings attached to them as here under;

Compliance Cost- Compliance costs refer to the costs over and above tax payment incurred by the taxpayers in meeting their tax obligations as laid down by various tax laws (Youde & Lim, 2019).

Enforcement measures- Measures put in place to compel observance of or compliance with the tax obligation, rules, regulations and laws (Kimutai & Ombasa, 2019).

Tax Compliance - Compliance implies to timely filing of tax returns, correct reporting of required tax information, the correct declaration of self-assessment of taxes owed, and the timely payment of those taxes without enforcement action (Lymer & Oats, 2009).

Tax non-compliance - This is defined as the failure of a taxpayer to report (correctly) the actual income, claim deductions and rebates and remit the actual amount of tax payable to the tax authority on time (Kastlunger et al., 2018).

Taxpayer Services - Taxpayer services are a set of measures undertaken by the tax administration that are designed to assist taxpayer in complying with tax laws (Dusek & Bagchi, 2019).

Taxation Knowledge- Knowledge in taxation refers to the ability for one to know or understands taxation procedures, rules, and regulations based on the various tax laws (Rahayu,2017).

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CHAPTER ONE

INTRODUCTION

1.1 Study Background

Taxation constitutes a significant revenue stream for governments in both developing and developed nations that is used to fund their public expenditures, to provide basic amenities and public social services, to stabilize the national economy and to redistribute wealth among its citizens (OECD, 2016; Kastlunger *et al.*, 2018). Tax Collection is a critical way for countries to generate public revenues to finance investments in infrastructure, human capital, and service delivery for citizens and businesses as tax a very critical component of the country's overall development.

Tax compliance refers to when a taxpayer abides by all the tax laws and regulations pertaining to their obligations, either voluntarily or being compelled by the relevant Authorities. They do so by ensuring that the respective tax returns are timely filed and remitted, and by reporting all other necessary tax information when need be (Kingoia,2016). Tax Compliance is the individual or business decision to comply with the tax laws in a given country. On the other hand, diametrically opposed to tax compliance is tax evasion. Tax evasion is the individual or business decision to avoid or underpay the taxes imposed on them which is illegal.

In Kenya, evidence suggests that compliance levels are higher among corporate taxpayers compared to individual taxpayers, as indicated by the composite mean scores among corporate taxpayers. Enforcement instruments were found to have a negative impact on tax compliance levels, whereas tax rates, compliance costs, and the nature of the tax had a positive impact on tax compliance levels (Umeora, 2013).

1.1.1 Value Added Tax Compliance

VAT Tax compliance refers to the fulfilling of all tax procedures and obligations on Value Added Tax (VAT) as required by law by the taxpayers that are registered for VAT obligation. Thiga and Muturi (2015) in their research findings observed that there was a general positive correlation between Tax understanding, lower tax rates, compliance

costs, high fines and penalties to the general level of compliance. According to CIAT, 2016, Kenya is ranked among countries with high levels of tax non-compliance, placing considerable pressure on the revenue authority to ensure efficient and effective tax administration. To bolster tax compliance and consequently increase revenue collection, tax administration in Kenya is overseen by the Kenya Revenue Authority, which was established through an Act of Parliament on July 1st, 1995. (Cap 469).

In Kenya, evidence suggests that tax compliance levels are affected by tax rates, compliance costs, the nature of tax, and enforcement instruments. This study examined relationships derived from existing literature regarding the correlation between tax rates, compliance costs, nature of tax, enforcement instruments, and tax compliance levels. Considering the differing influence of these factors on individual and corporate taxpayers, the study concludes that various factors have distinct impacts on tax compliance levels for individual taxpayers and corporations (Osoro, 2016).

1.1.2 Determinants of Tax Compliance

Several factors influence the compliance of taxpayers, (Waweru, 2014). These include factors such as the taxpayer's age, gender, occupation/status, educational attainment, income levels and sources, influence from peers and other taxpayers, legal sanctions, complexity of the tax system, the relationship between taxpayers and the tax authority, ethical considerations, the perceived equity in the tax system, the probability of audits, and the existing tax rates Wawire (2017) established the determinants of VAT to include GDP, institutional, demographic, and structural features of the economy. Moreover, he found that the preceding levels of tax bases, encompassing GDP, trade volume, and import volume, exert a significant impact on the current levels of VAT revenues.

The compliance model, (OECD, 2004) illustrates a systematic approach to comprehending and enhancing taxpayers' compliance, aiding in the comprehension of factors that influence an individual's behavior and therefore implement the most fitting compliance strategy. An individual's behavior is influenced by business, industry, technology and data, sociological, economic and psychological.

The compliance model summarizes the various types of assistance and intervention that a tax authority might need to offer to the taxpayer to collect the necessary revenue. In line with this compliance model, this study will focus on enforcement measures by the Tax Authority, taxpayers' tax knowledge, taxpayers' cost of tax compliance, and taxpayer attitudes and perceptions, the moderating variable being technology, examining how these factors impact Value Added Tax (VAT) compliance in the construction sector, with a specific focus on Thika Sub-County, Kiambu County.

Taxation knowledge involves the capability to know and comprehend the procedures associated with taxation procedures, rules, and regulations based on the various tax laws (Rahayu, 2017). Tax knowledge is vital as it helps taxpayers to know the cause and effect of engaging in tax non-compliance behaviors. Taxation knowledge is critical in the administration of a tax system, and the knowledge on tax that taxpayers possess or lack of it, that affects compliance (Alm, 2018).

There are conflicting findings on the influence of taxpayers' tax knowledge on tax compliance. Most studies on tax knowledge and tax compliance show that taxpayer education and tax knowledge have positive and substantial impact on tax compliance (Chebusit, 2014; King'oina, 2016; Kerubo 2019; Mwihaki, 2022). However, Lutomia (2021) in his study on the factors influencing VAT compliance among mechanics contends that possessing knowledge of VAT does not have a significant impact on VAT compliance within the mechanics' community. These findings were contradictory to most of the earlier studies done on tax compliance and tax knowledge, by (Chebusit, 2014; King'oina, 2016; Kerubo 2019; Mwihaki, 2022) and thus these findings may not be generalizable to other industries, and there is need to find out what the case is for the construction industry.

In the context of taxation, compliance costs refer to the expenses borne by taxpayers beyond the actual tax payment to fulfill their tax obligations as laid down by various tax laws (Youde & Lim, 2019). These are additional costs incurred beyond the actual tax

payment or any inherent distortion costs associated with the nature of the tax. Examples include expenses related to filing tax returns, making tax payments, bookkeeping, or hiring tax professionals/consultants for advice on tax matters.

Compliance cost refers to the direct costs incurred by businesses in performing various tasks associated with government regulation, for instance, cost of acquiring or formalization of business, acquiring taxation knowledge, securing the services of tax advisors and professional tax services, tax audits and tax appeals (Slemrod & Bakija, 2017). High compliance costs may result in distortion of production decisions, deadweight human resource costs, and adverse price movements which consequently lead to resentment that may lead to increased noncompliance behaviors. (Slemrod, 2017). Mahangila (2017), Doreen and Collins (2020), Zachary, Kariuki and Mwangi (2017) and Abdul and Wang'ombe (2018) in their research findings all illustrated a notable positive correlation between the costs associated with tax compliance and actual tax compliance. Moreover, they highlighted that an intricate tax system requires taxpayers to undergo extra training and seek external professional advice for compliance.

In contrast, Martinez (2018) established that complexity of tax system sometimes leads to greater reliance on tax professionals which reduces errors in taxation potentially reducing costs. Martinez (2018) argues that the influence of compliance costs on the compliance behavior of taxpayers is minimal, arguing that technology has evolved with automated solutions and tax software that help individuals and businesses calculate their tax liabilities accurately. This has reduced the likelihood of errors and has facilitated electronic filing and payments for individuals and businesses, simplifying the process electronically without incurring any cost, and yet compliance behaviors still remain a challenge (Martinez, 2018).

Doreen and Collins (2020) found that the costs of tax compliance rise in direct proportion to the complexity of the tax system and consequently impacting tax compliance. However, Brown (2020) presents contradicting argument that the

advancement in technology questions the relevance of compliance cost as a determinant of tax compliance. Brown (2020) contends technology has made it easier for businesses to register, make declarations, file tax returns and seamlessly make payments electronically at little to no cost (Brown, 2020).

Mogeni (2014) identified a detrimental impact of compliance costs on tax compliance within listed companies, whereas Smith (2018), in a comparative analysis of compliance levels between small and large businesses, determined that the influence of tax compliance costs on compliance behaviors among listed companies was negligible. Smith (2018) argues that larger businesses with complex tax structures have greater reliance on tax professionals in their management structures, potentially reducing compliance costs. The contradictions and conflicting findings in the literature reflect the intricate nature of the tax compliance landscape, underscoring the necessity for additional research to delve into the nuances and contextual influences of compliance costs on tax compliance.

The foundation for tax enforcement measures is rooted in the economic theory proposed by Allingham and Sandmo (1972). According to their model of tax compliance, taxpayers are perceived as utility maximizers, who evaluate the advantages of tax evasion in comparison to the likelihood of facing consequences, such as paying the accurate taxes along with accrued interest and penalties.

Ndumia (2015) in his research findings affirmed the presence of a direct relationship between the rate of audit and Value Added Tax compliance. This effect was deemed to be of moderate significance. The findings suggest that VAT revenue collection experienced an upturn with an increase in the audit rate. The study thus concludes that the government should increase the rate and number of audits in order to increase the VAT revenue collections. The government should also and also ensure strict enforcement of the audit findings and recommendations (Ndumia, 2015)

Adhiambo (2019) In her study contends that the perceived opportunities for tax evasion

exerted minimal to no impact on compliance with tax regulations. This is due to the fact that factors such as tax avoidance, personal gains, ethical considerations, and societal influence were viewed as personal choices, largely ingrained in individuals' morality and were not likely to change. The findings revealed that most traders were cognizant of the repercussions associated with underreporting taxes. They also acknowledged the tax authorities' capacity to scrutinize tax matters, leading them to perceive a high likelihood of detection for such offenses.

In contrast, Demessow (2020) in his study on the factors impacting voluntary tax compliance among VAT-registered taxpayers in Addis Ababa discovered that the effectiveness of the tax authority and tax audits did not exert a notable influence on VAT compliance. This disagrees with Chebusit (2014) whose research findings showed that a heightened potential for audit leads to increased deterrence of tax evasion, resulting in a higher rate of compliance. Masaku (2019) in his research aiming to assess the impact of taxpayers' education and awareness on VAT compliance within micro and small enterprises in Embu County established that although knowledge and awareness positively affected VAT compliance, a considerable number of small-scale traders lacked sufficient understanding of the repercussions associated with failing to submit taxes, which disagrees with Adhiambo (2019) who found out that traders were aware of the consequences of underreporting taxes.

Attitudes towards tax compliance are shaped by various elements such as individual characteristics, demographics, societal considerations, institutional aspects, and economic factors (Orkaido, 2018). These perspectives and attitudes include individuals' perceptions of government expenditure and assessments of the equity of the tax system, considerations of societal influence, and assessments of personal ethics and inclinations towards compliance.

Merima (2013) investigated the factors influencing attitudes on tax compliance in Africa, specifically focusing on South Africa, Kenya, Tanzania and Uganda. His research revealed individuals in Kenya and South Africa tended to adopt a tax-compliant attitude when they perceived that enforcement measures increased the difficulty of tax evasion. Moreover, the

results suggested that taxpayers who expressed greater satisfaction with public service provisions were more likely to endorse government efforts in tax collection across all four countries. However, the correlation between attitudes towards tax compliance and public services provision varied depending on the specific services in question and differed from one country to another.

In Kenya, the presence of infrastructure like roads and electricity was identified as a factor promoting a positive attitude towards tax compliance, whereas respondents in Uganda and Tanzania highlighted the importance of education and health services to promote tax compliance. In South Africa, the delivery of services, such as issuing identity cards and police services by the government, was identified as a more influential factor in fostering a tax-compliant attitude. The study also underscored the significance of tax knowledge and awareness in shaping tax compliance attitudes. As a recommendation, the research suggested further investigation into the fairness of tax collection practices and a comparative analysis of the treatment of taxpayers.

In his exploration of the factors influencing attitudes towards taxation in Ethiopia, Orkaido (2018) discovered that a compliance attitude was significantly influenced by factors including taxpayers' gender, age, perceptions of fairness and equity, experiences with tax audits, tax knowledge, the simplicity of the tax system, awareness of penalties for tax evasion, and perceptions of tax rates. However, the study revealed that variables such as education level and the role and efficiency of tax authorities did not emerge as significant factors influencing attitudes toward tax compliance. In his examination of the factors affecting compliance with value-added tax among hotels in Nakuru County, Maelo (2020) found a positive correlation between taxpayers' trust in the Tax Authority and tax compliance. Additionally, social norms were found to be positively associated with tax compliance. Equally, perceptions about the government had a positive relation to tax compliance in the hotel industry. The study recommended further study on the same variables in a different industry for comparison.

Mbugua, Mwambia, and Baimwera (2017) conducted research to examine the factors

affecting tax compliance among Small and Medium Enterprises (SMEs) in Kiambu County. The study revealed that the presence of opportunities for non-compliance influenced tax compliance behavior. It was observed that taxpayers tended to engage in tax evasion when they believed that the tax authority's capacity to identify such evasion was limited, and providing bribes was deemed a cost-effective alternative. Additionally, the findings highlighted the significant role of corruption among tax officials in contributing to tax noncompliance.

1.1.3 Technology and Tax Compliance

Relying on manual procedures presents notable obstacles for revenue authorities, hindering efficient tax administration and target revenue achievement. To tackle these hurdles, revenue authorities are progressively acknowledging the benefits of incorporating technology into their processes. Various technologies enable revenue authorities to scrutinize taxpayer information, detect trends, and reveal possible tax discrepancies or fraudulent activities. Integrated digital platforms and mobile apps streamline tax filing, offer instant notifications to taxpayers, and improve accessibility (KPMG,2023).

Considering that implementing IT can incur significant expenses and necessitate organizational and procedural adjustments, tax administrations ought to view IT as a pivotal business choice. They should integrate IT validation into their strategic approach, meticulously assessing and quantifying both costs and advantages. While the primary objective of tax administrations remains collecting the appropriate taxes from the correct taxpayers punctually, their interim strategic aims may encompass ensuring consistency in tax law application, delivering exceptional taxpayer service, enhancing compliance, or other goals (USAID,2023).

The utilization of technology in the field of taxation involves the use of advanced information technology tools, systems, and applications to enhance and streamline various aspects of tax-related processes, administration, compliance, and enforcement (Biørn, 2017). Technology has a significant impact on tax compliance in various ways,

both for taxpayers and tax authorities. Technology enables taxpayers to use software to automate the process of calculating their tax liabilities as well as maintain digital records of their financial transactions, making it easier to track income, expenses, and deductions (Muceke, 2021). This should enhance tax compliance, as record keeping is a critical component in compliance as it enables one to make accurate declarations during return filing and thus make the right payments.

Martinez (2018) argues that with the evolution of technology with automated solutions and tax software that help taxpayers to calculate their tax liabilities accurately, there is a reduced likelihood of errors, which is facilitated by electronic filing of tax returns and online payments for individuals and businesses, eliminating associated costs. Therefore, he argues that the influence of compliance costs on taxpayers' compliance behavior is minimal (Martinez, 2018). He further argues that organizations that are heavily automated have easy access to online resources on tax matters and hence are more likely to be compliant than those who rely on manual process.

Technology has a profound impact on tax compliance by enabling automation, improving data accessibility, enhancing analytics, streamlining reporting, and facilitating communication between taxpayers and tax authorities. All these factors border on knowledge, costs and enforcement measures as most of the enforcement measures are digitally implemented. Kiguro (2014) in his study on the utilization of technology as a strategic tool to enhance tax compliance in Kenya asserted that a substantial number of participants agreed to the fact that technology had significantly streamlined their tax compliance and saved a lot of man hours and expenses by using online systems to file and make payments of their taxes.

Technology does not nullify the effect of these factors on tax compliance, but influences the magnitude of influence of these factors on tax compliance.

In this study, technology is operationalized as the Degree of Automation in the company, availability of technically competent personnel and access to online resources.

1.1.4 The Construction industry in Kiambu County-Kenya

The construction industry remains a key driver of socio-economic development in a Kenya, contributing to 7.1% of the total GDP (KNBS, 2023). The industry has had a steady increase in its contribution to GDP from 2018 (KNBS, 2023), which can be attributed to the steady growth of the transport, power infrastructure, commercial and residential buildings construction in various parts of the country, with a total government expenditure on roads of Ksh 191.4b and total number of completed residential buildings of 18,300 in the financial year 2022/2023 up from 11,215 in 2018 (KNBS, 2023).

Firms in the construction industry are eligible for VAT registration as the goods being used in this industry, and the services being offered are Vatable at 16% (Makau, 2010). However, many of these construction firms are faced with many challenges concerning adherence to laws and regulations related to VAT. Some of the challenges encompass, but are not confined to, issues such as inadequate and accurate purchase invoices for VAT input claims, delays in VAT payments, irregularities in business transactions, a shortage of skilled personnel for tax filing and remittance, and insufficient record-keeping practices (Umeora, 2013).

There have been huge investments going into the construction industry in the past few years, but despite the huge investments and growth of the construction sector in its contribution to GDP, there has been no commensurate growth in VAT contribution to GDP (KRA, 2018). For the past 5 years, KRA VAT collection has fallen short of the projected targets forecasted in the KRA 8th corporate plan as per the KRA annual revenue reports (KRA, 2023).

There has also been a declining trend in the percentage of VAT contribution from the construction industry against the gross VAT collected, despite the steady growth and investment in the industry.

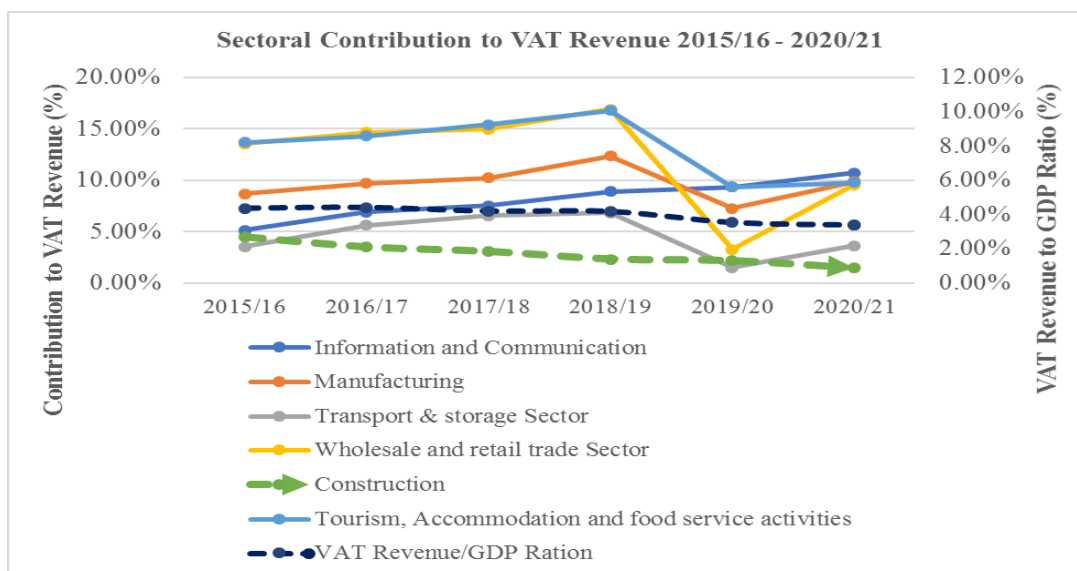


Figure 1.1: Trend of VAT contribution from the major sectors of economy 2015/16 to 2020/21 (KRA,2022).

Table 1.1: VAT from the Construction Industry against Gross VAT revenue (Kshs. Millions)

| Industry/Year | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|--|--------------|--------------|--------------|--------------|--------------|
| VAT from Construction Industry | 1,965 | 1,703 | 1,893 | 2,071 | 3,405 |
| Gross VAT Revenue | 290,843 | 336,572 | 356,776 | 395,032 | 366,103 |
| % Contribution to Total VAT revenue | 0.68% | 0.51% | 0.53% | 0.52% | 0.93% |

(KRA,2021).

Players in the construction industry in Thika Sub-County, Kiambu County are relatively of small and medium scale and their focus is majorly on leveling of murrum roads, construction of houses, repairing and maintaining roads, building of bridges on murrum roads, building culverts and constructing water pans (Kiambu CIDP, 2018). The main customers of these construction firms and contractors include; Kenya National Highways Authority (KeNHA), Kenya Rural Roads Authority (KERA), Kiambu County government and Kenya Urban Roads Authority (KURA). With a population of estimated 2.4 million people, Kiambu county is among one of the fastest growing

counties in the Kenya (KNBS, 2020). This huge population creates a big demand for construction work in order to meet their housing needs, offices and work spaces, and many other facilities.

As per KNBS projections, Kiambu county's annual demand for housing units is 106,000 units, and the current supply annually is 40,000 units, which creates a deficit of 66,000 units annually (KNBS, 2020). This huge demand has created a big influx in the construction business which has then led to a surge at the rate buildings are springing up within the residential and semi-urban areas in the county, with most of these constructions and developments springing up in Thika Sub county, being the head quarters of Kiambu County. Additionally, the construction sector in Thika Sub-County has grown rapidly over the past decade as major firms ,industrial plants and factories continually set base in the sub-county as it is considered a key Metropolitan County as well as the leading manufacturing and commercial hub after Nairobi (Macharia, 2012). As the sector continues to expand, new trends in clientele changing preferences has led to development of construction sector that meet the new standards (Cytton,2020). Therefore, with the surge of buildings resulting to a boom in the construction industry, it is expected that VAT collection from the sector would correspond to the growth in the sector, but this has not been the case (KRA, 2020).

While various studies have focused on different aspects of compliance, there are no adequate studies that have focused on VAT compliance in Kenya, particularly in the construction industry. This study aimed at examining how taxpayers' cost of compliance is moderated by technology. This moderation was assessed based on the level of automation implemented by the taxpayer in their company or business and their proficiency in operating the online system, which in turn affects the knowledge facet of tax compliance. Technology also moderates the impact of tax enforcement measures, given that most of these measures operate within a system-based framework. Technology also influence taxpayer attitudes and perceptions as the level of perceived simplicity or complexity of the tax system influences the taxpayers' attitudes to compliance. In this study, technology was utilized as a moderating variable to assess its impact on the

relationship between the cost of tax compliance for taxpayers, the taxpayer's knowledge, Authority's tax enforcement measures, taxpayer attitudes and perceptions and VAT compliance in the construction industry.

1.2 Statement of the Problem

In the past decade, Kenya has witnessed a tremendous growth in the construction sector, accelerated by both private investment and government's big four agenda for affordable housing. Residential and commercial buildings as well as road infrastructure has witnessed a high growth over the years (KNBS, 2023). However, data from both KRA and KNBS show that the growth of VAT, and particularly in the construction sector is not commensurate to the growth in the sector. VAT collection from the sector has lagged behind despite the growth (KRA, 2022).

Construction industry majorly involves the use of Vatable goods and services, thus a key player in the total VAT contribution. KNBS reports show that 9,488 Metric Tons of cement were used in the financial year 2022/2023, and 22,443 km Length of Bitumen Roads (KNBS, 2023). All the inputs in these constructions attract VAT at 16%, and a commensurate growth in VAT is expected, however, that is not the case (KRA, 2018, KRA 2021, KRA 2023).

The literature review shows that there are some contradictions in earlier studies done regarding the factors affecting tax compliance, particularly on the influence of taxpayer's knowledge, the costs related to adhering to tax regulations, the efficiency of tax enforcement measures, and the perceptions and attitudes of taxpayers. For instance, Chebusit (2014), King'oina (2016), Kerubo (2019) and Mwihaki (2022) argue that taxpayer education and tax knowledge have a positive and substantial impact on tax compliance while Lutomia (2021) found that having knowledge about VAT does not have a noteworthy impact on VAT compliance.

On the influence of taxpayer's cost of compliance, the research findings of Mahangila (2017), Doreen and Collins (2020), Zachary, Kariuki and Mwangi (2017) and Abdul and

Wang'ombe (2018) all showed a positive correlation between the costs of tax compliance and actual tax compliance while Martinez (2018) argues that cost of compliance is insignificant in the wake of automation of tax processes as most of the p

Ndumia (2015) found a positive connection between the audit rate and compliance with VAT. Adhiambo (2019) observed that traders were conscious of the repercussions associated with incorrect reporting, while Masaku (2019) contended that many small-scale traders lacked sufficient knowledge about the consequences of evading tax submissions.

Additionally, Majiwa (2014) explored the determinants of tax compliance in Kenya by analyzing data obtained from taxpayers interviewed within Nairobi County, the study established that for corporate taxpayers, enforcement measures had a negative impact on tax compliance level while tax rates, compliance costs and nature of tax had a positive impact.

While the above studies have evaluated the various aspects of tax compliance, some of the studies were not specific to VAT or were conducted in other countries other than Kenya and therefore the findings cannot be generalized to Kiambu County. Additionally, the studies did not focus on construction companies. Furthermore, in terms of conceptual relations, while some studies looked at how technology impacts on tax compliance, the studies did not evaluate the moderating effects of technology on the factors affecting tax compliance. Lastly, some of these studies used different methodological approaches to this study and thus this study may provide a substantial contribution to advancing current knowledge as well as presenting evidence on the influence of various factors on Value Added Tax (VAT) compliance, particularly within the construction sector. This study seeks to establish the moderating effect of technology on the relationship between tax compliance factors and VAT compliance among construction firms in Thika Sub-County, Kiambu County.

1.3 Objectives of the study

The general objective of this study was to investigate the factors that influence Value Added Tax compliance among the construction firms in Kiambu County, Thika Sub-

County in Kenya. The study also investigated the moderating effect on the relationship between tax compliance factors and VAT compliance among construction firms in Thika Sub-County, Kiambu County.

1.3.1 Specific Objectives

The study was guided by the following research objectives;

1. To evaluate the influence of taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County.
2. To evaluate the influence of taxpayers' cost of compliance on VAT compliance among construction firms in Thika Sub-County.
3. To evaluate the influence of tax enforcement measures on VAT compliance among construction firms in Thika Sub-County.
4. To evaluate the influence of taxpayer attitudes and perceptions on VAT compliance among construction firms in Thika Sub-County.
5. To evaluate the moderating effect of technology on the relationship between taxpayer's knowledge, taxpayer's cost of compliance, tax enforcement measures and taxpayers' attitudes and perceptions and VAT compliance among construction firms in Thika Sub-County.

1.4 Research Questions

The study sought to answer the following research questions;

- 1) What is the influence of taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County?
- 2) What is the influence of cost of compliance on VAT compliance among construction firms in Thika Sub-County?
- 3) What is the influence of tax enforcement measures on VAT compliance among construction firms in Thika Sub-County?
- 4) What is the influence of taxpayer attitudes and perceptions on VAT compliance among construction firms in Thika Sub-County?
- 5) What is the moderating effect of technology on the relationship between (taxpayer's knowledge, taxpayer's cost of compliance, tax enforcement measures

and taxpayer attitudes and perceptions) and VAT compliance among construction firms in Thika Sub-County..

1.5 The Scope of Study

This study was geographically confined to construction firms in Thika Sub-County, in Kiambu County. Kiambu county was a suitable location for this study, being the second most populated county in the country after Nairobi, with a population of 2,417,288 people as at 2019 and thus a constantly increasing demand for a lot of construction work to handle their homes, offices, and other facilities (2019-KPHC-Analytical-Report, 2020). The specific focus was in Thika sub-county, being the capital of Kiambu county as well as the leading manufacturing and commercial hub after Nairobi (Macharia, 2012).

There were 156 registered construction firms in Thika Sub- County, Kiambu County, out of which 60 are active in business (KRA, 2022). The study population targeted the 60 active registered contractors and construction firms. The study relied on primary data which was collected from managers and accountants of the registered construction firms by use of closed ended questionnaires. The study was carried out from January 2024 and was concluded in February 2024.

1.6 The Significance of the Study

Policy makers: The results of this study will provide valuable insights into strategies aimed at enhancing the efficiency of VAT revenue collection from the construction industry. The government will also benefit in formulating viable decisions or policies pertinent to issues concerning tax compliance in order to improve performance of VAT in this sector. Particularly, the Revenue Authority will have insights on the most suitable channels of communication, and the education content that is relevant to taxpayers in the construction sector.

The findings of this study will help inform the practitioners including the Construction firms on the importance of tax compliance, as well as provide information on the benefits of compliance and the possible consequences of noncompliance. They will also

understand the associated cost of tax compliance and what needs to be set aside for compilation of taxes.

Further, the findings of this study will be useful to scholars, researchers and theorists as it will provide more insights on tax compliance, the cost of tax compliance, the various enforcement measures among others. It will provide a deeper understanding on the moderating effects of technology on enhancing tax compliance and facilitation of information sharing on tax compliance. Finally, the finding of this study will provide reference material for future research on VAT compliance among construction firms.

1.7 Chapter Summary

This chapter includes the introduction to the study, the statement of the problem, research objectives and questions and the scope to be covered by the study. The chapter also includes the Significance of the Study to various parts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework and examines the empirical literature on Value Added Tax (VAT) compliance, along with an exploration of the factors influencing tax compliance. While theoretical literature presents theories on which the research is grounded, empirical literature provides a review of previous scholarly work done by other researchers on the factors that influence VAT compliance.

2.2 Theoretical Literature Review

An essential element in social research is the exploration of theoretical background, as every study needs to be grounded in an existing theory (Twumasi, 2022). The presence of theories is crucial for constructing a research model and providing guidance for analysis. As highlighted by Dale (2012), theories aid scholars in drawing novel inferences, enhancing actions, and contributing to the development of more refined theories. There are numerous theories that elucidate tax compliance. This study specifically concentrated on two theories: the economic deterrence theory and the ability-to-pay theory. The anchoring theory of this research was the economic deterrence theory as it touches on the first three objectives and the 5th objective of this study, while the supporting theory was the ability to pay theory which guides the 4th objective of this study.

2.2.1 Economic Deterrence Theory

The theory of Economic Deterrence was initially proposed by Becker (1968) and later advanced by Allingham and Sandmo (1972) and Yitzhaki (1974) in their theoretical exploration of the factors influencing tax compliance. Originating from the field of criminology, the economic deterrence theory perceives taxpayers as utility maximizers (Allingham & Sandmo, 1972). It is grounded on the notion that if the repercussions of engaging in a crime surpass the gains derived from the crime itself, the individual will be discouraged from committing the offense

This model has been extensively employed in research to elucidate the link between tax compliance and tax evasion. The theory posits that individuals are more inclined to refrain from engaging in a crime if the potential consequences outweigh the benefits. The theory encompasses deterrence by punishment and retrospectively holds out threats of unleashing punishment to taxpayers whenever there is a commitment of wrong doing (Gachanja, 2012). The economic deterrence theory is therefore premised on an enforcement mechanism complemented by the appeal to the citizen's tax morality when dealing with the challenges of tax compliance and taxpayers' knowledge on tax matters (Ortega & Sanguinetti, 2013). The theory of economic deterrence underscores the utilization of coercion, threats, and intrinsic material incentives, thus making it achievable through both punitive and persuasive measures (Slemrod, 2017).

The economic deterrence theory is not without criticisms. The underlying theoretical assumptions of this theory are that: criminals are rational decision makers, crime is a chosen activity, and that crime rates can be reduced by decreasing the benefits of crime. All of these assumptions involve simplistic analyses of human behavior that fail to consider the irrational and expressive nature of human behavior as well as the immediate environmental circumstances that restrict behavioral choices. Another weakness of the economic deterrence theory is its ignoring of the inherently subjective nature of the deterrence process. As long as it is impossible to measure the subjective rewards and costs of criminal activities, there is no way of implementing an economic model of deterrence.

The persuasive approach emphasizes on simplification of tax processes and understanding various tax regulations and tax-related information as enablers of tax compliance (Redae & Sekhon, 2016). Therefore the persuasive approach of the economic deterrence theory will address the first objective of this study on the influence of the perceived influence of knowledge in taxations on the performance of VAT revenue. One could argue that taxpayers assess the likelihood of being caught in their misconduct and weigh the associated costs, ultimately deciding if they can endure such consequences. Taxpayers will use perceived probability of detection, interest rates, the

legal consequences and the severity of punishment thereof to sustain the thought of punishment and tax compliance (Alm, 2018).

The cost-benefit approach of the theory will tackle the second objective of this study, exploring the impact of taxpayers' compliance costs on Value Added Tax (VAT) compliance. This theory views a taxpayer as an economic being, who will always weigh the cost of complying vis a vis the cost of non compliance. If the cost of non compliance, i.e the cost of paying penalties, is lower than the cost of complying, i.e paying experts to compute and file their returns, the taxpayer will choose the cheaper option (Redae & Sekhon, 2016).

The theory advocates for the use of the enforcement power of revenue agencies to ensure compelled adherence to laws and regulations on tax, leading to the recovery of tax revenue and thereby enhancing the effectiveness of tax collection initiatives (Wilson, Custers, & Dom, 2019). The theory supports the idea that penalties, fines, interest, and frequency of compliance audits should be increased to improve compliance. Kimutai and Ombasa (2019) employed the theory of economic deterrence in exploring the use of tax enforcement measures in tax revenue collection and tax debt recovery in Kenya. This economic deterrence theory fit this study as it informed and addressed the tax enforcement measures on the compliance of VAT revenue, as the taxpayers weigh the cost benefit analysis of tax evasion, comparing which one is higher between the cost of complying vis a vis the cost of not complying.

2.2.2 The ability to pay theory

This theory, articulated by Adam Smith in 1776, stands as one of the oldest theories of taxation. According to the theory, individuals should pay taxes based on their income level (Kendrick, 1939). The theory follows the belief that individuals should be taxed based on how much they can pay. It focuses on income rather than expenditure. The theory considers whether an individual can pay the full tax owed or not. The ability-to-pay theory is seen as an effort to promote income distribution, which is achieved when

more revenue is collected from high-income earners and spent to fund the essential amenities mostly needed by low-income earners.

The ability-to-pay principle asserts that the distribution of the overall tax burden should be based on individuals' capacity to bear it. This principle is widely recognized and accepted as a fundamental tenet of fairness and justice in taxation, reflecting the idea that citizens contribute taxes to the government in proportion to their ability to pay (West,2016). The theory thus supports the idea that tax rates should be fair and just in relation to a taxpayer's income. That a taxpayer should only be taxed what they can afford to pay. The major criticism of this theory however is the argument that such a system discourages economic success as it penalizes those who earn the most.

The ability-to-pay theory is viewed by critics as a socialist ideal that hampers initiative and innovation in a free market economy. This theory disincentivizes hard work in the sense that making more money means paying more taxes, making more money becomes unappealing, according to critics.

This theory was applied on the fourth objective of this study, on the attitudes and perceptions of taxpayers, and their influence on tax compliance. One of the attitudes and perceptions of taxpayers is on the fairness of the tax rates and government spending of the taxes collected. The ability-to-pay theory is consequently connected to the assessment of whether tax rates and brackets are perceived as equitable for taxpayers within the construction industry, considering their incomes, and if the taxpayers consider the existing VAT rates as fair to them. Taxpayers will be more inclined to pay their taxes if they believe that the tax rates are fair to them based on the incomes they receive (Kendrick, 1939).

2.3 Empirical Literature

This section delves into empirical studies conducted both internationally and locally related to the variables considered in this study. It aims to pinpoint conceptual,

contextual, and methodological research gaps and discuss how the current study intends to address these gaps.

2.3.1 Taxpayers' Knowledge in Taxation and Value Added Tax compliance

Knowledge in taxation refers to the ability for one to know or understand taxation procedures, rules, and regulations based on the various tax laws (Rahayu, 2017). Tax knowledge is vital as it helps taxpayers to know the cause and effect of engaging in tax non-compliance behaviors. Taxation knowledge is critical in the administration of a tax system and what knowledge about tax that taxpayers possess or do not possess that affects tax compliance (Alm, 2018).

In many instances, globally taxpayers frequently lack clarity on their tax obligations due to the complexity and uncertainty of the tax system, leading to a heavy reliance on paid tax practitioners for tax preparation (Alm, 2018). Taxpayer tax knowledge can be measured through their understanding of their tax obligations, rights, and responsibilities. Understanding tax regulations is a process that leads taxpayers to know taxation and apply that knowledge to payments of tax (Redae & Sekhon, 2016). Indicators of knowledge in taxation comprise knowledge of tax computations to calculate the amount of tax payable, knowledge of tax procedures, rules, and regulations, and knowledge of filling of tax returns (Slemrod & Bakija, 2017). Thus, taxation knowledge can be divided into, declarative knowledge that knowing that and procedural knowledge knowing how and when.

Rantelangi & Majid (2018) points out that taxpayers will not engage in tax evasion if the authorities cascade various trainings and education materials to them on tax evasion and other tax-related issues. Tax knowledge is a critical factor that determines whether a taxpayer will engage or refrain from tax evasion (Khlif and Achek, 2015). When taxpayers are going about their usual routine tasks with lack of tax knowledge, they may be involved in some risks that will expose them to unknowingly engage in tax evasion. On the other hand, if they are well informed and conversant with their tax obligations, they are more likely to do the right thing and be tax compliant.

Across Slovenia, many countries such as India continue to grapple with tax collection technology being significant in ensuring compliance. Doerrenberg and Schmitz (2015) sought to establish a link between information provision and tax compliance among small businesses in Slovenia. The study found that a higher level of tax compliance occurred when taxpayers were well-informed about their civic duties regarding tax remittance. The results were notably effective, especially when the information was personalized for each taxpayer.

Across Africa, many countries have not been able to attain the levels of desired taxation. Touche (2018) conducted a study on the correlation between tax knowledge and VAT performance. The study revealed that 62% of micro and small enterprises engaged in offenses related to VAT, including activities such as document falsification, selling products without issuing receipts, reluctance to submit taxes, and late submission of taxes due to lack of technical knowledge on the operations of the VAT system.

Regionally, Deloitte and Touche (2018) established a positive relationship between tax knowledge and tax compliance in East African countries of Uganda, Rwanda and Tanzania they did not delve deeply into the causality and mechanisms behind this relationship. understanding how and why tax knowledge impacts compliance is crucial as one would wish to know the specific aspects of tax knowledge that are more influential and as to whether it a matter of awareness or the ability to navigate complex tax laws and systems. In Kenya, Bernard et al. (2018) assessed the impact of tax knowledge and understanding on tax compliance among shareholders in export production area in Kenya. The study through descriptive statistics established a positive relationship with taxpayers' ability to understand tax laws and thus increase tax compliance.

Another study in Kenya by Mwangi (2014) sought to identify the factors influencing tax compliance among Small and Medium Enterprises (SMEs) operating in Industrial Area, Nairobi. The study results indicated that providing tax information played a crucial role in improving tax compliance among these businesses. The availability of information on tax information assisted SME owners in understanding their tax

obligations, particularly concerning registration and filing of returns. The research discovered that many of these business owners encountered various challenges when attempting to obtain the necessary tax information. Furthermore, the findings showed that generally, the information provided by the revenue authority to SMEs in general was fairly insufficient and could not facilitate them to be tax compliant. Most of other studies on tax knowledge and tax compliance agree to the fact that taxpayer education and tax knowledge has a positive and substantial impact on tax compliance. (Chebusit, 2014), King’oina, 2016, Kerubo 2019, Mwihaki, 2022).

Additionally, Lutomia (2021) aimed to identify the factors affecting VAT compliance among mechanics in Nairobi County. The study results revealed that VAT knowledge did not have a significantly impact on VAT compliance among the mechanics. These findings contradicted those of many earlier studies on tax compliance and tax knowledge. The findings from Doerrenberg and Schmitz (2015); Bernard et al. (2018); Deloitte and Touche (2018); Mwangi (2014), Chebusit (2014), King’oina (2016); Kerubo (2019) and Mwihaki (2022) present contradictory findings, and therefore cannot be generalized. Additionally, some of the studies are not contextualized to Kenya and more over Thika Sub- County and therefore are not consistent to the current study in both concept and context.

2.3.2 Taxpayers’ Cost of Tax Compliance and Value Added Tax compliance

In taxation, costs of compliance refer to the costs over and above the actual tax payment, incurred by the taxpayers in meeting their tax obligations as laid down by various tax laws (Youde & Lim, 2019). These are the expenditures beyond the actual tax payment, including the costs associated with filing tax returns, making tax payments, bookkeeping, or hiring tax professionals/consultants for advice on tax matters. Compliance cost refers to the direct costs incurred by businesses in performing various tasks associated with government regulation, for instance, cost of acquiring or formalization of business (Slemrod & Bakija, 2017).

Evidence from across the world indicated that cost of tax compliances has worked

negatively for most tax payers. Musimenta et al. (2019) established that costs of tax compliance are regressive in nature as it may swallow up or reduce business resources that could otherwise be used in the running of the businesses without raising any financial income to the taxpayer; hence they are an economic waste to the business. The study also established that these costs vary, encompassing the acquisition of taxation knowledge, which can be time-consuming and costly, or seeking the services of tax advisors and professional tax services for guidance, audits, and even appeals.

Martinez (2018) evaluated the cost of tax compliance across a number of sectors in USA. The study established that complexity of tax system sometimes leads to greater reliance on tax professionals which reduces errors in taxation potentially reducing costs and also contended that the influence of compliance costs on taxpayers' compliance behavior is negligible, asserting that advancements in technology have introduced automated solutions and tax software to assist individuals and businesses in accurately calculating their tax liabilities. This has minimized the probability of errors and simplified the process for individuals and businesses to electronically file their tax returns and make payments without incurring additional costs. However, despite these advancements, compliance behaviors continue to pose a challenge (Martinez, 2018).

Another study in the Norway by Nurlis (2018) established that tax compliance costs entail a multitude of expenses, the challenge lies in the difficulties faced by taxpayers in adhering to tax laws, encompassing both administrative and technical compliance aspects. This one would argue that simplification of tax process would lower the cost of compliance hence positively influencing the taxpayers' compliance behaviors leading to the good performance of the tax system.

While cost of tax compliance is directly proportional to the complexity of the tax system which directly affects tax compliance. Brown (2020) identified technology which has made it easier for businesses to register, make declaration, file tax returns and seamlessly make payments electronically at little to no cost in such countries as India. This has contributed increased tax compliance across many sectors in emerging

economies such as India.

In Africa, Demenet & Razafindrakoto (2013) established that reduction of costs of tax compliance has been associated with improved efficiency which results in fair and equal treatment of businesses for tax purposes. The study however, highlighted that it was worthwhile to connect improved efficiency in the taxation process to increase in tax compliance and in the long run results in an increase in tax revenues. This supports a study by Thiga and Muturi (2020) that established that in the construction sector, small businesses and taxpayers are sometimes disadvantaged competitively when tax processes and procedures are complex, leading to inefficiency in the allocation of capital and resources. Many small businesses in the construction sector face a growing tax burden due to a lack of adequately skilled staff to manage tax compliance matters, leading to additional incurred costs.

In Uganda, a study by Doreen and Collins (2020) investigated the interplay between taxation knowledge, compliance costs, tax system complexity, and tax compliance in Uganda. The study highlighted that utilizing a cross-sectional and correlational design, focused on VAT registered withholding agents. The results indicated a direct correlation between the cost of compliance and the complexity of the taxation system. The results also indicated that in cases where the tax system was intricate, the associated cost of compliance tended to be higher. The study further concluded that a complex taxation system necessitates taxpayers to undergo additional training and seek external professional advice to ensure compliance.

Another study by Mahangila (2017) evaluated how the costs of tax compliance influence taxpayers' behavior in complying with taxes. The study employed a laboratory experimental method involving 75 small and medium-sized entrepreneurs located in Dar es Salaam, Tanzania. The results revealed that as the costs increased, tax non-compliance also increased. This suggests that the expenses associated with tax compliance contribute to the suboptimal levels of compliance with tax among SME taxpayers. It's important to

note that this study utilized a small sample of SMEs, so the findings may not be universally applicable to all taxpayers.

In Kenya Zachary, Kariuki, and Mwangi (2017) conducted a study with the objective of comprehending the relationship between costs of tax compliance and tax compliance among small and medium enterprises in Embu County, Kenya, using a descriptive research design. The study outcomes indicated a significant positive correlation between tax compliance costs and tax compliance among Small and Medium Enterprises in Embu County. The research also illustrated a substantial direct connection between the expenses associated with tax compliance and the actual compliance behavior of Small and Medium Enterprises in Embu County.

Another study by Abdul and Wang'ombe (2018) explore the correlation between tax costs and tax compliance behavior in Kenya. The research while employing mixed methods revealed that tax compliance in Kenya experienced a noteworthy decrease as taxpayers' tax compliance costs increased, especially those associated with understanding the existing tax laws and adapting to changes in tax regulations, along with the overall costs of compliance and meeting the regulatory requirements.

Mogeni (2014) on the other hand undertook a study to evaluate the impact of tax compliance costs on compliance with tax regulations within the companies listed on the Nairobi Securities Exchange. The research utilized a census survey, encompassing sixty-two listed companies. The results revealed a negative influence of tax compliance costs on the level of tax compliance, attributed to the size of the listed companies.

Smith (2018) in a comparative analysis of small and large businesses compliance level concluded that the cost of tax compliance was insignificant in tax compliance behaviors among listed companies, which is a contradiction to the earlier study by Mogeni (2014). The study argued that larger businesses with complex tax structures have greater reliance on tax professionals in their management structures, potentially reducing compliance costs. This contradiction and conflicting finding in literature reflects the complexity of

the tax compliance landscape and highlights the need for additional research to delve into the intricacies and contextual impact of compliance costs on tax compliance.

2.3.3 Enforcement Measures and Value Added Tax compliance

The foundation of tax enforcement measures can be traced back to the economic theory proposed by Allingham and Sandmo in 1972. According to their model of tax compliance, taxpayers are perceived as individuals seeking to maximize their utility. This involves weighing the advantages of tax evasion against the likelihood of being detected and facing consequences such as paying the correct taxes along with interest and penalties.

While persuasive philosophy is employed on large taxpayers to secure tax compliance, the coercive approach is employed on the small taxpayers' division for noncompliance deterrence. A study by Pimhidzai and Fox (2012) on the methods employed to handle tax compliance in small and large businesses in some emerging economies like Brazil varied based on the risks they pose and the revenues they contribute to the tax system indicating that

Dissanayake and Premaratna (2021) conducted a research study focused on the interplay of power, trust, enforcement, and tax compliance among SME taxpayers in Sri Lanka. The aim of their study was to empirically investigate how the enforcement power of the authority and the level of trust in the authority impact tax compliance. They employed a cross-sectional survey research design and collected primary data through a survey questionnaire from 408 Small and Medium taxpayers. Correlation analysis and simple regression analysis were used to analyze and interpret the data. The results revealed a connection between enforcement power, trust, and tax compliance within SMEs in Sri Lanka. The findings indicated a positive correlation between trust and tax compliance, as well as a negative correlation between the enforcement power of the tax authority and the voluntary tax system.

In Africa, Giulia, Roel and Fabrizio (2021) evaluated the practical aspects of Value Added Tax (VAT), examining equity, enforcement, and the complexity of the tax system

in Rwanda. The study through descriptive studies established that improving taxpayer's trust in the tax system would translate to improved voluntary tax compliance and efficient tax collection while excessive use of enforcement power of the authority has a negative impact on tax compliance. The study highlighted the need to balance enforcement power and creating trust among taxpayers. However, study reiterated that the tax authority must make a decisive choice between emphasizing the enforcement power of the revenue body or fostering mutual trust in the tax authority when collecting taxes from the society.

Locally, a study by Ndumia (2015) aimed to examine the impact of enforcement measures on compliance with Value Added Tax (VAT) revenue collection within the category of large taxpayers in Kenya. The study through descriptive statistics showed a positive correlation between the rate of audit and VAT revenue collection, exhibiting a moderate yet significant impact. The implication of these findings was that an upsurge in the audit rate led to a proportional increase in VAT revenue collection. The substantial coefficient associated with the audit rate suggested that tax audits served as an effective enforcement strategy in ensuring tax compliance. This study's conclusion was that governments should increase the rate of audit and strictly enforce it in order to increase VAT revenue collection.

A comparative study by Kimutai & Ombasa (2019) identified two sets of opposite efforts of tax enforcement in use to spur tax compliance which include the persuasive and coercive approaches. The study through comparative analysis established that while persuasive efforts advocate for a collaborative approach between the taxpayer and the tax official, the coercive efforts advocate for hard actions on taxpayers to deter tax noncompliance. The study also established that although tax administration was more advanced in countries such as UK, German, USA among other, tax authorities in both developed and developing economies worldwide have adopted a practice of categorizing their taxpayers and implementing different enforcement strategies for different segments within their administrative jurisdictions.

A study by Adhiambo (2019) investigated the factors influencing tax compliance among small-scale traders in Nakuru Town. The cross-sectional descriptive study indicated that the perceived opportunities for tax evasion had a minimal effect on tax compliance. This was attributed to the fact that matters related to tax avoidance, personal gains, ethics, and societal influence were largely individual choices with moral implications, making them resistant to change. The findings also showed that the perceived opportunities of tax evasion were low among these traders, particularly regarding manipulation of tax returns. Furthermore, these traders were found to be aware of the consequences of underreporting their taxes and they believed that the tax authority was capable of scrutinizing their tax issues and thus the perceived probability of being detected was high.

Masaku (2019) in his study, evaluated how taxpayers' education and awareness influenced Value Added Tax (VAT) compliance among micro and small enterprises in Embu County. The study through research a survey suggested that while the knowledge and awareness of taxpayers had a positive impact on VAT compliance, a notable portion of small-scale traders lacked adequate understanding of the consequences of not submitting taxes. This finding contradicts the observations by earlier studies that discovered that traders were well-informed about the consequences of underreporting taxes.

2.3.4 Taxpayers' attitudes and perceptions and Value Added Tax compliance

The attitude towards tax compliance is shaped by various factors, including demographic, individual, social, institutional, and economic influences. A study by Stein (2018) evaluated the tax payers' attitude in tax compliance in Czech Republic. The study through meta- analysis of a number of studies established that attitudes and perceptions are connected to government expenditure, views on the fairness of the tax system, adverse social influences, and ethical considerations regarding compliance attitudes.

A study by Merima (2013) evaluated by the factors that influence tax compliance attitudes in Africa, with evidence from South Africa. The study used through descriptive analysis of data collected from semi-structured questionnaires evaluated the extent to

which attitude contributed tax compliances. The results of the research indicated that individuals in South Africa are more inclined to adopt a tax-compliant attitude when they believe that enforcement measures contribute to increased difficulty in evading taxes. The results further indicate that individuals who express a higher satisfaction with public service provision are more inclined to endorse the government's taxation authority in all four countries. However, the relationship between attitudes toward tax compliance and the provision of public services differs depending on the specific service and demonstrates variations among countries.

Another study by Orkaido (2018) assessed the factors influencing Tax Compliance Attitude in Ethiopia. The study through survey that targeted tax payers across Ethiopia, revealed that a compliance attitude is significantly influenced by the gender of taxpayers, age, tax knowledge, the simplicity of the tax system, perceptions of fairness and equity, awareness of penalties for tax evasion, experience with tax audits, and perceptions of tax rates. The study also showed that variables such as education level and the role and efficiency of the tax authority did not emerge as significant determinants of tax compliance attitude.

Regionally, a study by King'oina (2016) evaluated tax compliance and government service delivery. The study through survey across many sectors established that tax-compliant attitude was positively influenced by access to infrastructure such as roads and electricity, while respondents in Tanzania and Uganda emphasized the importance of education and health services for their tax compliance. The study also highlighted the substantial impact of tax knowledge and awareness on tax compliance attitudes. The study suggested further investigation into the fairness of tax collection and the comparative treatment of taxpayers.

In Kenya, Maelo (2020) conducted research on the factors that impact compliance with value-added tax among hotels in Nakuru County. The descriptive survey that sought to establish compliance with value-added tax among hotels in Nakuru County showed that taxpayers' trust in the Tax Authority Increase Tax compliance. The findings also showed

that social norms are positively related to tax compliance, and perceptions about government have a positive relation to tax compliance in the hotel industry. The study recommended further study on the same variables in a different industry for comparison.

Additionally, Mbugua, Mwambia, and Baimwera (2017) conducted research to assess the factors influencing tax compliance among SMEs in Kiambu County. The results revealed that the presence of opportunities for noncompliance had a significant impact on the compliance behavior of taxpayers. It was observed that individuals were more inclined to engage in tax evasion when they perceived a low likelihood of the tax authority detecting their noncompliance, and when offering bribes appeared to be a more cost-effective option. Additionally, the study identified the involvement of corrupt revenue officials as a contributing factor to tax noncompliance.

2.3.5 The moderation effect of Technology in Tax Compliance

Technology in taxation encompasses the utilization of sophisticated information technology tools, systems, and applications to enhance and streamline various aspects of tax-related processes, administration, compliance, and enforcement. The integration of technology in taxation across the world aims to improve efficiency, accuracy, transparency, and accessibility in managing tax systems (Merima ,2013). In the US and China among other leading technological economies, digital platforms, data analytics, artificial intelligence, and other technological solutions are used to address the complexities of modern tax environments (USAID ,2023).

In Singapore, a study by Martinez (2018) argued that with the evolvement of technology with automated solutions and tax software that help individuals and businesses calculate their tax liabilities accurately, there is a reduced likelihood of errors. The study highlighted that because of technology has made it simpler for both individuals and businesses to electronically submit their tax returns and make payments without incurring any expenses, contending that the impact of compliance costs on taxpayers' compliance behavior is negligible. These findings thus imply that with the advent of technology, taxpayers' compliance level has gone up and taxpayers are able to file and pay their

returns more accurately and on time. This study sought to find out if that was the case among the construction firms.

Mwema (2019) in his research on the utilization of technology as a strategic tool to enhance tax compliance in Kenya evaluated the effects of Tax Audit on Tax Compliance. He established that with the implementation of iTax, taxpayers have been able to file their returns and make their tax payments online after generating the payment registration at the comfort of their homes without having to visit a KRA office or interacting with a KRA officer. Another study by Kiguro (2014) discovered that a majority of taxpayers acknowledged the facilitative role of technology. They affirmed that technology had simplified the compliance process, making it more convenient to submit returns and make tax payments online. Additionally, the study also noted that this approach saved them considerable financial costs and man-hours.

Technology does not dismiss the influence of the factors that influence tax compliance, but has an impact on their level of influence on tax compliance. This study utilized technology as a moderating variable to assess its impact on the connection between taxpayers' cost of tax compliance, taxpayer knowledge, enforcement measures, and VAT compliance in the construction industry.

2.4 Summary of Literature Review

Table 2.1 Summary of Literature Review and Research Gaps

| Author, Year | Research Objectives | Findings and Conclusions | Gaps |
|--------------------------------|--|---|--|
| Doerrenberg and Schmitz (2015) | To establish the link between information provision and tax compliance in small businesses in Slovenia | Informed taxpayers coupled with higher chance of audit probability enhance the level of tax compliance. The results are more enhanced when the information is delivered on a personalized basis | The gap is on understanding of how tax information should be delivered, what formats work best, and how to tailor it to the needs and preferences of different small businesses. |
| Bernard (2018) | To assess the impact of tax knowledge and understanding on tax | There is a significant positive relationship between taxpayers' | The study did not delve deeply into the causality and mechanisms behind this |

| | | | |
|---|---|--|--|
| | compliance among shareholders in export production in Kenya | ability to understand tax laws and the level of tax compliance. | relationship. Understanding how and why tax knowledge impacts compliance is crucial. |
| Mahangila (2017) | To evaluate the impact of tax compliance costs on tax compliance behaviour in Dar es Salaam. | Tax non-compliance significantly increased as tax compliance costs increased | While the study found that tax non-compliance increased as tax compliance costs increased, it doesn't delve deeply into the causal mechanisms driving this relationship. The study too employed laboratory experimental methods, qualitative research could provide deeper insights into the experiences, perceptions, and decision-making processes of SMEs regarding tax compliance costs. |
| Zachary, Kariuki and Mwangi (2017) Embu | To establish the relationship between tax compliance cost and tax payment by small and medium enterprises in Embu County, Kenya | There is a significant direct relationship between tax compliance costs and tax payment by Small and Medium Enterprises in Embu County. | The gap is as to whether the SMEs maintain their compliance behavior over time, or do they adjust their practices in response to changing costs. |
| Abdul and Wang'ombe (2018) Kenya | To establish the relationship between tax costs and tax compliance behavior in Kenya. | Tax compliance in Kenya significantly declines with increase in tax compliance costs, particularly those related to understanding of the existing complex tax laws, changes in tax rules as well as general costs of meeting the compliance and regulatory requirements. | Tax compliance costs encompass various components, such as administrative burdens, financial costs, and time costs. The study did not differentiate among these cost components to identify which ones have the most significant impact on tax compliance behaviour. |
| Dissanayake and Premaratna (2021) | To empirically examine the influence of the enforcement power of authority and trust in authority towards tax compliance in Sri | There exists a positive relationship between trust and tax compliance, and a negative relationship between the enforcement power of the | The study did not delve deeply into understanding of the complex dynamics between enforcement power, trust in tax authorities, and tax |

| | | | |
|-----------------|--|--|--|
| | Lanka. | tax authority and the voluntary tax system | compliance among Small and Medium Enterprises (SMEs). |
| Adhiambo (2019) | To investigate the factors that influenced tax compliance, concentrating on small scale traders operating in Nakuru Town | Perceived opportunity for evading taxes had a weak effect on tax compliance since the issues of avoidance; gains, ethics and social influence are personal choices that thus much could not be changed since they deal with the morality. | The study focuses on perceived opportunity for evading taxes but does not delve into the multifaceted nature of tax compliance. Tax compliance is influenced by a variety of factors beyond perceived opportunities, including tax knowledge, the effectiveness of tax enforcement, tax morale, and economic incentives. |
| Merima (2013) | To examine the factors that affect tax compliance attitudes in Africa: Kenya, Tanzania, Uganda and South Africa | Taxpayers in Kenya and South Africa are more likely to express a tax compliant attitude if they perceive that enforcement makes tax evasion more difficult. Those who are more satisfied with public service provision are more likely to support the government's right to tax. Tax knowledge and awareness have a significant impact on tax compliance attitude. | While the study identifies various factors influencing tax compliance attitudes in Kenya, Tanzania, Uganda, and South Africa, it doesn't provide an in-depth analysis of the specific contextual factors within each country that may be influencing tax compliance. This research could delve deeper into the unique cultural, economic, and political factors in each country that shape tax compliance attitudes. |

2.5 Conceptual Framework

This study conceptualizes the key factors influencing the performance of Value Added tax from the construction industry as taxation knowledge among the taxpayers, the cost of tax compliance to the taxpayer, the enforcement effort by the tax authority and the taxpayer's attitudes and perceptions. The moderating variable being technology. Figure 2.1 below diagrammatically summarizes this information as shown below;

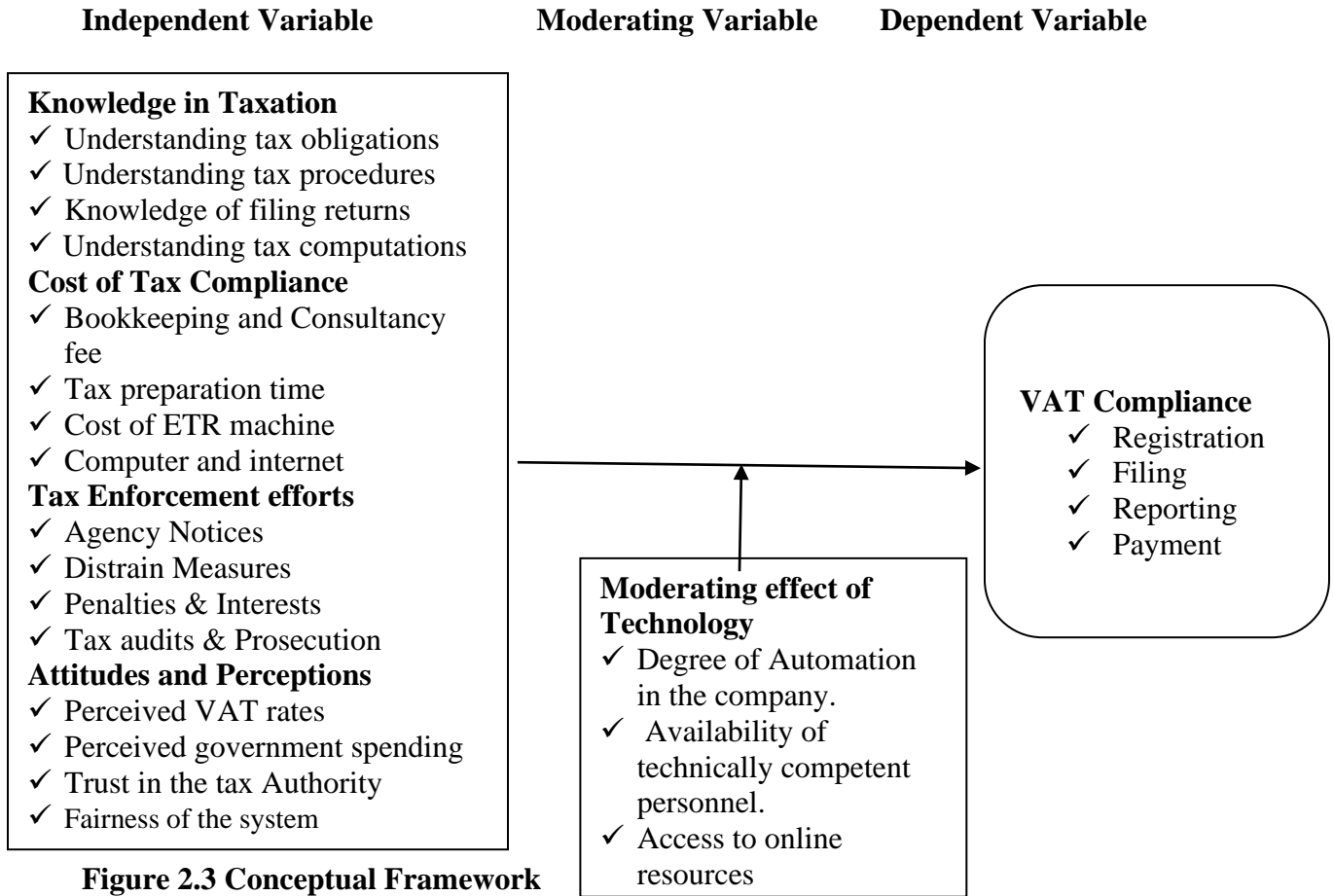


Figure 2.3 Conceptual Framework

2.6 Operationalization of variables

In this study, factors influencing the performance of Value Added tax from the construction industry were operationalized using constructs that were mainly adapted from previous studies. VAT performance was construed in terms of registration, filing of returns, timely declaration and payment. Knowledge in taxation was construed as the ability to understanding tax obligations, understanding tax computation, understanding tax procedures and knowledge of filing tax returns. Compliance Cost was construed as

the cost of book keeping and hiring of experts, tax preparation, cost of computer & internet connectivity, Time spent, Cost of ETR machines. Tax enforcement measures/efforts was construed as the application of the agency notices, distraint measures, penalties & interests and tax audits & prosecution.

Taxpayer attitudes and perceptions are construed as the perceived VAT rates, perceived government spending, trust in the tax authority, and the perceived fairness of the system. Technology as a moderating factor was construed as the degree of Automation in the company and the availability of technically competent personnel to run the online requirements of the company including iTax, and the access to online resources that facilitate their tax compliance.

All constructs will be measured using multiple items using a five-point Likert-type scale (ranging from 1-strongly disagree to 5-strongly agree). This is summarized in table 2.1 below;

Table 2.2 Operationalization of the Variables

| Variable Type | Variable | Variable Description | Indicators | Measurement | Sources |
|----------------------|--------------------|---|---|-------------------------|--|
| Dependent | VAT Compliance | The adherence of businesses and individuals to the rules, regulations, and requirements set forth by the tax authorities regarding the proper registration, filing and calculation, reporting, and remittance/payment of Value Added Tax. | Registration -Return Filing -Tax Reporting -Tax Payment of declared taxes | Nominal Measurements | Rasshid & Noor (2010), Maina & Sakwa (2012), Dissanayake & Premaratna (2021) |
| Independent | Taxation Knowledge | Taxation knowledge refers to an individual's or an organization's understanding and proficiency in the principles, laws, regulations, and practices related to taxation i.e filing and computation. | -Understanding tax obligations -Understanding tax procedures -Knowledge of filling tax returns. -Understanding tax computation | 5 Likert Scale(Ordinal) | Rasshid & Noor (2010), Asirigwa (2011), Chilibasi (2012), Nurlis (2018) |
| | Compliance Cost | Compliance cost refers to the total expense incurred by individuals, businesses, or other entities to adhere to regulatory requirements, laws, and standards imposed by governing authorities which encompass book keeping and | -Bookkeeping and consultancy fee -Tax preparation time -Cost of ETR machines -Computer & internet | 5 Likert Scale(Ordinal) | Olweny & Omondi (2011), Demenet & Razafindrakoto, (2013), Nurlis (2018) Smith 2020 |

| | | | | | |
|----------------------------|------------------------------------|---|--|-------------------------|--|
| | | consultancy fees, tax preparation time, cost of ETR machines, Cost of computers and internet. | | | |
| | Tax enforcement measures/efforts | Tax enforcement measures or efforts refer to the actions and strategies employed by tax authorities and government agencies in ensuring compliance with the laid down tax laws and regulations. These measures involve a range of activities, from Agency Notices, Dstraint Measures, Penalties & Interests and Tax audits & Prosecution. | -Agency Notices -Dstraint Measures -Penalties & Interests -Tax audits & Prosecution | 5 Likert Scale(Ordinal) | Allingham and Sandmo (1972), Tax Procedure Act (2015), Dissanayake & Premaratna (2021) |
| | Taxpayer attitudes and perceptions | Taxpayer attitudes and perceptions refer to the beliefs, opinions, and feelings that individuals or entities hold with regards to the tax system, their tax obligations, and the overall experience of interacting with tax authorities. Elements of taxpayer attitudes include: Fairness, trust in the tax Authority, transparency, tax complexity, fair rates, and government spending, among others. | -Perceived VAT rates -Perceived government spending -Trust in the tax Authority -Fairness of the system | 5 Likert Scale(Ordinal) | Martinez (2018), Dissanayake & Premaratna (2021) |
| Moderating Variable | Technology | Technology in taxation refers to the use of advanced information technology tools, systems, and applications to enhance and | -Availability of technology. -Degree of Automation in the company. | 5 Likert Scale(Ordinal) | Brown (2020) Smith (2018) Smith (2020) |

| | | | | | |
|--|--|---|--|--|--|
| | | streamline various aspects of tax-related processes, administration, compliance, and enforcement. | -reduction of likelihood of errors. -Access to online resources such as videos and public notices or tax related information. | | |
|--|--|---|--|--|--|

2.7 Chapter Summary

The chapter includes a theoretical framework, an empirical overview and a study gap. It also includes a conceptual framework and Operationalization of study variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was used to address the research objectives. In particular, this chapter provides a comprehensive explanation of the chosen research philosophy, the research population, the research design, the data collection procedure, the methods for data analysis, considerations for research quality and reliability, and the ethical considerations.

3.2 Research Philosophy

Research philosophy delineates the beliefs, perspectives, and positions regarding how valid knowledge is established or derived from phenomena under investigation (Saunders, 2016). Various research paradigms are frequently employed in research, aiding researchers in conceptualizing research ideas and consequently identifying methodologies, as well as detailed steps/processes for collecting, analyzing, and integrating data to generate knowledge (Saunders, 2016).

This research employed the positivism research philosophy. Positivism operates within a paradigm that leans heavily on measurement and rationality, asserting that knowledge emerges from impartial and quantifiable observation of activities, actions, or reactions. It posits that if something cannot be measured in this manner, certainty about it cannot be attained (Bleiker, Morgan-Trimmer, & Knapp, 2019). Positivism concentrates on testing hypotheses that involve causal relationships by operationalizing variables and employing quantitative methods. This entails utilizing structured questionnaires with predetermined and pretested questions on a sizable sample to gather data, statistically analyzing it for general patterns, and assessing the hypothesized causal connections (Park, Konge, & Artino, 2020).

Therefore, this was the most appropriate philosophy for this study since it sought to investigate the factors that influence Value Added Tax compliance among the

construction firms in Kiambu County, Thika Sub-County in Kenya. The study also investigated the moderating effect on the relationship between tax compliance factors and VAT compliance among construction firms in Thika Sub-County, Kiambu County.

3.3 Research Design

The research utilized a survey research design. Survey research involves the use of instruments sent to respondents by researchers, and the data collected is subsequently statistically analyzed to draw meaningful research conclusions (Žukauskas, Vveinhardt & Andriukaitienė, 2018). The primary and integral purpose of conducting research through surveys is the ability to gather responses to specific, essential questions (Bagozzi & Yi, 2012).

The study thus used the survey research design by form of questionnaires to enable the researcher to answer the objectives of the study. The use of survey design helps in the collection of data using various tools and also helps in collection of primary data that is current and more factual. The study employed explanatory designs to establish the relationship between Independent Variable: tax payers' knowledge, tax payers cost of compliance, enforcement measures and perception and attitude and Dependent Variable: VAT Compliance among construction companies in Thika Sub- County. Additionally, the study used survey method to collect primary data from the respondents that were targeted by the study.

3.4 Population of the study

In research population refers to the entire set or comprehensive group of units, objects, institutions, or individuals, having a common observable characteristic of interest to the researcher within a particular geographical location (Mugenda & Mugenda, 2013 & Cooper & Schindler, 2014). The key focus of the research was the construction industry in Kiambu County, it being the second highly populated county in Kenya, and its proximity to the Capital city thus the high demand for construction facilities for the population's needs. The specific focus was on Thika Sub-County, being the largest and most developing sub county and the headquarters of Kiambu County. The focus was on tax revenue collection in form of VAT from the sector, as the goods and services involved are Vatable. The study focus was on all the players in the construction industry,

which include registered companies, consultants, partnerships and sole proprietors in the construction sector. There were a total of 156 registered contractors and construction firms in Thika Sub-County within Kiambu County, Kenya as at 30th December 2022 (KRA, 2022). Out of the 156 registered, 60 of them were active in business, and these formed the population of interest (KRA, 2022). The study was conducted on all the 60 active registered contractors and construction firms in Thika sub county.

3.5 Sampling Method

Sampling refers to the method of choosing a subset of individuals or objects from a larger population in a way that the selected group mirrors the characteristics present in the entire population. The sample size included all the 60 contractors and construction firms who were active in business (KRA, 2022). Additionally, the study purposively selected 2 respondents from the 60 companies targeted by the study. These respondents included one manager and one accountant or whoever was responsible for the tax matters in the firm as they would be in the best position to respond to the questionnaire questions as accurately as possible.

3.6 Data Collection

The research was based on primary data collected through structured questionnaires distributed to the 60 actively registered contractors, 2 being issued to each one of them, totaling to 120 questionnaires issued. Employing questionnaires was cost-effective and time-efficient for obtaining factual information. Additionally, questionnaire administration was convenient, allowing for the outreach of a large sample of respondents within a short timeframe (Young, 2016).

The questionnaire was drafted to target specific objectives, featuring closed-ended questions. Unless specified otherwise, all variables were assessed using a 5-point Likert scale, where 5 signifies "strongly agree" and 1 denotes "strongly disagree."

Respondents expressed their agreement or disagreement with various statements outlined in sections C, D, E, and F by indicating the extent to which they align with each statement. They were as follows Section A: General Information; Section B: The Value Added Tax Compliance; Section C: Knowledge in Taxation; Section D: Cost of Tax

Compliance; Section E: Enforcement Measures; Section F: Perceptions and Attitudes and Section G: Use of technology

The researcher employed the drop-and-pick method to administer the questionnaires, which reduced the likelihood of data manipulation. A total of 2 questionnaires were issued to each company, one to the manager of the company, and one to the accountant. In the absence of an accountant, an employee or representative of the company who was responsible for the company's tax matters. They were given a maximum of one week to fill the questionnaire after which the researcher then picked the populated questionnaires.

3.7 Data Analysis

Upon gathering all data, the researcher conducted data cleaning, which involved the identification and rectification of incomplete or inaccurate responses. The cleaned data obtained was categorized, coded and entered into SPSS version 25 for analysis. The quantitative data obtained from the questionnaire underwent initial processing, involving validation, coding, and tabulation, to prepare it for analysis in alignment with the study objectives.

3.7.1 Analytical Model

Both Simple regression and Multiple linear regression analysis were employed used to analyze data as follows;

Simple regression equation was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y = VAT Compliance

β_0 – is the intercept; and reflects the constant of the equation.

β_1 – was the coefficients

X_1 – The independent variable (Taxation Knowledge, Tax Compliance Costs; Tax Enforcement effort; Taxpayer attitudes and perceptions)

ε – is the error term.

While Multiple linear regression equation was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 D_1 + \varepsilon$$

Where;

Y = VAT Compliance

β_0 – is the intercept; and reflects the constant of the equation.

B_1, B_2, B_3 and B_4 – are the coefficients

X_1 – Taxation Knowledge;

X_2 – Taxation Compliance Costs

X_3 – Tax Enforcement Measures;

X_4 – Taxpayer attitudes and perceptions

D_1 - Technology and level of automation of the company

ε – is the error term.

Significance levels was assessed for each β value (slope). The primary measure of overall fit in the study was the coefficient of determination, denoted as R^2 (R-squared) which is a statistical measure that represents the proportion of the variance in the dependent variable (VAT Compliance) that is predictable from the independent variables (Taxation Knowledge; Compliance Costs; Tax Enforcement effort; Taxpayer attitudes and perceptions) and Technology and level of automation of the company as a moderating variable in the multiple regression model. In simpler terms, R^2 indicated the goodness of fit of the model showing how well the independent variables explain the variability of the dependent variable (Bagozzi and Yi ,2012). Mathematically, R^2 was calculated as the ratio of the explained sum of squares (ESS) to the total sum of squares (TSS). In this research R^2 with values ranging from 0 to 1 was interpreted as where the value 0 indicates that the model does not explain any of the variability, while a value of 1 suggested that the model explains all the variability. A higher R^2 therefore indicates a better fit of the regression model to the data.

Additionally, the study used ANOVA to establish the moderating effect of technology on the relationship between (taxpayer's knowledge, taxpayer's cost of compliance, and tax enforcement measures) and VAT compliance among construction firms in Thika Sub-County. The ANOVA test results where the p-value of less than 0.05 (Sig= .000< .05) were considered to have a significance moderating effect on the relationship between (taxpayer's knowledge, taxpayer's cost of compliance, and tax enforcement measures)

and VAT compliance among construction firms in Thika Sub-County. The unit of analysis will be the registered contractors and construction companies.

3.8 Research Quality

A pilot test was done to assess the validity and reliability of the instrument. The instrument was pre-tested in Kiambu Town Sub County. The aim of pre-testing was to gather information regarding the length, language, focus, and potential defects or ambiguities within the instrument (Ghazi, Petersen, Reddy and Nektanti, 2020). According to Cooper & Schilder, (2011), 10% of the sample constitutes the pilot test, and in this study, 12 respondents who were not part of the target study population were pilot tested (Loebet et al., 2017).

Before the main research was conducted, the questionnaires underwent pre-testing to assess several aspects: the clarity of the questionnaire, the level of difficulty in understanding the questions by respondents, and the relevance of the questions in gathering information. The pilot phase allowed the researcher to revise any incorrectly worded items within the questionnaires and eliminate unnecessary ones. This ensured that the items in the questionnaire addressed the research objectives and the questions of the study.

3.8.1 Validity

Validity denotes that the instrument accurately assesses the intended concept (Troy, Shrukalla, Butere, Conaty, Macken, Lonergn, Melling, Niamh, Shakh and Ruttledhe, 2023). Threats to validity was minimized by using the questionnaires for collecting the required data (Heale & Twycross, 2015). Face validity is the process of application of superficial and subjective assessment to determine if the study assesses what it is intended to measure.

To establish face validity, the study used expert judgment through discussion with supervisors to provide their input in the research tool (Heale & Twycross, 2015). The researcher also worked with the lecturers with knowledge in the area of Business management and the research instrument was found to be relevant, clear and easy to

complete. The study ensured that the questionnaire was precise and well worded to avoid injuring the ego of the respondents.

Content validity is the extent to which items in a tool accurately reflect the content universe to which the tool will be applied (Almanasreh, Moles and Chen, 2019). The researcher conducted an exhaustive literature review. Two experts who are supervisors with the knowledge of business management evaluated the instrument to check on its clarity and appropriateness. The experts looked at the description, of the questionnaire, if it captured the study's objectives. Similarly, the supervisors assessed the instrument format suitability and found it to be suitable.

Construct validity means ensuring that a test accurately measures the construct it purports to measure. (Middleton, 2020). It was considering how appropriately the questionnaire items are used in measuring the construct. To ensure homogeneity, the researcher made sure that the instrument measures one construct only thereby making it as reliable as possible.

Criterion validity pertains to the extent to which test scores can forecast a specific criterion variable. It helped to assess how effectively one measure predicts an outcome for another measure. With the help of the supervisors, the researcher ensured that the questionnaire is relevant to the aspects of the variables it measures in the study.

3.8.2 Reliability of the research

Reliability refers to the statistical consistency of a measure of a specific construct (Heale and Twycross, 2015). The questionnaires underwent evaluation for reliability through a pilot study, allowing the researcher to gauge the clarity of the questionnaire items. The researcher administered the questionnaire during the pilot study. The collected data was encoded into the statistical Package for social scientists (SPSS) version 25, and reliability analysis was constructed using Cronbach's Alpha Coefficient. The Cronbach's Alpha Coefficient was calculated for each item to assess the reliability of the research instrument.

The reliability threshold for this research was .70. The closer Cronbach's alpha coefficient was to 1, the higher the internal consistency reliability of a questionnaire were, reliability of less than 0.6 is poor; that in the range of 0.7 is acceptable while over 0.8 is good (Sekaran, 2003).

In this study, all the items registered a Cronbach's Alpha Coefficient of over 0.8 which indicated that all items were accepted.

Table 3.2: Reliability test Results

| Variable Type | Item (Variable) | Cronbach's Alpha | No. of Items |
|------------------------------|--------------------------------|-------------------------|---------------------|
| Dependent Variable | The Value Added Tax Compliance | .845 | 3 |
| Independent Variables | Knowledge in Taxation | .821 | 5 |
| | Cost of Tax Compliance | .802 | 5 |
| | Enforcement Measures | .819 | 5 |
| | Perceptions and Attitudes | .811 | 5 |
| Moderating Variable | Use of technology | .891 | 6 |

3.9 Ethical Consideration

This research observed ethical principles during the study. An introductory letter was obtained from Strathmore University Business School, and the study underwent an ethical review and attained an ethics clearance by the university. Further, the researcher applied for a research permit from the National Commission for Science, Technology and Innovation before initiating the data collection process.

The researcher prioritized respect for the dignity of research participants, and thus full informed consent was obtained from the participants prior to the study. Tax information is confidential and critical in the normal operation of businesses hence obtaining an informed consent facilitated autonomous decision-making for research participants to decide to provide information in relation to their tax compliance history.

To establish trust with the respondents, the researcher communicated that the study's objective was to facilitate the completion of their research. The researcher assured them of confidentiality in the information they give and that the information was only used for the stated purpose, and issued the respondents with a consent form to sign stating the same. The researcher encouraged the respondents to volunteer to participate and that they had the right to withdraw if they did not want to participate.

The study observed confidentiality on the information shared. The researcher made sure that they respected the privacy and anonymity of the participants when reporting the findings by avoiding identification of individuals and by use of code numbers.

To avoid plagiarism, the researcher made sure that the written work was original and was devoid of some expressions or texts which are copied, manipulated from other authors or publications without acknowledging where the information was obtained from, and adhered to the plagiarism check threshold. Researcher gave credit for the work of other authors by acknowledging them during literature review.

3.10 Chapter Summary

This chapter included the target population, sampling techniques used, data collection procedures, data analysis and presentation. The chapter was also divided into research design, target population, sample size and selection procedures, data collection and data analysis.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.0 Introduction

This chapter mainly focuses on presentation, analysis and interpretation of data so as to answer the research questions. The concern for the present study was to understand the main factors that influence Value Added Tax compliance among the construction industry, specifically looking at the influence of taxpayers' tax knowledge, cost of compliance, tax enforcement measures and taxpayer attitudes and perceptions. Also the study assessed how technology and the level of automation influences taxpayer's knowledge, cost of compliance, and tax enforcement measures towards VAT compliance in the construction industry.

The data was analyzed using both descriptive and inferential analysis techniques through the help of the SPSS software. In order to adequately answer the research questions, this chapter is organized into nine (9) sections and discussed in the following order: (a) Research responses rate; (b) demographic characteristics of research participants; (c) Value Added Tax Compliance; (d) Knowledge in Taxation versus Compliance; (e) Cost of Tax Compliance; (f) enforcement Measures; (g) Perceptions and Attitudes; and (h) Use of technology as a moderating variable.

4.1 Response Rate

A total of 2 research questionnaires were distributed to each of the 60 active constructions firms located in Thika Sub-County within Kiambu County bringing it to a total of 120 respondents. The results indicated that, out of the sampled 120 respondents, 111 respondents were able to respond to the questionnaire representing 92.5% response rate, which is considered very good by (Mugenda and Mugenda, 2008). The other 9 respondents (7.5%) were not available at the time of the study. The nine non-respondents included respondents from 3 business firms that did not fill out the questions at all, while the other three non-respondents were from 3 business firms that filled out one questionnaire instead of 2. Thus the feedback will be based on the 57 companies and construction firms that responded.

4.2 Business Profile

4.2.1 The Legal status of the Business

The nature of business in the construction industry is diverse, involving various professionals, trades, and services and encompasses a wide range of activities related to the planning, design, and physical construction of buildings and infrastructure which experiences different challenges. The study sought to establish the nature of the construction businesses, and the respondents ranged from Sole Proprietorship, General Partnership, Limited Liability Company (LLC) and any other not specified in the questionnaires. The results are as shown below:

Table 4.1 Legal status of business

| Legal status | Frequency | Percentage (%) |
|---------------------------------|-----------|----------------|
| Sole Proprietorship | 18 | 31.6% |
| General Partnership | 32 | 56.1% |
| Limited Liability Company (LLC) | 6 | 10.5% |
| Others | 1 | 1.8% |
| Total | 57 | 100.0% |

Source: Researcher (2024)

Table 4.1 above shows the distribution of the 57 construction companies in Thika Sub County that participated in the study. Out of the 57 companies, 31.6% of them were Sole Proprietorship which is characterized by ease of formation with minimal legal formalities and paperwork involved with flexibility and quick decision-making. The General Partnership represented the highest number at 56.1%. This type of business set-up within the construction industry is essential for project success due to collaboration and coordination of business partners and they are relatively easy and cost-effective to form compared to other business structures (KNBS, 2020).

Limited Liability Company (LLC) represented 10.5% of all the construction companies covered by the study. In the normal business set up, this category of business structure is sometimes more popular due to the limited liability protection (KNBS, 2020), however,

this is not popular among the construction firms in Kiambu County. The results indicated that only 1.8% of the covered construction firm by the study was involved in providing Consultancy services within the construction industry offering a wide range of services to clients, including engineering services, project management, design, and environmental assessments among other services.

4.2.2 Period that the business has been active in the construction sector

The duration of activity may provide insights into how businesses and firms adapt to tax obligations and navigate over time. It is assumed that the longer-standing businesses may have invested more in staying informed about VAT changes and best practices (Rahayu, 2017). The study sort to establish the period for which the business had been active in the construction sector. The results are as tabulated as shown below:

Table 4.2 Period that the business has been active in the construction sector

| Duration | Frequency | Percentage (%) |
|-----------------|------------------|-----------------------|
| 0 – 2 years | 3 | 5.3% |
| 3 – 5 years | 16 | 28.1% |
| 6 – 8 years | 20 | 35.1% |
| 9 years & above | 18 | 31.5% |
| Total | 57 | 100.0% |

Source: Researcher (2024)

Considering the distribution of the period of being active in business within the construction industry, table 4.2 above shows that most construction firms are have been active for a period of 6 to 8 years with a higher percentage of 35.1% followed closely by those who were active for a period of 9 years and above at 31.5% within Thika Sub-County. Construction firms that have been active for a period of between 3 to 5 years were 28.1% while those active for periods lesss than 2 years were merely 5.3%.

4.2.3 Annual Turnover of the Business

The annual turnover of a business is a crucial factor in Value Added Tax (VAT) compliance. In Kenya, the business annual turnover often determines whether a business is required to register for VAT. For mandatory VAT registration in Kenya, a business is required to register when the total value of taxable supplies made within a consecutive

12-month period exceeds or equals Kshs 5,000,000. Failure to register when required can lead to penalties and legal consequences. The study sought to establish the approximate annual business turnover. The results are as indicated below:

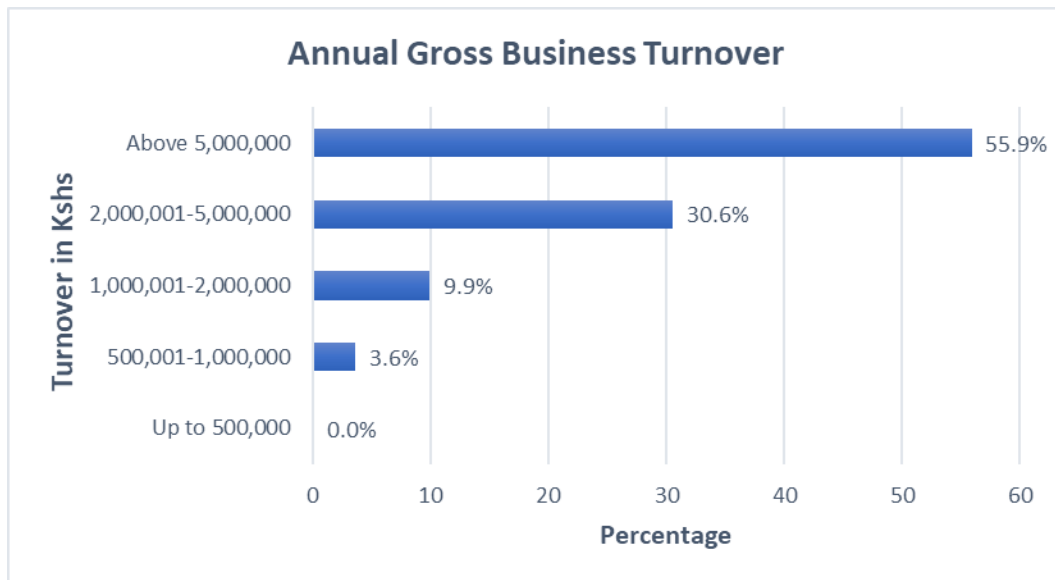


Figure 4.1: Annual Turnover

Source: Researcher (2024)

Figure 4.1 above shows the distribution of the business annual turnover among the respondents and the firms surveyed. From the bar graph, we observe that almost half of the respondent population (55.9%) have an annual business turnover of above Kshs 5,000,000 which is within the mandatory VAT registration requirement. Secondly, 30.6% of the firms surveyed had an annual business turnover of between Kshs 2,000,000 and Ksh 5,000,000 bordering the registration threshold. Another 9.9% have an annual business turnover of between Kshs 1,000,000 and Kshs 2,000,000 in a year while 3.6% have a business turnover of between Kshs 500,000 and Kshs 1,000,000 annually. The results indicated that most of the businesses in the construction sector operating in the area had annual business turnover of above Kshs 5,000,000 and are thus legally required to be registered for VAT obligation.

4.2.4 Distribution of Businesses with Tax Compliance Certificates

A Tax Compliance Certificate (TCC) is basically a legal document issued by Kenya Revenue Authority (KRA) to certify that an individual or business has met all their tax obligations and is in compliance with all the tax laws and regulations (Waweru, 2014).

The study sort to establish the extent to which construction firms in Thika Sub- County were tax compliant.

The results indicated that on average of 33 (57.9%) of the surveyed construction firms had a compliance certificate signifying that they are in compliance with various tax laws while about 24 (42.1%) did not have a Tax Compliance Certificate. Marrying this closely with results on duration for business being active in the construction sector in table 4.2 above where about 66.7% of the companies covered by the study had been active for a duration of more than 5 years, one can infer that the longer duration of operation sometimes may lead to business being compliant with tax laws. Thus, there is a thin line between tax compliance and the duration of being active in business either through accumulation of tax knowledge and expertise or through refining their internal systems for invoicing, record-keeping, reporting and evolving over time, with changes in tax requirements.

4.2.5 Firm Size

The size of the workforce can influence certain aspects of the company's operations and internal processes, which, in turn, can affect VAT compliance. A larger workforce may result in more sales and purchases transactions. The number of employees involved in these processes can impact their efficiency and accuracy. Proper VAT compliance requires accurate and organized documentation, including invoices and supporting records for input and output tax. The study sought to establish the number of employees employed by the construction business. The results are as shown below:

Table 4.3 Firm Size according to Number of Employees

| Type | Number of employees | Frequency | Percentage (%) |
|----------------------|----------------------------|------------------|-----------------------|
| Micro sized Business | < Less than 10 employees | 2 | 3.5% |
| Small sized Business | 11-49 employees | 55 | 96.5% |
| Medium Firms | 50-99 employees | 0 | 0% |
| Large Firms | > 100(Above 100) | 0 | 0.0% |

| | | |
|--------------|-----------|---------------|
| Total | 57 | 100.0% |
|--------------|-----------|---------------|

Source: Researcher (2024)

Table 4.3 above shows the distribution of the company size based on the number of employees in the construction firms covered by the study. The results indicated that 2(3.5%) of the covered firms were Micro sized firms with less than 10 employees, while 55 of them (96.5%) were small sized businesses with 11-49 employees. None of the firms covered by the study can be categorized as medium or large businesses. The findings of the study indicated that most of the construction firms covered by the study were small sized enterprises.

4.3 Descriptive Statistics

The study analyzed quantitative data collected from structured questionnaire through descriptive analysis methods. The quantitative data allows for statistical analysis based on structured questionnaire. The questionnaire was drafted to target specific objectives, featuring closed-ended questions. The first section of the descriptive analysis included the study tax compliance factors measured through normal scale, while the second, third, fourth and fifth section included study objectives measured through ordinal scale based on 5-point Likert scale.

The analysis of ordinal data and the normal data generated means and standard deviations from data collected from the respondents. Additionally, the descriptive analysis was based on the 5-point likert scale (where 1= Strongly Disagree and 5= Strongly Agree). The interpretation of the mean values from the questionnaire responses was that 1-1.8 represents strongly disagree, 1.81-2.6 represents disagree, 2.61-3.4 was interpreted as neutral/uncertain, 3.41-4.2 was agree and finally 4.21-5 was strongly agree (Wandili, 2022).

4.3.1 Value Added Tax Compliance

In addition to the study objectives, the study had sort to investigate factors that influence compliance with Value Added Tax among the construction firms in Thika Sub-County. This section was pertinent for the reason that despite there being many factors that influence the level of VAT Compliance; some are more potent than others and by

knowing the factors that influence the VAT compliance, the relevant tax authority will tailor practical policy intervention to mitigate them and enhance tax compliance.

The study employed an approach that measures the perceived contribution of identified factors that were perceived to have an influence on VAT compliance. VAT compliance was measured through a perceptual survey that looked at how the businesses in the construction sector adhered to the rules, regulations, and requirements set forth by the tax authorities regarding the proper registration, filing and calculation, reporting, and remittance/payment of Value Added Tax. The results are as tabulated below:

Table 4.4 Respondents responses on VAT compliance.

| VAT Compliance | N | Responses | |
|---|----|-----------|-------|
| | | Yes(%) | No(%) |
| Our company is registered for VAT obligation | 57 | 86.5 | 13.5 |
| Our company reports all VAT sales and purchases accurately. | 57 | 75.7 | 24.3 |
| Our company makes timely payment of VAT monthly | 57 | 47.7 | 52.3 |
| Our company files VAT monthly returns on time. | 57 | 40.5 | 59.5 |

Source: Researcher (2024)

From the finding on table 4.4 above, a large majority of respondents (86.49%) indicated that their companies are registered for VAT, an indication that they are legally required to charge, collect and remit VAT on their sales with only 13.51% of the respondents indicating that they are not registered for VAT. This suggests that most companies are compliant with VAT registration requirements.

4.3.2 Taxpayers' tax knowledge on Value Added Tax compliance

The first objective was to establish the influence of taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County. The response was as follows:

Table 4.5 Taxpayers’ tax knowledge and VAT compliance

| Taxpayers’ tax knowledge on VAT compliance | N | Mean | Standard Deviation |
|--|------------|-------------|---------------------------|
| The company has personnel who have full knowledge of filing Value Added Tax electronically. | 111 | 2.71 | .667 |
| The company has enough information and understand the tax procedures applicable in administration of Value Added Tax system. | 111 | 2.56 | .948 |
| I know and fully understand how to compute Value Added Tax for the business and keep up to date books of accounts. | 111 | 2.49 | 1.033 |
| I am aware and fully understand tax obligations in regards to compliance with Value Added Tax system. | 111 | 2.31 | .936 |
| Overall mean score and standard deviation | 111 | 2.52 | 0.896 |

Researcher (2024)

The results indicated that there was some sense of neutrality as to whether companies have personnel who have full knowledge of filing Value Added Tax electronically based on the mean of 2.71 and standard deviation of .667. The results also indicated the respondents were not aware and did not fully understand tax obligations in regards to compliance with Value Added Tax system (Mean= 2.31, Standard Deviation=.936). The average mean and standard deviation on tax knowledge was **2.52** and **.896** respectively. The results indicated that construction firms covered by the study did not have adequate knowledge on VAT compliance.

4.3.3 Taxpayers’ cost of compliance and Value Added Tax compliance

The second objective was to establish the influence of taxpayers’ cost of compliance on VAT compliance among construction firms in Thika Sub-County. The response was as follows:

Table 4.6 Taxpayers' cost of compliance on VAT compliance

| Taxpayers' cost of compliance on VAT compliance | N | Mean | Standard Deviation |
|--|------------|--------------|---------------------------|
| Time the firm spends on tax planning, filing, and submission of books of account is minimal and not costly. | 111 | 2.56 | 0.124 |
| Cost of acquiring ETR e-TIMS compliant machine is affordable and therefore not a hindrance to the company VAT compliance. | 111 | 2.49 | 0.153 |
| Cost of acquiring or hiring the services of a tax expert is not a hindrance to VAT compliance for the firm as they do not charge exorbitant rates. | 111 | 2.12 | 0.114 |
| The cost of keeping books of accounts for making VAT declaration, filing and tax payment is fair enough for the Company. | 111 | 1.62 | 0.206 |
| The costs incurred by the company on acquiring computers and internet connectivity are not significant and do not make tax compliance costly. | 111 | 1.49 | 0.153 |
| Overall mean score and standard deviation | 111 | 2.056 | 0.15 |

Source: Researcher (2024)

The findings showed that the respondents disagreed that the time the firm spends on tax planning, filing, and submission of books of account is minimal and not costly based on the mean of 2.56 and standard deviation of 0.124. Additionally, there was a strong disagreement among respondents on the insignificance of the costs incurred by the company on acquiring computers and internet connectivity with a Mean of 1.49 and Standard Deviation of 0.153. The results indicated an average mean and standard deviation of **2.056** and **.15** respectively. The results indicated that construction firms covered by the study did not consider the cost of VAT compliance as fair.

4.3.4 Tax enforcement measures and Value Added Tax compliance

The third objective was to establish the influence of tax enforcement measures on VAT compliance among construction firms in Thika Sub-County. The response was as follows:

Table 4.7 Tax enforcement measures on VAT compliance

| Tax enforcement measures on VAT compliance | N | Mean | Standard Deviation |
|---|----------|-------------|---------------------------|
| Distrain measures have been taken against the Company due to VAT noncompliance to recover the unpaid taxes. | 111 | 3.25 | 1.892 |
| Penalties and interests incurred for noncompliance are not a significant expense to the company compared to the taxes defaulted. | 111 | 2.75 | 1.237 |
| I am aware that there is serious enforcement of tax recovery measures such as agency notices leading to closure of the company accounts if the company is found to be noncompliant with VAT laws. | 111 | 2.121 | 1.153 |
| The company has never been audited by KRA regarding VAT noncompliance. | 111 | 1.219 | 0.104 |
| I believe KRA is not very keen on its enforcement measures, and I will not be easily detected if I do not comply. | 111 | 1.161 | 0.980 |
| Overall mean score and standard deviation | 111 | 2.1002 | 1.0732 |

Researcher (2024)

The results indicated that respondents were uncertain as to whether distrain measures had been taken against the Companies due to VAT noncompliance to recover the unpaid taxes based on the mean of 3.25 and standard deviation of 1.892. The results also indicated that there was believe that KRA is very keen on its enforcement measures, and the respondents would be easily detected if they do not comply with a mean of 1.161 and Standard deviation of .980. The average mean and standard deviation were **2.1002** and **1.0732** respectively.

The results indicate low reinforcement measures for non-VAT compliance.

4.3.5 Taxpayers' attitude and perception and Value Added Tax compliance

The fourth objective was to establish the influence of attitude and perception on VAT compliance among construction firms in Thika Sub-County. The response was as follows:

Table 4.8 Attitude and perception on VAT compliance

| Attitude and Perception On VAT Compliance | N | Mean | Standard Deviation |
|---|------------|--------------|---------------------------|
| I perceive that the current applicable rate of VAT is fair. | 111 | 3.71 | 1.204 |
| The company does not struggle to comply with VAT requirements. | 111 | 2.49 | 1.290 |
| There is trust between me and the tax authority, and I can comfortably contact KRA whenever I have any tax related issues without any fear. | 111 | 1.76 | 1.331 |
| There is transparency in use of public resources which leads me to have a positive attitude towards taxation. | 111 | 1.58 | 1.267 |
| I am motivated to comply with tax laws when the government is accountable and the tax system is fair. | 111 | 1.49 | 0.763 |
| Overall mean score and standard deviation | 111 | 2.206 | 1.171 |

Researcher (2024)

The results indicated that there was agreement that current applicable VAT rates was perceived to be fair based on the mean of 3.71 and standard deviation of 1.204.

The study also indicated a strong disagreement on whether the respondents were motivated to comply with tax laws when the government is accountable and the tax system is fair registering with a Mean of 1.49 and a Standard Deviation of 0.763. The results indicated an average Mean and standard deviation of **2.206** and **1.171** respectively.

4.3.6 The use of technology

The fifth objective was to establish the impact of the use of technology on the influence of taxpayer's knowledge, taxpayer's cost of compliance, and tax enforcement measures on VAT compliance among construction firms in Thika Sub-County. The response was as follows.

Table 4.9 The impact of the use of technology on tax compliance

| Use of technology on VAT compliance | N | Mean | Standard Deviation |
|--|----------|--------------|---------------------------|
| The automation of our company processes including accounting and tax related matters has enabled us to seamlessly file our company returns accurately, with timely payments of our taxes without incurring any extra cost. | 111 | 3.71 | 1.204 |
| Our company has invested in technology and automated most of its processes, including all accounting and tax related records. | 111 | 3.49 | 2.390 |
| Automation of the tax system has reduced the likelihood of errors and made it easier for the company to comply. | 111 | 3.43 | 1.233 |
| Using our already available technology and use of internet resources, the company is able to access all the tax related resources available online that enhance the tax related processes, administration and compliance. | 111 | 3.41 | 1.181 |
| The available online resources, like videos and public notices are useful and have provided the company with relevant information and resources to better understand tax obligations for compliance purposes. | 111 | 1.58 | 1.267 |
| The company has technical experts who understand the itax system and are able to file and remit all our taxes without any struggles. | 111 | 1.26 | 1.053 |
| Overall mean score and standard deviation | 111 | 2.813 | 1.388 |

Source: Researcher (2024)

The results indicated that there was agreement that the automation of company processes including accounting and tax related matters had enabled the construction companies to seamlessly file their returns accurately, with timely payments of the company taxes without incurring any extra cost based on the mean of 3.71 and standard deviation of 1.204.

Additionally, the results indicated a strong disagreement among respondents to having technical experts who understood the itax system and therefore were not able to file and remit all their taxes without any struggles with a Mean of 1.26 and Standard Deviation of

1.053. The results indicated an average Mean and Standard Deviation of **2.813** and **1.388** respectively.

4.4 Diagnostic Analysis

The study also conducted a diagnostic test prior to regression analysis to ensure adherence to model assumptions. Collinearity tests, as described below, were employed for this purpose.

4.4.1 Collinearity Test

In this study, Variance Inflation Factors (VIF) were employed to verify the absence of linear relationships among predictor variables. A VIF value of 1 suggests no correlation among predictor variables, while a value exceeding 5 indicates a high correlation among them (Frost, 2020).

Table 4.10 Collinearity Test

| Model | Collinearity Statistics | |
|-------------------------------------|-------------------------|-------|
| | Tolerance | VIF |
| (Constant) | | |
| Taxpayers' Tax Knowledge | .221 | 4.120 |
| Taxpayers' cost of Compliance | .292 | 3.230 |
| Tax Enforcement Measures | .338 | 2.887 |
| Taxpayer Attitudes and Perceptions | .286 | 3.272 |
| Use of technology moderating effect | .278 | 3.491 |

From Table 4.9 above, Taxpayers' Tax Knowledge, Taxpayers' cost of Compliance, Tax Enforcement Measures, Taxpayer Attitudes and Perceptions and Use of technology moderating effect have a VIF of 4.120, 3.230, 2.887, 3.272 and 3.491 respectively. This suggests that there is no correlation among the independent variables, allowing the data to undergo regression analysis. Furthermore, the estimated regression coefficients for all variables, which are less than 5, are not inflated by collinearity.

4.4.2 Normality Test

Shapiro-Wilk test of normality was conducted to determine whether taxpayers' tax knowledge, taxpayers 'cost of compliance, tax enforcement measures, taxpayer attitudes

and perceptions and the moderating use of technology data is normally distributed. The null hypothesis is rejected if the p-value is less than 0.05.

Table 4.11 Normality Test

| Normality Test | | | |
|------------------------------------|--------------|-----|------|
| | Shapiro-Wilk | | |
| | Statistic | df | Sig. |
| Taxpayers' Tax Knowledge | .904 | 110 | .454 |
| Taxpayers' cost Of Compliance | .853 | 110 | .372 |
| Tax Enforcement Measures | .964 | 110 | .347 |
| Taxpayer Attitudes And Perceptions | .895 | 110 | .112 |
| Use of technology | .868 | 110 | .434 |

In this case we accept the null hypothesis for all the data set for all the variables ($p = .454$; $p = .372$, $p = .347$, $p = .112$ and $p = .434$) and concluded that data for taxpayers' tax knowledge, taxpayers 'cost of compliance, tax enforcement measures, taxpayer attitudes and perceptions and use of technology is normally distributed and therefore the five data sets were fit for analysis.

4.5 Inferential Analysis

Inferential statistical analysis was utilized to derive estimates. The study operated under the assumption that the observed dataset was sampled from the study population. Parametric statistical tests of inferential statistics were employed to make assumptions about population parameters and the distributions from which the data originated. The methods employed encompassed correlation analysis and regression analysis. (Analysis of Variance (ANOVA), Model Summary and Regression Coefficient) (Kimeu, 2018).

4.5.1 Correlation Analysis

The study conducted correlation analysis, a statistical technique employed to assess the degree of linear association between two variables and calculate their relationship (Senthilnathan, 2019). Correlation analysis facilitated the assessment of how changes in the independent variable, specifically Value Added Tax factors, affect the dependent variable, Value Added Tax compliance among construction firms in Thika Sub-County (Taxpayers' Tax Knowledge, Taxpayers' cost of Compliance, Tax Enforcement

Measures, Taxpayer Attitudes and Perceptions and Moderating effect of the use of technology).

Pearson moment Correlation analysis was used at 95% confidence levels. The Pearson moment correlation coefficients are valuable tools in statistics for understanding the association between variables. The correlation coefficient, represented by 'r', allows for the quantification of the degree of linear association between ranked or numerical variables. This coefficient takes the values between -1 and +1 (Saunders et al, Lewis, & Thornhill, 2009) as summarized in table 4.11 below:

Table 4.12: Correlation Analysis

| | | Tax Compliance | Compliance cost | Enforcement Measures | Attitude and perception | Tax Knowledge | Use of Technology |
|----------------------------|------------------------|---------------------------|----------------------------|---------------------------------|--|--------------------------|------------------------------|
| Tax Compliance | Pearson Correlation | 1.000 | | | | | |
| | Sig. (2-tailed) | . | | | | | |
| | N | 111 | | | | | |
| Compliance cost | Pearson Correlation | -0.718** | 1 | | | | |
| | Sig. (2-tailed) | 0.033 | . | | | | |
| | N | 111 | 111 | | | | |
| Enforcement measures | Pearson Correlation | -0.634** | -0.337 | 1 | | | |
| | Sig. (2-tailed) | 0.021 | 0.047 | . | | | |
| | N | 111 | 111 | 111 | | | |
| Attitude and perception | Pearson Correlation | 0.509** | -0.423 | -0.440 | 1 | | |
| | Sig. (2-tailed) | 0.035 | 0.023 | 0.031 | . | | |
| | N | 111 | 111 | 111 | 111 | 111 | |
| Tax Knowledge | Pearson Correlation | | -0.434 | -0.437 | 0.325 | 1 | |
| | Sig. (2-tailed) | 0.847** | 0.003 | 0.004 | 0.022 | . | |
| | N | 111 | 111 | 111 | 111 | 111 | |

| | | | | | | | |
|----------------------|-----------------|---------|--------|--------|-------|-------|-----|
| Use of technology | Pearson | 0.876** | -0.723 | -0.577 | 0.871 | 0.737 | 1 |
| | Correlation | | | | | | |
| | Sig. (2-tailed) | 0.038 | 0.033 | 0.000 | 0.041 | 0.024 | . |
| | N | 111 | 111 | 111 | 111 | 111 | 111 |

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

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

As depicted in Table 4.11 above, the results from the correlation analysis demonstrate a statistically significant strong negative correlation between VAT compliance and compliance cost ($r = -0.718$, $n = 111$, $p < .033$). This inverse relationship practically means that as compliance costs tend to decrease, VAT compliance improves and vice versa. Similarly, the correlation between VAT compliance and application of enforcement measures of the tax system was also found to be moderately strong negative but statistically significant ($r = -0.634$, $n = 111$, $p < .021$).

The findings suggest that there is a tendency for VAT compliance behaviors to deteriorate (decline) with an increase in frequency of application of enforcement measures of the tax system, and vice versa. On the other hand, VAT compliance and taxpayer attitude and perception within the construction firms showed a moderate positive correlation which was statistically significant ($r = 0.509$, $n = 111$, $p < .035$). This implies that to some extent, the opinions, attitudes, and perceptions of taxpayers in the construction firms regarding VAT-related matters have an impact on how they adhere to Value Added Tax (VAT) regulations and requirements. Additionally, the findings indicate a statistically significant very strong positive correlation between VAT compliance and taxpayers' understanding of tax laws and knowledge. ($r = 0.847$, $n = 111$, $p < .003$).

The findings show a robust linear relationship which implies that as taxpayers' tax knowledge and understanding of tax laws, VAT compliance increases also tend to increase. Similarly, finding shows an existence of a very strong positive correlation between VAT compliance and use of technology as a moderating factor which was statistically significant ($r = 0.876$, $n = 111$, $p < .038$). This is a clear indication that leveraging technology can be positively associated with higher levels of VAT

compliance.

4.5.2 Regression Analysis

Regression analysis is a statistical method used to examine the relationship between one dependent variable and one or more independent variables. In this study, regression analysis was used to establish the relationship between taxpayers' tax knowledge, cost of compliance, tax enforcement and taxpayer attitudes and perceptions together with technology as a moderating variable and VAT compliance among the construction firms.

This study employed both simple and multiple linear regression

Simple regression took the following form;

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

While, Multiple linear regression taking the form;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_s D_1 + \varepsilon$$

Where;

Y = VAT Compliance; β_0 – is the intercept and reflects the constant of the equation while $\beta_1, \beta_2, \beta_3, \beta_4,$ and $\beta_s,$ are the standardized coefficients for independent variables X_1, X_2, X_3, X_4 and D_1 where, X_1 – Compliance Costs; X_2 – Tax Enforcement effort; X_3 – Taxpayer attitudes and perceptions; X_4 – Taxation Knowledge and D_1 - Technology and level of automation of the company while ε – is the error term. Using SPSS, coefficient of regression (β_i) was established as shown in table 4.12 below.

Table 4.13 Effect of Taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County

| Model Summary | | | | | | |
|---|-------------------|----------------|-------------------|----------------------------|---------|-------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .657 ^a | .615 | .610 | .28352 | | |
| a. Predictors: (Constant), Taxpayers' Tax Knowledge | | | | | | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 14.724 | 4 | 14.724 | 183.168 | .000 ^b |
| | Residual | 1.367 | 106 | .080 | | |
| | Total | 16.090 | 110 | | | |

| a. Dependent Variable: VAT compliance among construction firms | | | | | | |
|--|--------------------------|-----------------------------|------------|---------------------------|--------|------|
| b. Predictors: (Constant), Taxpayers' Tax Knowledge | | | | | | |
| Coefficients^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .767 | .354 | | 2.165 | .045 |
| | Taxpayers' Tax Knowledge | 1.099 | .081 | .957 | 13.534 | .000 |
| a. Dependent Variable: VAT compliance among construction firms | | | | | | |

The coefficient determinant (R Squared) of .615 implies that 61.5% of the changes in VAT compliance among construction firms Thika Sub-County are explained by taxpayers' tax knowledge factors. The other 38.5% is attributed to other factors other than taxpayers' tax knowledge factors.

The study also employed Analysis of Variance (ANOVA) to determine the statistical significance of the regression model. The ANOVA test results revealed a p-value of less than 0.05 (Sig= .000 < .05), indicating the statistical significance of the model in explaining the relationship between taxpayers' tax knowledge factors and VAT compliance among construction firms in Thika Sub-County. The (F=183.168; 4, 106) furthermore demonstrated that the model was statistically suitable for assessing the association between taxpayers' tax knowledge and VAT compliance among construction firms in Thika Sub-County. The regression equation derived from the coefficients yielded in Table 4.12 above is:

$$Y = .767 + .957X_1$$

The equation above can be understood in the following way:

This means that a unit increase in tax knowledge factors will increase taxpayer's compliance by 95.7%.

Further, the findings show that VAT compliance among construction firms Thika Sub-County (Sig= .000 < .05) is statistically significant.

Table 4.14 Effect of taxpayers' cost of compliance on VAT compliance among construction firms in Thika Sub-County

| Model Summary | | | | | | |
|--|-------------------------------|-----------------------------|-------------------|----------------------------|---------|-------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .686 ^a | .673 | .671 | .15982 | | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 15.656 | 4 | 15.656 | 612.910 | .000 ^b |
| | Residual | .434 | 106 | .026 | | |
| | Total | 16.090 | 110 | | | |
| a. Dependent Variable: VAT Compliance among construction firms | | | | | | |
| b. Predictors: (Constant), Taxpayers 'Cost of Compliance | | | | | | |
| Coefficients ^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .239 | .154 | | 1.546 | .140 |
| | Taxpayers 'Cost of Compliance | -.960 | .039 | -.986 | 24.757 | .000 |

The coefficient determinant (R Squared) of .673 implies that 67.3% of the changes in VAT compliance among construction firms Thika Sub-County are explained by taxpayers 'compliance cost factors. The other 32.7% is attributed to other factors other than Taxpayers 'Cost of Compliance factors.

The study also employed Analysis of Variance (ANOVA) to determine the statistical significance of the regression model. The ANOVA test results revealed a p-value of less than 0.05 (Sig= .000< .05), indicating the statistical significance of the model in explaining the relationship between taxpayers 'cost factors on VAT compliance among construction firms Thika Sub-County in this study. The (F=612.910; 4, 106) also showed that the model was statistically fit to measure the relationship between taxpayers 'cost of compliance and VAT compliance among construction firms Thika Sub-County.

The regression equation derived from the coefficients yielded in Table 4.13 above is:

$$Y = .239 + .986X_2$$

The equation above can be understood in the following way:

This means that a unit increase in cost factors will decrease taxpayer's compliance by 98.6%.

Further, the findings show that VAT compliance among construction firms Thika Sub-County (Sig = .000 < .05) is statistically significant.

Table 4.15 Effect of tax enforcement measures on VAT compliance among construction firms in Thika Sub-County

| Model Summary | | | | | | |
|--|--------------------------|-----------------------------|-------------------|---------------------------|----------------------------|-------------------|
| Model | R | R Square | Adjusted R Square | | Std. Error of the Estimate | |
| 1 | .603 ^a | .516 | .505 | | .41698 | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 13.134 | 4 | 13.134 | 75.538 | .000 ^b |
| | Residual | 2.956 | 106 | .174 | | |
| | Total | 16.090 | 110 | | | |
| a. Dependent Variable: VAT compliance among construction firms | | | | | | |
| b. Predictors: (Constant), Tax Enforcement Measures | | | | | | |
| Coefficients ^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .638 | .393 | | 1.624 | .123 |
| | Tax Enforcement Measures | .937 | .108 | .903 | 8.691 | .000 |

The coefficient determinant (R Squared) of .516 implies that 51.6% of the changes in VAT compliance among construction firms Thika Sub-County are explained by tax enforcement measures factors. The other 48.4% is attributed to other factors other than tax enforcement measures factors.

The study also employed Analysis of Variance (ANOVA) to determine the statistical significance of the regression model. The ANOVA test results revealed a p-value of less than 0.05 (Sig= .000< .05), indicating the statistical significance of the model in explaining the relationship between tax enforcement measures factors on VAT compliance among construction firms Thika Sub-County in this study. The (F=75.538; 4, 106) also showed that the model was statistically fit to measure the relationship between tax enforcement measures and VAT compliance among construction firms Thika Sub-County.

The regression equation derived from the coefficients yielded in Table 4.14 above is:

$$Y = .638 + .903X_3$$

The equation above can be understood in the following way:

This means that a unit increase in enforcement factors will increase taxpayer's compliance by 90.3%.

Further, the findings show that VAT compliance among construction firms Thika Sub-County (Sig= .000< .05) is statistically significant.

Table 4.16 Effect of tax attitude and perception on VAT compliance among construction firms in Thika Sub-County

| Model Summary | | | | | | |
|--|-------------------|-----------------------------|-------------------|----------------------------|--------|-------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .805 ^a | .447 | .427 | .57781 | | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 10.415 | 5 | 10.415 | 31.195 | .000 ^b |
| | Residual | 5.676 | 105 | .334 | | |
| | Total | 16.090 | 110 | | | |
| a. Dependent Variable: VAT compliance among construction firms | | | | | | |
| b. Predictors: (Constant), Tax Attitude and Perception | | | | | | |
| Coefficients ^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.303 | .949 | | 1.372 | .188 |

| | | | | | | |
|--|-----------------------------|-------|------|------|-------|------|
| | Tax Attitude and Perception | 1.373 | .246 | .805 | 5.585 | .000 |
|--|-----------------------------|-------|------|------|-------|------|

The coefficient determinant (R Squared) of .447 implies that 44.7% of the changes in VAT compliance among construction firms Thika Sub-County are explained by tax attitude and perception factors. The other 55.3% is attributed to other factors other than tax attitude and perception factors.

The study also employed Analysis of Variance (ANOVA) to determine the statistical significance of the regression model. The ANOVA test results revealed a p-value of less than 0.05 (Sig= .000< .05), indicating the statistical significance of the model in explaining the relationship between taxpayers' attitude and perception factors on VAT compliance among construction firms Thika Sub-County in this study. The (F=31.195; 5, 105) also showed that the model was statistically fit to measure the relationship between tax attitude and perception and VAT compliance among construction firms Thika Sub-County.

The regression equation derived from the coefficients yielded in Table 4.15 above is:

$$Y = 1.303 + .805X_4$$

The equation above can be understood in the following way:

This means that a unit increase in taxpayer attitudes and perception will increase taxpayer's compliance by 80.5%.

Further, the findings show that VAT compliance among construction firms Thika Sub-County (Sig= .000< .05) is statistically significant.

Table 4.17 The effect Tax compliance factors on VAT compliance among construction firms in Thika Sub-County.

| Model Summary | | | | | | |
|--------------------|-------------------|----------------|-------------------|----------------------------|---------|-------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .993 ^a | .986 | .982 | .12652 | | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 15.866 | 7 | 3.967 | 247.789 | .000 ^b |
| | Residual | .224 | 103 | .016 | | |

| | | | | | | |
|--|-------------------------------|-----------------------------|------------|---------------------------|-------|-------|
| | Total | 16.090 | 110 | | | |
| a. Dependent Variable: VAT compliance among construction firms | | | | | | |
| b. Predictors: (Constant), Tax Compliance Factors (Taxpayers' Tax Knowledge, Taxpayers 'Cost of Compliance, Tax Enforcement Measures, Tax Attitude and Perception) | | | | | | |
| Coefficients^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .143 | .249 | | .572 | .046 |
| | Taxpayers' Tax Knowledge | .279 | .117 | .243 | 2.373 | .033 |
| | Taxpayers 'Cost of Compliance | .906 | .160 | .931 | 5.673 | 0.021 |
| | Tax Enforcement Measures | .125 | .117 | .121 | 1.069 | .035 |
| | Tax Attitude and Perception | .118 | .106 | .069 | 1.106 | .003 |

The coefficient determinant (R Squared) of .986 implies that 98.6% of the changes in VAT compliance among construction firms Thika Sub-County are explained by tax compliance factors under this study. The other 1.4% is attributed to other factors not included in the study.

In order to evaluate the Moderating effect of use of technology on the relationship between Tax compliance factors and VAT compliance, the study included the moderating effect of use of technology factors on whether the use of technology would influence tax compliance factors on VAT compliance as illustrated.

Table 4.18 The Moderating effect of use of technology on the relationship between Tax compliance factors and VAT compliance.

| | | | | | | | |
|--------------------------|--|-------------------|----------|-------------------|----------------------------|---------|-------------------|
| | | | | | | | |
| Model | | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | | .988 ^a | .973 | .970 | .15654 | | |
| ANOVA^a | | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. | |
| 1 | | Regression | 15.698 | 13 | 7.849 | 320.314 | .000 ^b |

| | Residual | .392 | 97 | .025 | | |
|--|---------------------------------------|-----------------------------|------------|---------------------------|-------|------|
| | Total | 16.090 | 110 | | | |
| a. Dependent Variable: VAT compliance among construction firms | | | | | | |
| b. Predictors: (Constant), Use of Technology, Taxpayers' Tax Knowledge, Taxpayers 'Cost of Compliance, Tax Enforcement Measures, Tax Attitude and Perception | | | | | | |
| Coefficients^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .648 | .188 | | 3.452 | .003 |
| | Taxpayers' Tax Knowledge | .554 | .139 | .455 | 3.986 | .001 |
| | Taxpayers 'Cost of Compliance | -.534 | .121 | -.548 | 4.793 | .000 |
| | Tax Enforcement Measures | .494 | .167 | .507 | 2.956 | .011 |
| | Tax Attitude and Perception | .148 | .200 | .146 | .477 | .041 |
| | Use of Technology (Moderating effect) | .954 | .090 | .021 | .393 | .017 |

The coefficient determinant (R Squared) of .970 implies that 97.0% of the changes in VAT compliance among construction firms Thika Sub-County are explained by moderating effect of technology use on tax compliance factors. The other 3.0% is attributed to other factors not included in the study.

The study also utilized Analysis of Variance (ANOVA) test to assess whether the regression model is statistically significant. The output from the ANOVA test indicates a p-value which is less than 0.05 (Sig= .000< .05) which shows that the model above is statistically significant in explaining the relationship between tax compliance factors (and moderating effect of technology) on VAT compliance among construction firms Thika Sub-County in this study. The (F=320.314; 13, 97) showed that the model was statistically fit to measure the relationship between tax compliance factors (and moderating effect of technology) on VAT compliance among construction firms Thika Sub-County.

The resulting regression equation from the coefficients in Table 4.9 above is:

$$Y = .648 + .455 X_1 + .548 X_2 + .507 X_3 + .146 X_4 + .021 D_1$$

The above equation can be interpreted as follows:

A unit change in tax knowledge, with a moderating effect of 2.1% of technology will cause 45.5% change in tax compliance.

A unit change in cost of compliance, with a moderating effect of 2.1% of technology will cause -54.8% change in tax compliance.

A unit change in tax enforcement measures, with a moderating effect of 2.1% of technology will cause 50.7% change in tax compliance.

A unit change in taxpayer's attitude and perceptions, with a moderating effect of 2.1% of technology will cause 14.6% change in tax compliance.

The findings also indicate that the regression model ($\beta = .648$) is statistically significant ($\text{sig} = .000 < .05$). Further, the constant term had an unstandardized coefficient of 1.069 ($p = .001$), indicating the expected change in the dependent variable when all predictor variables are zero.

4.6 Chapter Summary

This chapter includes the general information of the respondents, the descriptive statistics, Collinearity Test and the inferential statistics that included the correlation analysis and the multilinear regression analysis.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter encompasses several sections, including discussions of the study findings, conclusions, and recommendations. Additionally, it will address the limitations of the study, along with suggestions for further research.

5.2 Discussions of the study findings.

5.2.1 The effect of Taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County

The first objective of this study was to evaluate the influence of taxpayers' tax knowledge on VAT compliance among construction firms in Thika Sub-County. The study findings indicated a significant positive relationship between taxpayers' tax knowledge and VAT compliance among construction firms in Thika Sub-County. These findings are consistent with those of Bernard et al. (2018) whose study findings established a positive relationship between taxpayers' ability to understand tax laws and tax compliance. However, most of the respondents either did not know or fully understood how to compute Value Added Tax for the business and keep up to date books of accounts. Additionally, the companies demonstrated lack of awareness and understanding of their tax obligations in regards to compliance with Value Added Tax system.

The importance of tax knowledge on tax compliance was highlighted by Alm (2018). He mentioned that taxation knowledge is critical in the administration of a tax system and what knowledge about tax that taxpayers possess or do not possess that affects tax compliance. In many instances, taxpayers frequently lack clarity on their tax obligations due to the complexity and uncertainty of the tax system, leading to a heavy reliance on paid tax practitioners for tax preparation. The results are also consistent with findings by Deloitte and Touche (2018) which revealed that 62% of micro and small enterprises engaged in offenses related to VAT, including activities such as document falsification, selling products without issuing receipts, reluctance to submit taxes, and late submission

of taxes due to lack of technical knowledge on the operations of the VAT system.

5.2.1 The effect of Taxpayers' cost of compliance on VAT compliance among construction firms in Thika Sub-County

The second objective of this study was to establish the influence of taxpayers' cost of compliance on VAT compliance among construction firms in Thika Sub-County.

The results indicated a significant negative relationship between taxpayers' cost of compliance and VAT compliance among construction firms in Thika Sub-County.

This inverse relationship practically means that as compliance costs tend to decrease, VAT compliance improves and vice versa. Youde & Lim (2019) highlighted the cost of compliance as and hindrance taxpayers in meeting their tax obligations as laid down by various tax laws.

The findings are also consistent with those of Mogeni (2014) who established a negative impact of compliance costs on tax compliance within listed companies. Abdul and Wang'ombe (2018) also established that tax compliance in Kenya experienced a noteworthy decrease as taxpayers' tax compliance costs increased, especially those associated with understanding the existing tax laws and adapting to changes in tax regulations, along with the overall costs of compliance and meeting the regulatory requirements.

The significant negative effect of high cost of compliance was also highlighted by Mahangila (2017) who sited that as the costs of compliance increased, tax non-compliance also increased, and that the compliance costs were considered an economic waste to the business. Musimenta et al. (2019) also established a significant negative relationship between the cost of filling incurred and tax compliance thereby increasing the possibility of non-compliance.

5.2.3 The effect of enforcement measures on VAT compliance among construction firms in Thika Sub-County.

The third objective of this study was to evaluate the influence of tax enforcement measures on VAT compliance among construction firms in Thika Sub-County.

The results indicated a significant positive relationship between enforcement measures and VAT compliance among construction firms in Thika Sub-County. The findings suggest that there is a tendency for VAT compliance behaviors to increase with an increase in frequency of application of enforcement measures of the tax system, and vice versa.

These findings on importance of tax enforcement measures in tax compliance are in line with the findings by Kimutai & Ombasa (2019) which indicated that tax compliance is instrumental in the recovery and collection of tax debt, ensuring the prompt and complete collection of taxes owed.

Adhiambo (2019) also posits that traders were well-informed about the consequences of underreporting taxes and therefore are expected to be more tax compliant. She argued that increased knowledge of the consequences of non-compliance would lead to a more tax compliant behavior. The study by Ndumia (2015) in his findings also indicated that an upsurge in the audit rate led to a proportional increase in VAT revenue collection. His evidence indicated that KRA is very keen on its enforcement measures and that the companies would be easily detected if they do not comply leading to increased compliance,

5.2.4 The effect of tax attitude and perception on VAT compliance among construction firms in Thika Sub-County

The fourth objective of this study was to evaluate the influence of taxpayer attitudes and perceptions on VAT compliance among construction firms in Thika Sub-County.

The results indicated a positive relationship between taxpayers' attitudes and perceptions and VAT compliance among construction firms in Thika Sub-County.

The findings of the study support findings by Orkaido (2018) that attitude towards tax compliance influenced the level of compliance and was shaped by various factors, including demographic, individual, social, institutional, and economic influences.

The significant influence of attitude on tax compliance further supports the findings by Braithwaite *et. al.* (2009) that indicated that individuals who engage in tax evasion

often rationalize their actions by citing government wastage of tax revenue and unwise spending. Such arguments may diminish voluntary compliance over time. This is also in line with the findings of Merima (2013) whose findings indicated that individuals who express a higher satisfaction with public service provision are more inclined to endorse the government's taxation authority. Finally, the findings of the study also support findings by Adhiambo (2019) that cultivating the right attitude in order to ensure compliance by citizens can be done through public engagement and openness in how the government spends the tax payer's money.

5.2.5 The Moderating effect of the use of technology on the relationship between Tax compliance factors and VAT compliance among construction firms in Thika Sub-County.

The fifth objective of this study was to evaluate the moderating effect of technology on the relationship between taxpayer's knowledge, taxpayer's cost of compliance, tax enforcement measures and taxpayers' attitudes and perceptions and VAT compliance among construction firms in Thika Sub-County.

The study indicates a positive moderating effect of the use of technology of 2.1% on the relationship between the Tax compliance factors under study and VAT compliance among construction firms in Thika Sub-County.

The study findings demonstrated that the automation of accounting and tax related matters had enhanced accurate and timely filing of tax returns without incurring any extra cost, and reduced the likelihood of errors and increased tax compliance. However, the findings also showed that the tax related information and educational materials available online were not very useful or sufficient to aid tax compliance. This finding is in line with those of Mwangi (2014) who highlighted that generally, the information provided by the revenue authority to SMEs in general was fairly insufficient and could not facilitate them to be tax compliant. These findings therefore call for the revenue authority to provide not only more relevant and meaningful information, but also train taxpayers on the use of the online platforms in order to facilitate tax compliance.

The findings are also consistent with Kiguro (2014) who established that majority of taxpayers acknowledged the facilitative role of technology in filling of tax and overall compliance. Martinez (2018) also argued that with the evolvement of technology that includes automated solutions and tax software that help individuals and businesses calculate their tax liabilities accurately, there is a reduced likelihood of errors and that this simplified tax filling for both individuals and businesses as it enabled electronical submission of tax returns and made tax payments without incurring any expenses. Furthermore, Kiguro (2014) highlighted that technology is very instrumental in equipping taxpayers with knowledge through the online resources, advised on the need for more sensitization on how to use online platforms in filling tax returns and increase accessibility and cost of technological enablers of tax filling. This will greatly impact on the uptake of tax related knowledge and information.

5.3 Conclusion

The objectives of this study were to evaluate the influence of taxpayers' tax knowledge, taxpayers cost of compliance, tax enforcement measures and taxpayers attitudes and perceptions on VAT tax compliance in the construction industry and to evaluate the moderating effect of technology on these factors. The following conclusions can be drawn based on the findings of the study:

Most taxpayers do not have knowledge in their tax obligations, legal requirements regarding tax matters and tax computations. Most taxpayers can access the tax education materials available online, but most of this information is not relevant in aiding their tax compliance.

As compliance costs tend to decrease, VAT compliance improves and vice versa. High costs of compliance were found to be a hindrance to taxpayers in meeting their tax obligations as laid down by various tax laws. The most significant cost of compliance was found to be the cost of purchasing Etims compliant ETR machines and hiring technical experts to address tax related processes.

Most taxpayers are unaware of the serious enforcement measures in place and there is need to educate and sensitize them on the same as this information could enhance their compliance. The findings also showed that the more the frequency of enforcement

efforts, the higher the rate of compliance. The more severe the penalties are the more compliance will be realized. The findings also indicated that while the VAT rate is perceived to be fair by many of the companies in the construction sector, lack of transparency in the way the government uses the collected revenue is seen as a hindrance to tax compliance as most of them express that they would be more motivated to comply if the government was more accountable and if the tax system was fair. Lastly, there was a slight positive moderating effect of technology of 2.1% on the influence of the factors under study (taxation knowledge, compliance costs, tax enforcement effort, and taxpayer attitudes and perceptions) on VAT compliance.

5.4 Implications of Research

Different stakeholders can derive the findings of the study to exercise judgments differently depending on their need. The study findings have implications on management, knowledge and policy makers as elaborated below:

5.4.1 Contribution to Policy

The Kenya Revenue Authority will benefit from the findings of this study particularly on the findings of tax compliance costs and Tax knowledge and provide policy intervention and guidelines on how to enhance tax compliance in the construction sector in Kenya. KRA will be able to see the areas of concern and pain points to taxpayers in this sector for example the high costs of compliance and come up with policies that will address these pain points and make it easier for taxpayers to comply. They will also be able to streamline their tax information and taxpayer education in a way that is more useful and beneficial to taxpayers to aid in their tax compliance.

5.4.2 Contribution to the Management

In order for construction companies to continue being VAT compliant, it is important that they understand how to compile tax returns, the costs and enforcement measures involved, and that as a sector they develop the right attitude toward VAT so that they can be more compliant as stipulated in the various tax laws. Additionally, the management of the construction companies will be able to understand the implication of technology and the role it plays in enhancing tax compliance.

5.4.3 Contribution to Knowledge

The study specifically viewed Tax Compliance factors in terms of taxation knowledge, compliance costs, tax enforcement effort, and taxpayer attitudes and perceptions and the influence they have on VAT compliance with the use of the moderating effect of technology among construction firms in Thika Sub-County. This research's findings address the gaps in previous studies by pin pointing how these factors under study influence tax compliance specifically in the construction industry. Particularly, the research findings demonstrate that tax knowledge is very critical for VAT tax compliance, and that high tax compliance costs are a deterrent to VAT tax compliance. Furthermore, enforcement measures aid in deterring noncompliance, and that a positive attitude and perception towards tax leads to a higher compliance rate.

5.4.4 Recommendations of the study

There is need for the government to increase taxpayers' knowledge through tax education to increase the level of tax knowledge and understanding and there is need for increased online resources in order to make adequate, relevant and helpful information accessible to the taxpayers.

5.5 Limitations of the Study

The main limitation in this study was access to data. Tax matters are very sensitive and accessing detailed tax information both from the revenue Authority and the taxpayers was a big challenge, particularly getting detailed tax information and analysis on the construction sector.

The study was limited to the construction industry and did not cover other sectors that may be significant in paying taxes for increased revenue for the government. The study did not include other variables such as the number of projects involved, and age of the tax payers as this may affect use of technology and knowledge uptake in tax compliance. Additionally, the study was only conducted in Thika Sub- County and therefore, the findings cannot be generalized to other areas that may be facing different challenges in tax compliance.

5.6 Suggestion for Further Research

The study findings of this research on the effect of enforcement measures on tax compliance were not consistent to most of the previous studies that have been done on the same. While most studies showed that application of enforcement measures led to increased tax compliance levels, this study finding indicate the opposite. This study therefore suggests further research to be carried out to find out what is unique in the construction industry as far as enforcement measures are concerned, and what could be the reason for the contradicting findings in this particular industry compared to previous studies on the same in other industries.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Jane Yego,
P.O Box 40800,
NAIROBI.
November, 2023.

Dear Sir/Madam,

RE: REQUEST FOR DATA COLLECTION

This is to request for data collection in your esteemed organization by filling in the questionnaire attached. I am Jane Yego, a student pursuing a Masters Degree at Strathmore University School of Business. I am conducting an academic research on the "Factors Affecting Value Added Tax Compliance Among Construction Firms in Kiambu County."

The questionnaire that will be utilized in this research has been crafted specifically to gather perspectives and data from the designated respondents exclusively for the purpose of this study. Any information provided will be treated with utmost confidentiality.

I kindly request you to spare a few minutes to complete this questionnaire objectively. Thank you in advance for your participation in this research, which contributes to the successful completion of my course. Your assistance and cooperation is greatly appreciated.

Sincerely

Jane Jepkemboi Yego

APPENDIX II: PARTICIPANT INFORMATION AND CONSENT FORM

Study Topic: *Factors Influencing Value Added Tax Compliance Among Construction Firms in Kiambu County: Moderating Effect of Technology and Level of Automation of the Construction Firms.*

SECTION 1: INFORMATION SHEET

Investigator: Jane Jepkemboi Yego

Study Institution: Strathmore Business School (SBS)

SECTION 2: INFORMATION SHEET–THE STUDY

2.1: Why is this study being carried out?

The reason for this research is for partial fulfillment of the requirement for award of a Masters study at Strathmore University. This research seeks to investigate the factors that influence VAT compliance in the construction industry. The information provided or gathered will only be used for academic purposes and will be treated with utmost confidentiality.

2.2: Is my participation mandatory?

Participation in this study is totally voluntary, it is entirely your choice to participate or not to participate. If you opt to participate, you will be requested to fill out a questionnaire to provide information on the factors influencing VAT compliance in your company. In case you encounter difficulty answering all the questions initially, you may be invited to attend an additional informational session, after which you can choose to answer the questions again. You have the freedom to withdraw from the study at any point without providing any reasons.

2.3: Who meets the criteria for participating in this study?

- i. A manager of the company

- ii. The Accountant of the company or an employee of the company who is responsible for accounting duties and return filing tasks.

2.4: What does participating in this study entail for me?

The Investigator, Jane Yego, will approach you and invite you to participate in the study. If you feel that you have a comprehensive understanding of the study's objectives, you will be requested to sign this consent form and subsequently be guided through the completion of a questionnaire.

2.5: Are there any potential risks or hazards associated with participating in this study?

Participating in this study poses no risks. Any information you give will be handled confidentially and will not be utilized in any manner without your explicit permission.

2.6: What advantages come with participating in this study?

The information you give will offer valuable insights to policymakers regarding appropriate laws and regulations that can enhance your organization's tax compliance.

2.7: What are the consequences if I choose not to participate in this study?

Participation in this study is completely optional. Whether you initially decide to take part or change your mind later, you have the freedom to withdraw at any time without the need for an explanation.

2.8: During this research, who will be able to access my information?

All research records will be securely stored in locked cabinets. While the data may be transcribed into our database, it will be thoroughly encrypted and password-protected. Access to your information will be restricted to individuals closely involved with this study, ensuring the utmost confidentiality of your information.

2.9: How will the results of the research be disseminated and utilized?

The results of this research will be disseminated and utilized through the following ways:

- I. Publishing programs or policy briefs.
- II. Publishing project findings in national journals and statewide publications.
- III. Presenting at national conferences and meetings of professional associations.

2.10: Whom should I reach out to if I have additional questions?

For further inquiries, you can reach out to me, Jane Yego, at SBS, via email at jepkemboi.yego@strathmore.edu, or by phone at 0714853465. Alternatively, you may contact my supervisor, Dr. Hellen Otieno, at Strathmore Business School in Nairobi, via email at hotieno@strathmore.edu, or by phone at 0721333825.

If you prefer to consult an independent party regarding this research, please get in touch with: The Secretary – Strathmore University Institutional Ethics Review Board P. O. BOX 59857, 00200, Nairobi Email: ethicsreview@strathmore.edu Tel: +254 703 034 375

I, _____, have received an explanation of the study. I comprehended all the information presented to me, and my questions were answered to my satisfaction. I am aware that I can change my decision at any point. Please check the boxes that correspond to your choices:

I CONSENT to participate in this research

I DO NOT CONSENT to participate in this research

Record keeping of information from the completed questionnaire.

I CONSENT to having my completed questionnaire stored for future data analysis

I DO NOT CONSENT to having my completed questionnaire stored for future data analysis

Respondent's Signature: _____

Date: ____/____/____

Respondent's Name: _____

Time: _____ / _____

I, Jane Jepkemboi Yego, confirm that I have adhered to the Standard Operating Procedure (SOP) for this study. I have provided the study information to the participant mentioned above, ensuring their understanding of the study's nature and purpose, and obtaining their consent to participate. The participant has had the opportunity to ask questions, and I have addressed them to their satisfaction.

Researcher's Signature: _____

Date: _____ / _____ / _____

Researcher's Name: _____ Jane Jepkemboi Yego

Time: _____ / _____

APPENDIX III: QUESTIONNAIRE

Section A: General Information

1. What is the status of your Business?
 - Sole Proprietorship
 - General Partnership
 - Limited Liability Company (LLC)
 - Other(Specify).....
2. How long have you been active in the construction sector?
 - 0 – 2 years
 - 3 – 5 years
 - 6 – 8 years
 - 9 years & above
3. What is your approximate annual turnover?
 - Up to 500,000
 - 500,000 – 1,000,000
 - 1,000,000 – 2,000,000
 - 2,000,000-5,000,000
 - Above 5,000,000
4. Does your company have a tax compliance certificate? Yes No

If No, why?.....
5. How many employees does your company have?
 - < 10 Less than 10
 - 11-20
 - 21-30
 - 31-40
 - 41-50
 - > 50 Above 50

Section B: The Value Added Tax Compliance

6. The following are statements on the tax compliance of your construction company, with regards to VAT for the last five years (2017-2022). Please select Yes, No, based on your company’s position on the below questions.

| Statement | Yes | No |
|---|-----|----|
| Our company is registered for VAT obligation | | |
| Our company files VAT monthly returns on time. | | |
| Our company reports all VAT sales and purchases accurately. | | |
| Our company makes timely payment of VAT monthly | | |

Section C: Knowledge in Taxation

7. In a scale of 1-5 where; **1=Strongly Disagree, 2= Disagree, 3=Uncertain/neutral, 4= Agree and 5=Strongly Agree**, Kindly rate the statement which best depicts your level agreement of disagreement.

| Statement | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| I am aware and fully understand tax obligations in regards to compliance with Value Added Tax system. | | | | | |
| I know and fully understand how to compute Value Added Tax for the business and keep up to date books of accounts. | | | | | |
| The company has enough information and understand the tax procedures applicable in administration of Value Added Tax system. | | | | | |
| The company has personnel who have full knowledge of filing Value Added Tax electronically. | | | | | |

Section D: Cost of Tax Compliance

8. Kindly evaluate the statement that most accurately reflects your level of agreement or disagreement with the below statements. **Key: 1=Strongly Disagree, 2= Disagree, 3=Uncertain/neutral, 4= Agree and 5=Strongly Agree**

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| The cost of keeping books of accounts for making VAT declaration, filing and tax payment is fair enough for the Company. | | | | | |
| Cost of acquiring or hiring the services of a tax expert is not an hindrance to VAT compliance for the firm as they do not charge exorbitant rates. | | | | | |
| Time the firm spends on tax planning, filing, and submission of books of account is minimal and not costly. | | | | | |
| Cost of acquiring ETR e-TIMS compliant machine is affordable and therefore not a hindrance to the company VAT compliance. | | | | | |
| The costs incurred by the company on acquaring computers and internet connectivity are not significant and do not make tax compliance costly. | | | | | |

Section E: Enforcement Measures

9. Kindly evaluate the statement that most accurately reflects your level of agreement or disagreement with the below statements. **Key: 1=Strongly Disagree, 2= Disagree, 3=Uncertain/neutral, 4= Agree and 5=Strongly Agree**

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I am aware that there is serious enforcement of tax recovery measures such as agency notices leading to closure of the company accounts if the company is found to be noncompliant with VAT laws. | | | | | |
| Distrain measures have been taken against the Company due to VAT noncompliance to recover the unpaid taxes. | | | | | |
| Penalties and interests incurred for noncompliance are not a significant expense to the company compared to the taxes defaulted. | | | | | |
| The company has never been audited by KRA regarding VAT noncompliance. | | | | | |
| I believe KRA is not very keen on its enforcement measures, and I will not be easily detected if I do not comply. | | | | | |

Section F: Perceptions and Attitudes

10. Please rate the statement which best depicts your level of concurrence or non-concurrence with the statements. **Key: 1=Strongly Disagree, 2= Disagree, 3=Uncertain/neutral, 4= Agree and 5=Strongly Agree**

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I perceive that the current applicable rate of VAT is fair. | | | | | |
| The company does not struggle to comply with VAT requirements. | | | | | |
| There is transparency in use of public resources which leads me to have a positive attitude towards taxation. | | | | | |
| There is trust between me and the tax authority, and I can comfortably contact KRA whenever I have any tax related issues | | | | | |
| I am motivated to comply with tax laws when the government is accountable and the tax system is fair. | | | | | |

Section G: Use of technology

11. Please rate the statement which best depicts your level of concurrence or non-concurrence with the statements. **Key: 1=Strongly Disagree, 2= Disagree, 3=Uncertain/neutral, 4= Agree and 5=Strongly Agree**

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Our company has invested in technology and automated most of its processes, including all accounting and tax related records. | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| Automation of the tax system has reduced the likelihood of errors and made it easier for the company to comply. | | | | | |
| The automation of our company processes including accounting and tax related matters has enabled us to seamlessly file our company returns accurately, with timely payments of our taxes without incurring any extra cost. | | | | | |
| The company has technical experts who understand the itax system and are able to file and remit all our taxes without any struggles. | | | | | |
| Using our already available technology and use of internet resources, the company is able to access all the tax related resources available online that enhance the tax related processes, administration and compliance. | | | | | |
| The available online resources, like videos and public notices are useful and have provided the company with relevant information and resources to better understand tax obligations for compliance purposes. | | | | | |

THANKS FOR YOUR COOPERATION

APPENDIX IV: STUDY BUDGET

| No. | Item | Description | Unit Cost | Quantity | Total Cost |
|-----|---|---|-------------------|------------------|--------------------|
| 1 | Document printing and photocopying expenses | Printing and photocopying of the questionnaires. | Ksh 10 per page | 400 papers/pages | Ksh 4,000 |
| 2 | Document binding expenses | Binding of the thesis document | Ksh 1,500 | 2 | Ksh 3,000 |
| 3 | Data sorting and coding | 1 research assistant to help with sorting and coding data. | Ksh 2,000 per day | 5 days | Ksh 10,000 |
| 4 | Travel expenses | Movement from my house to the various respondents. It will take 6 days to drop all the 60 questionnaires, and another 6 days to pick them up. | Ksh 4,000 per day | 12 days | Ksh 48,000 |
| 5 | Meal Expenses | Daily meals during the dropping and picking of questionnaires. | Ksh 1,500 per day | 12 days | Ksh 18,000 |
| 6 | Communication Expenses | Daily telephone expenses for making calls contacting the various respondents. | Ksh 500 per day | 12 days | Ksh 6,000 |
| 7 | Contingency budget | Any other expense. | | | Ksh 11,000 |
| | Total Cost | | | | Ksh 100,000 |