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System Automation, Taxpayer Perception and Value Added Tax Compliance among Small and Medium Enterprises in Eldoret Town, Kenya.

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Abstract

The specific objectives were to determine the effect of Digital payment process, Tax invoice management system and Withholding Value Added Tax system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. Additionaly to determine the moderating effect of taxpayer perception on each effect of the relationship. The study was anchored on the following theories: Diffusion of Innovation (DOI) Theory, Technology Acceptance Model, Ability to pay Theory and Theory of planned behaviour. The research design for this study was explanatory research design. The population of this study was 3872 SMEs in Eldoret town with a sample size of 362 SMEs who are SMEs owners/Managers. A questionnaire was used to collect primary data and analysis included both descriptive and inferential statistics. Descriptive statistics involved the use of mean standard deviation and variance while infrarational statistics included correlation and hierarchical regression. The study found out that digital payment process, Tax invoice management system, Withholding VAT system Taxpayer perception. have a positive and significant effect on Value Added Tax compliance. A unit change in withholding VAT system causes an increase of 0.553 in Value Added Tax compliance. A unit change in taxpayer perception causes an increase of 0.276 in Value Added Tax compliance. Improvement in Value Added Tax compliance is caused by a unit change in Tax invoice management system. The findings also indicated that there is a positive moderating effect of taxpayer perception on relationship between :(Digital payment process (Δ R2= 0.005., β =0.109, P value was < 0.05), Tax invoice management system (Δ R2=0.002, β =0.041, p value is < 0.05) and Withholding VAT system (Δ R2=0.004, β =0.103, p value is < 0.05) and Value Added Tax compliance. KRA is recommended to explore the implementation of Tax invoice management system and provide guidance on their setup and operation. KRA is also recommended to facilitate awareness campaigns highlighting the positive impact of such systems on Value Added Tax compliance. Future research may be concluded to find out whether or not other factors such as tax incentives and compliance cost have influence on Value Added Tax performance.

Keywords: Automation Systems, Value Added Tax, Taxpayer Perception

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Introduction

Governments across the world are increasingly experiencing pressure to generate more revenues to meet the needs of their citizens. Value Added Tax is one of the commonly used taxes globally. More than 140 countries globally have adopted Value Added Tax (Pomaerleau, 2015). Value Added Tax accounts for approximately 20 percent of worldwide tax revenue. Ernst & Young (2018) in their paper 'The Macroeconomic Effects of an Add-on Value Added Tax'; observed that non-compliance is a growing concern in the administration of Value Added Tax, partly because under a credit-invoice tax the gross amount of taxes paid by firms plus refunds returned to firms is so large relative to the net taxes collected by the government (Robert Carroll, 2010).

The level of tax compliance in an economy is a function of many variables especially for Value Added Tax (VAT) since it is not ease for the Government to monitor transactions as they occur at the tax payer's station (Hurst, Li & Pugsley, 2014). Many governments operate on a self- assessment basis when it comes to payment of VAT as the Companies determine on their own the VAT payable through computation of VAT on purchases and VAT on sales. However, one of the challenges noted from previous research indicates that voluntary compliance where the tax payers voluntarily determine their tax liabilities and pays gives room for some form of manipulation (Gangl, Hofmann & Kirchler, 2015). This means that all the taxes due in a particular time period may be delayed or ignored all together leading to loss of revenue to the Government.

Digital tax platforms are crucial to making tax systems lean in that they permit real time access from across the globe and enables risks mitigations (Mcluskey & Huang, 2019). For instance, the use of Electronic Tax Registers in Value Added Tax administration in Kenya has gone a long way towards enhancing accuracy and completeness in disclosure on Value Added Tax computations. Use of digital platforms has been noted to improve compliance rates among businesses due to costs reductions that characterizes the platforms. Electronic tax management reduces corporate tax evasions without increasing overheads of the tax departments. It transforms activities and improves capacities of public organizations to offer service delivery.

The idea that the digitization of transactions through electronic payment technology can help increase tax compliance has been prominent in academic circles (Rogoff 2016), in the policy advice provided by international organizations (OECD 2018, Gupta et al., 2017, World Bank 2016). Okiro (2015) found that the adoption e-payment system positively influences the revenue collection performance. Other studies identified a positive impact of cashless payments on VAT compliance (Hondroyiannis & Papaoikonomou, 2020; Madzharova, 2020).

In line with the Section 43 of the Value Added Tax Act 2013, every person in the course of business, registered as per Section 34 of the same Act, is required to keep a proper record of all the transactions made in the course of business. This may be in form of electronic or otherwise. From the Act, the Commissioner may require the person to use an electronic tax register (ETR) in the form and description prescribed. This facilitates in assessing the transactions with the objective of determining the tax liability of any tax payer OECD, (2023).

Literature has shown the role of Tax invoice management system and value Added Tax compliance. For instance, Kimani, Nyangu and Yego (2024) found that Tax invoice management system and value Added Tax compliance is positive and statistically significant. According to a survey of taxpayers and tax practitioners in Korea that was conducted by Lee (2016), 69.4 percent of the respondents agreed or strongly agreed that mandatory electronic tax invoicing has contributed to curbing value-added tax evasion by raising transaction transparency, and 72.9 percent agreed or strongly agreed that it has improved taxpayer service by facilitating the convenience of tax filing or automating the issuance of invoices.

Withholding Value Added Tax allows the Kenya Revenue Authority (KRA) to collect Value Added Tax in advance from suppliers of taxable supplies. Under the Withholding Value Added Tax system, KRA appoints selected local entities to be withholding Value Added Tax agents. Registered withholding Value Added Tax agents are required to Withhold 6% of the taxable value at the point of paying the suppliers. The appointment of the Withholding Value Added Tax agent was previously governed by Section 25A of the Value Added Tax Act 2013. Under Legal Notice No. 12, January 19 was set as the date the Tax Procedures Act (TPA) came into operation and deleted Section 25A of the Value Added Tax Act KRA (2019).

The study by Mabeya (2022) indicated that withholding VAT administration, withholding VAT reforms, and withholding VAT rates had a positive and significant effect on VAT revenue. Adu-Ababio et al. (2023) observed significant positive impacts after adopting a system for withholding value-added tax on VAT collection in Zambia. The study found that the reform improves compliance with the introduction of a change in the tax remitting liability in the transaction chain.

Knowledge about taxpayer attitudes and behaviour is essential when analyzing opportunities and constraints for reform, and for the design and implementation of effective policy and administrative measures to enhance compliance (UNDP, 2024). The perceived fairness of direct and indirect taxes would be influenced by both the respondents' knowledge of tax related concepts as well as their perception of how the government uses tax revenue – if it is perceived that the government is misusing tax revenue, it is more likely that citizens consider the paying of taxes to be unfair or unnecessary (Castaneda, 2024). Dissanayake and Damayanthi

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(2024) highlighted the importance of emphasizing the public benefits derived from tax revenues in terms of public service delivery as well as reduced social inequality to enhance compliance and support.

In China, Value Addded Tax was comprehensively implemented as the country's only indirect tax in 2016, effectively replacing the business tax (BT) that previously applied to a number of industries (Bekoe, Danquah & Senahey, 2016). Value-added tax reforms brought several industries instrumental to the Chinese economy under the jurisdiction of the Value Added Tax. The real estate, construction, finance, and lifestyle services sectors made up 80 percent of total BT revenue before the tax was scrapped. Under Value Added Tax, businesses are considered either general taxpayers or small-scale taxpayers based on their annual sales. Small-scale taxpayers – those collecting less than RMB 500,000 in revenue – benefit from a lower Value Added Tax rate of three percent, compared to the six to 17 percent levied on general taxpayers, depending on their industry. In 2017, the revenue from Value Added Tax was 15.47 billion yuan ($2.2 billion) which made up 33.9 percent of China's total tax revenue for the year (Bekoe, Danquah & Senahey, 2016).

In the United States, the Government implemented a number of policies and laws to help improve the level of VAT compliance among tax payers. These measures included requiring withholding of tax at the source of income which means that the organization paying for services or goods withholds VAT there on and forwards it to the Government (Brockmann, Genschel, & Seelkopf, 2012). Another measure included application of deterrent mechanisms like giving the revenue collection agencies some powers to enforce the law by laying out clear penalties to those found disobeying the law.

The East Africa countries that comprise of Uganda, Tanzania and Kenya have

remained in the list of developing countries, despite economic and abundance of natural

economic resources, South Africa has a comparatively advanced tax collection system, which explains the country's position as a leading economy in the continent (IMF, 2013). In June 2016 gross revenue collected surpassed the monthly target by 3.20%. In 2017, the first half year (H1:2017) financial report on revenue collection outperformed the H1:2016 by 9.74%. This performance was attributed to automation (introduction of Tax Management System in 2016), audits and anticorruption initiatives by a revenue report (South Africa Revenue Service, 2017).

In Kenya, like other developing nations, SMEs are viewed as the key drivers of economic and social development and are mostly considered to be the important part in revenue generation to the government through taxation (Gathungu, 2019). On this backdrop, Kenya has increased attention to policy framework reviews around Value Added Tax compliance and enforcement among SMEs making both policy and automation interventions over the last decade to boost tax compliance. Taxpayer registration, filing of returns as well as payment of taxes is happening electronically via Electronic Tax Invoice Management System (etims).

Even though there have been many administrative reforms, VAT compliance level has remained low contributing only 23% of the total revenue. Value Added Tax compliance has remained a challenge, especially when it comes to SMEs operating in Kenya (KRA, 2022). The high level of informality of this sector provides an incentive for most of the SMEs to evade payment of VAT, a situation that has constrained the amount of tax revenues available to finance fiscal budget. For instance, in the financial year 2022/2023, the shortfall between actual and targeted VAT collected stood at Kshs. 24 billion (KRA, 2023).

Statement of the Problem

Tax compliance has been a crucial subject to researchers in many countries around the globe. In most third world countries house rental taxation has been classified as economic. (Tilahun & Yidersal, 2014; Palil, 2010). Like the other tax systems, the system of Value Added Tax compliane has been confronted with many challenges both on the side of the tax payers and the officials (Berhane & Yesuf, 2013).

The Macroeconomic Effects of an Add-on Value Added Tax'; observed that non-compliance is a growing concern in the administration of Value Added Taxes, partly because under a credit-invoice tax the gross amount of taxes paid by firms plus refunds returned to firms is so large relative to the net taxes collected by the government (Robert Carroll, 2010).

For instance, the 2018/2019 annual revenue performance report by KRA shows that KRA managed to collect only Ksh. 409.5 billion from Value Added Tax against a target of Ksh. 464.2 billion (KRA 2019). In 2019/2020 financial year, the 2019/2020 revenue performance reports show that Value Added Tax reduced from Ksh. 464.2 billion in 2018/2019 to Ksh. 380.8 billion in 2019/2020 (KRA 2020). In 2020/2021 financial year, the Value Added Tax collected amounted to KShs. 478.2 billion against a target of KShs. 484.2 billion missing target by KShs. 6 billion. These revenue shortfalls have been blamed on tax evasion and other behaviors of tax non-compliance by SMEs and other small taxpayers. It is this worrying trend in revenue collection statistics and the knowledge gap that warrants research to be done in this area.

Research has shown the importance of System automation namely digital payment process, Tax invoice management system and Withholding Value Added system in tax compliance. For instance, Okiro (2015) found that the adoption e-payment system positively influences the revenue collection performance. Kimani, Nyangu and Yego (2024) found that Tax invoice management system and value Added Tax compliance is positive and statistically significant. The study by Mabeya (2022) indicated that withholding VAT administration, withholding VAT reforms, and withholding VAT rates had a positive and significant effect on VAT revenue. Adu-Ababio et al. (2023) observed significant positive impacts after adopting a system for withholding value-added tax on VAT collection in Zambia. Understanding the level of acceptance of a tax system and willingness to comply begins with the question of perception, influenced by past experiences, interactions, and expectations of the future,

and framed by institutional and policy structures as well as public discourse (Baseka, 2022).

Underperformance on Value Added Tax, however, denies the government the much-needed revenue for growth and development according to Oladipupo & Obazee (2016). Several studies by Barbone, Bird, & Vazquez-Caro (2012), Msangi (2015) and King'oina (2016) found that there are a number of factors that contribute to underperformance of Value added tax collection among various sectors of the economy. Notably, compliance among small and medium enterprises was noted to be a major challenge that significantly contributes to Value Added Tax revenue underperformance. It was however noted that studies conducted in this area left knwoledge gaps. For instnace, Chiaji, Kapkiyai and Kirui (2024) sought to determine the moderating role of obligation cost on the relationship between Tax system automation and VAT compliance. However the study adopted obligation cost as the moderating variable other than taxpayer perception. Mackenzie (2019) sought to establish the effect of tax system automation on value added tax compliance among small and medium enterprises in Kisumu County. The study will add value to the challenging environment of tax revenue collection and address the gap through the study to determine the moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya.

Objectives of the study

General Objective

The general objective of the study was to determine the moderating effect of Taxpayer perception on the relationship between System automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya.

Specific Objectives

The specific objectives of the study were as follows:

To determine the effect of digital payment process on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya.

To establish the effect of Tax invoice management system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya.

To determine the effect of Withholding Value-Added system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya.

To determine the moderating effect of taxpayer perception on relationship between:

Literature Review

Theoretical Review

Theories are the postulates that attempt to explain phenomena and the relationships Technology Acceptance Model was the main theory of the study, Diffusion of Innovation (DOI) Theory, Ability to pay Theory and Theory of planned behavior.

Technology Acceptance Model

Technology Acceptance Model is an information system theory that explains how consumers come to consent and adopt technology because of its professed user-friendliness and making activities less tedious and fast (Davis, 1989). This model proposes that when consumers are offered with fresh expertise they are indifferent on its adoption and the choice of whether to adopt is defined by two factors namely; professed effectiveness which is the capacity in which the use of the new technology will enhance the productivity of the person and the perceived simplicity of usage which is the level in which an individual considers that using a given technology will be simple and seamless (Bagozzi, Warshaw, & Davis, 1989).

Davis (1989) argues that professed user-friendliness of a new technological platform promotes its adoption. This means that where the technology is complicated and the interface is complex, no one wills to adopt such a system but where the system is perceived as easy to use, there are high chances of adoption. However, Technology Acceptance model has been criticized despite advocating and being resourceful for adoption and use of technology as failing to consider the background of the organization, generalizing organizations and finally, disregard of aspects which influence ICT Adoption (Sun & Zhang, 2006). Technology Acceptance model is nevertheless informative it provides information on adoption of new ideas more so technological ideas.

Technology Acceptance model is relevant to this study as it provides information on why new ideas are adopted either fast or at slow pace. Technology Acceptance model therefore explains all items of the independent variables (digitalization). KRA has since introduced Electronic Tax Registers and itax system phasing out manual processes of tax compliance. It is imperative to assess the uptake of the fiscal devices and how it influences Value added Tax compliance.

Diffusion of Innovation (DOI) Theory

This hypothesis was created by Lazarsfeld in the year 1949. It tries to depict the examples of selection of innovation, clarifying the instrument of the reception and further anticipating whether and how another creation or advancement will be fruitful. The Diffusion of Innovation hypothesis recommends that mechanical development is imparted through specific channels, after some time, amongst the individuals from a social framework. In light of this definition, utilizing e-recording is a genuinely new practice in Kenya and can be viewed as a development for every individual web client. As indicated by Rogers (2003), the phases through which a mechanical development passes includes five stages which normally take after each other in a period requested way. The stages are: Persuasion, Knowledge, Decision, Confirmation and Implementation. Advancement choices might be discretionary, group or expert based (Sahin, 2006). Usually, this hypothesis demonstrates that mechanical development is conveyed by means of particular channels, after some time, amongst the people from a social system. The hypothesis identifies with the nation Kenya in that the advancement of itax framework is imparted through the different channels by the KRA and got to by means of the web to achieve every individual client.

Ability to pay Theory

This scientific theory of the sixteenth century was proposed by the Swiss philosopher Jean Jacques Rousseau (1712-1778),

Jean-Baptiste Say (1767-1832) who was a French political economist and John Stuart Mill (1806-1873), an English economist. The argument that is put forward by the theory is that the income of an individual or their ability to make payment determines how much taxation should be levied on the individual. This is therefore the basis upon which progressive tax is founded and accordingly, as taxable income increases, tax rate also increases (Jones & Rhoades, 2011).

Thus the theory provides that individuals who have greater income or wealth and can actually afford to make tax payments ought to be taxed at a higher rate of taxation than individuals who earn less income which results to the most equitable tax system. It has been adopted extensively in industrialized economies that have unequal income distributions. The theory however lacks a solid method of measuring equity of sacrifice, since it has been demonstrated that it can be measured through absolute, proportionate and to some extent also captured in marginal terms.

The implication of the theory therefore extends to the taxes and tax systems therefore helping in increasing Government revenues. The theory also has social consequences that are intertwined with economic effects. The criteria guiding the choice of taxes that was adopted as well as their rates of application was lead to a situation where one set of economic effects are preferred to another set which leads to different social implications as a result of divergent economic effects. However, it is worthwhile to note that this theory does not vividly capture VAT because despite the fact that individuals earn significantly different amounts of income and therefore have different abilities, they are all subjected to the same amount of VAT on a particular good that they buy.

Jones and Rhoades (2011) therefore argue that VAT is regressive since it only captures a smaller proportion of an individual's income even as their income improves. Johnson, (2020) The ability-to-pay philosophy of taxation maintains that taxes should be levied according to a taxpayer's ability to pay. The idea is that people, businesses, and corporations with higher incomes can and should pay more in taxes. The idea underlying ability-to-pay taxation is that everyone should make an equal sacrifice in paying taxes, and because people with more money effectively have less use for a given dollar, paying more of them in taxes does not impose a greater burden. According to Chigbu, Eze and Ebimobowei (2021). Individuals should pay taxes in respect of their ability to pay such that they are not overburdened by the taxes.

The argument is that the society that government tax revenue has helped build infrastructure such as highways and fibre optic communications networks, a strong military, public schools, a free market system provide the environment in which their success is possible and in which they can continue to enjoy that success. Critics of progressive taxation argue that it is fundamentally unfair. They say it penalizes hard work and success and reduces the incentive to make more money. Many argue that everyone should pay the same income tax rate a "flat tax" to make the system more equitable.

The most suitable taxes from this standpoint are personal levies (income, net worth, consumption and inheritance taxes) (West, 2016). The economists are not unanimous as to what should be the exact measures of a person's ability or faculty to pay. The main viewpoints advanced in this connection are as follows: Ownership of property, that is amount of property and accumulated wealth, some economists are of the opinion that ownership of the property is very good basis of measuring one's ability to pay. This idea is out right rejected on the grounds that if a person earns a large income but does not spend on buying any property; he will not be subjected to taxation. Tax based on Expenditure: it is also asserted by some economists that the ability to pay theory should be judged by the expenditure, which a person incurs. The greater the expenditure, the higher should be the tax and vice versa.

The viewpoint is unsound and unfair in every respect. A person having a large family to support has to spend more than a person having a small family. If we make expenditure as the test of one's ability to pay, the former person who is already burdened with many dependents will have to pay more taxes than the latter who has a small family thus unjustifiable (Hartman, Jain & Kundu 2016). Income as the Basics: Most of the economists are of the opinion that income should be the basis of measuring a man's ability to pay. It appears very just and fair that if the income of a person is greater than that of another, the former should be asked to pay more towards the support of the government than the latter. That is why in the modern tax system of the countries of the world, income has been accepted as the best test for measuring the ability to pay of a person.

Theory of planned behaviour

This theory is on the taxpayer's ethics and morals. The theory suggests that a taxpayer may comply even when the probability of detection is low. As opposed to the economic theories that emphasize on intensifying audits and penalties as solutions to compliance issues, psychological theories lay emphasis on changing individual attitudes towards tax systems. This is achieved majorly through taxpayer education.

This is a psychological theory that links Ajzen and Fishbein (1980) introduced the Theory of Reasoned Action. According to this theory, taxpayers' behaviour is determined by their intentions, which are a function of: their attitudes towards behaviour and perception of subjective norms. The attitude towards behaviour is described as a positive or negative judgement regarding the behaviour and the perception of subjective norms as the social pressure influencing a person to perform behaviour. Lewis (1982) and Cialdini (1989) used the TRA to study the psychology of taxation.

Firstly, they examined attitudes and perceptions of taxpayers in order to understand compliance behaviour whereby they found several factors affecting evasion intentions: personal and demographic characteristics, moral outlook, age and perception of others evasion. The second used the model to determine the possibility of improving compliance by educating taxpayers about their social responsibility of paying taxes. After, Ajzen (1991) introduced the Theory of Planed Behaviour. TPB links beliefs and behaviour, in a bid to explain human behaviour. The 8-concept aimed at improving on the predictive power of the theory of reasoned action by including perceived behavioural control.

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According to this theory, the behaviour of individuals within the society is influenced by definite factors which originate from certain reasons and emerge in a planned way.

The ability to perform a particular behaviour depends on the fact that the individual has a purpose towards that behaviour (behavioural intention). Behavioural intention in turn depends on three factors that is Attitude towards the behaviour, Subjective norms and Perceived behavioural control. These three factors are also influenced by behavioural beliefs, normative beliefs and control beliefs. The focus beliefs and behaviour, tries to explain human behaviour. The concept was proposed by Icek Ajzen to improve on the predictive power of the theory of reasoned action by including perceived behavioural control. According to this theory, the behaviour of individuals within the society is under the influence of definite factors which originate from certain reasons and emerge in a planned way. The ability to perform a particular behaviour depends on the fact that the individual has a purpose towards that behaviour (behavioural intention). Behavioural intention in turn depends on three factors that is Attitude towards the behaviour, Subjective norms and Perceived behavioural control.

These three factors are also under the influence of behavioural beliefs, normative beliefs and control beliefs. The focus of this theory therefore is on the taxpayer's morals and ethics. The theory suggests that a taxpayer may comply even when the probability of detection is low. As opposed to the economic theories that emphasize on increased audits and penalties as solutions to compliance issues, psychological theories lay emphasis on changing individual attitudes towards tax systems.

Figure 2.1: Conceptual Framework
Source: Author, 2024

Research Methodogy

Research Design

The purpose of a research design is to ensure that the evidence gathered enables one to answer the initial research question as unambiguously as possible and without bias (Imenda, 2014). The study adopted explanatory design research where gathering and collection of information was through the help of questionnaires. According to Leedy and Ormrod (2013), explanatory method assesses a phenomenon by looking principally at quantities or amounts which are then analyzed using some kind of generally accepted measurement standards. Explanatory studies are described through hypotheses that specify the nature and direction of the relationship between or among variables being studied. This design was therefore appropriate for this study since it aimed at testing hypotheses using dataset for one year that is the financial year 2022/2023.

3.3 Target Population

According to (Kothari 2004) population refers to a group of individuals, things, elements, households that are well-defined and which are being examined. Research should have a population onto which the study's findings are generalised. The target population for this study was 3872 business owners of Small and Medium Enterprises in Eldoret town, Kenya. KRA (2022).

3.4 Sampling Frame

Cooper & Schindler (2014) define a sampling frame as a list that consist of all the elements from which a representative sample is drawn and has relations to the study's target population. They further propose that the listed elements could be individuals, geographical locations, institutions or organizations or other units as defined by the research phenomena under study. The current list is of registered businesses from different sectors formed the sampling frame. These were from tourism and hospitality, health services/clinics, jua kali, irrigation and agriculture, building and construction, professionals and general retailers and wholesalers.

Table 3.1: Target population

Category	Target population
Health services/clinics	314
Irrigation and Agriculture	370
Tourism and hospitality	
General retailers and wholesalers	439
	1295
Jua Kali	721
Building and construction	502
Professionals	231
TOTAL	3872

3.5 Sample Size and Sampling Technique

Sampling technique is the process through which the entities in a sample are identified and selected (OECD, 2004). The study adopted a stratified sampling technique to place the SMEs in categories relating to the sectors they belong. Simple random sampling was then utilized to pick individual SMEs from each stratum. A sample is a subset of the population. By studying the sample, the researcher should be able to draw conclusions that would be generalizable to the population of interest (Sekaran, 2003). Yamane formula was used for determining the sample size for this study because Yamane formula assumes a normal distribution and it is assumed that the taxpayer was distributed normally in relation to the parameters under study that is SMEs in Eldoret town. The sample size of the will be ascertained using Yamane's (1967) formula.

n= N/(1+N 〖(e)〗 ^2)

Where: N = Population size

n = sample size

e = Margin error of the study

Sample size therefore was

=3872/(1+3872(0.05)^2)=3872/(1+3872(0.0025))=3872/(1+9.68)=3872/10.68 = 362 respondents

Table 3.2: Sample Size

Category	Sample Size
Health services/clinics	29
Irrigation and Agriculture	35

Tourism and hospitality	
General retailers and wholesalers	41
121	
Jua Kali	67
Building and construction	47
Professionals	22
TOTAL	362

3.6 Data Collection Instruments

The primary data was collected using a structured questionnaire. A questionnaire refers to a series of questions that are aimed at fulfilling the collective purpose of a study and they are completed by study respondents (Brace, 2018). It also refers to a list of questions (closed or open-ended) aimed at realizing specific raw data from the field that was the population of interest to the study. The use of questionnaire were best suited due to its ability to gather facts from respondents without alterations of their first-hand opinions on the area of study, it allowed the respond to give answers without being influenced and it cost effective in acquiring information from the target population as it covered a huge geographical area. The design of the questions was have a demographic section and main sections having a five- point Likert scale where 1= Strongly disagree to 5= Strongly agree. The sections were divided based on the objectives of the study.

3.7 Data Collection Procedure

This is the roadmap of the data collection component of the research process. First, the researcher obtained an introduction letter and research permits from National Commission for Science, Technology, and Innovation (NACOSTI) for data collection. The questionnaires were administered to the respondents using the drop and pick method during official working hours. Blumberg (2014), stated that a self-administered survey method is appropriate when it is important for the respondent to have adequate time to carefully consider their responses. The respondents, who did not have filled the questionnaires during picking, were given three more days to complete.

Assumptions of Regression

When using the regression model, there are assumptions that have to be made to the model to determine the relationship between the independent and dependent variables (Osborne & Waters, 2014). "These assumptions must be met before inferences are drawn and if not the results may not be valid and therefore it may result in type 1 or type 11 error or under or overestimation of significance level (Wheeler & Tiefelsdorf, 2005)." Therefore, the assumptions have to be pretested for a valid result. Prior to data analysis, assumptions for normality were checked together with homoscedasticity, linearity, autocorrelations, and multicollinearity.

Test of Normality

Multiple regression assumes that the data under test is normally distributed (Osborne & Waters, 2014). "It is assumed that errors are normally distributed, and that a plot of the values of residuals will approximate a normal curve (Keith,2006)". Non-normally distributed variables can distort relationships and significance tests (Osborne & Waters, 2014). There are several ways of testing normality such as Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson Darling. Shapiro-Wilk test was used as it is the most powerful normality test (Razali & Wah, 2011). The results of above 0.05 ($p > 0.05$) confirms data normality

Homoscedasticity test

Homoscedasticity is the variance or spread of errors from the regression line is constant. According to Lani (2010) about regression, an error is how distant a point deviates from the normal line of regression. "The assumption of linear regression is that the spread of the residual or the error term is constant across the graph and if this assumption is violated, the statistical results may not be trustworthy due to biased coefficients. The results from the homoscedasticity test F-statistic p value >0.05, shows that the assumption for homoscedasticity is not violated.

Linearity test

The link between the dependent and independent variables will be determined using linearity tests and it was established that it is linear. "The assumption for linearity measured through a deviation from linearity mElectronic Tax Registeric with alpha of 0.05. Csörgő, (1985) elaborated that if the p value of deviation from linearity is >0.05 the assumption of linearity is not violated, if the p value is <=0.05 the assumption for linearity has been violated."

Multicollinearity Test

Multicollinearity is point where there is high correlation among the independent variables (Keith, 2006). "The researcher is able to interpret regression coefficients as the effects of the independent variables when there is low collinearity (Keith,2006)".In order to test for multicollinearity, Variance inflation factor (VIF) was computed using statistical packages for social science (SPSS). Multicollinearity increases the standard errors of the coefficients and thus makes some variables statistically not significant while they should otherwise be significant (Osborne and Waters, 2014).

Bowerman and Connell (2006) stated that lower levels of VIF are more better, while higher levels of VIF are known to affect adversely the result associated with a multiple regression analysis. Multicollinearity test was carried out using the Variance Inflation Factor (VIF)for all independent variables < 10 implies no Multicollinearity problem VIF for all independent variables >10 suggest multicollinearity problem

Operationalization of Variables

Variable	Indicators	Source	Measurement Scale	Data collection instrument	Type of analysis
Independent		Syafira, Ratnasari and Ismail (2020)	5- point Likert scale		Descriptive Statistics
Digital payment processing	Mobile payments				
	E-slip generation			Questionnaire	Correlation analysis.
					Regression Analysis.

Independent 5- point Likert scale Descriptive Statistics
Tax Invoice Management System
Perceived usefulness and benefit of TIMs machines
Verification of VALUE ADDED TAX pre-filled Le and Nguyen (2021) Questionnaire Correlation analysis.
Regression Analysis.
Independent 5- point Likert scale Questionnaire Descriptive Statistics
Withholding VALUE ADDED TAX system
Awareness of WHVALUE ADDED TAX tax policy reforms
Rate of withholding VALUE ADDED TAX
Miller and Oats (2019)
Correlation analysis.
Regression Analysis.

5- point Likert scale Questionnaire Descriptive Statistics
Moderator Perceived benefit Cornelius, (2017)
Correlation analysis
Taxpayer perception
Regression Analysis
Dependent
VALUE ADDED TAX Compliance
Returns Filed
VALUE ADDED TAX paid
KRA (2022) 5- point Likert scale
Questionnaire
.
Descriptive
Statistics
Correlation
analysis
Regression Analysis

Data Analysis and Presentation

Data analysis involves the data gathering, modelling, and transforming with the aim of identifying the usefulness of information, suggesting conclusions, and supporting decision making (Fitcher, 2005). Inferential statistics, such as Analysis of Variance was used to analyse qualitative data (ANOVA). The study also conducted multiple regression analysis to develop a mathematical model that connected the independent and dependent factors."

Linear Regression Model Equation

The regression model was used to establish the link between the independent variable and the dependent variable as follows.

$$Y=\beta_0+\beta_1 FA+\beta_2 DP+\beta_3 TS+\beta_4 WS+\varepsilon,$$

Model Specifications for Testing Moderation

$$Y=\beta_0+\beta_1 FA+\beta_2 DP+\beta_3 TS+\beta_4 WS+\beta_5 TP+\varepsilon,$$

$$Y=\beta_0+\beta_1 FA+\beta_2 DP+\beta_3 TS+\beta_4 WS+\beta_5 TP+\beta_6 DP*TP+\varepsilon,$$

$$Y=\beta_0+\beta_1 FA+\beta_2 DP+\beta_3 TS+\beta_4 WS+\beta_5 TP+\beta_6 DP*TP+\beta_7 TS*TP+\varepsilon,$$

$$Y=\beta_0+\beta_1 FA+\beta_2 DP+\beta_3 DP+\beta_4 TS+\beta_5 WS+\beta_6 TP+\beta_7 DP*TP+\beta_8 TS*TP+\beta_9 WS*TP\varepsilon,$$

Where: Y = Value Added Tax Compliance
FA = Firm Age
DP= Digital payment process
TS= Tax Invoice Management System
WS = Withholding Value Added Tax system
TP= Taxpayer perception as a moderator

β_0 = Constant term

β_1,β_2,andβ_3 = regression coefficient of three independent variables

ε= error term

4. FINDINGS

Reliability test

Table 4.1 shows the reliability test results, Cronbach's alphas >0.7 indicates that the questionnaire items selected were reliably able to explain the study Value Added Tax compliance $\alpha=0.918>0.7$, digital payment process has a $\alpha=0.989>0.7$, Tax invoice management system$\alpha=0.975>0.7$, withholding Value Added Tax system$\alpha=0.970>0.7$, and lastly the moderator variable taxpayer perception $\alpha=0.981>0.7$.

Table 4.1: Reliability Tests

Variable	Cronbach's Alpha	N of Items
value tax compliance	0.918	4
digital payment process	0.989	4
Tax invoice management system	0.975	4
withholding Value Added Tax system	0.970	5
taxpayer perception	0.981	4

Response Rate

Most studies should aim for response rates of about 60%, and the Editor and Associate Editors of the Journal surely expect this. A response rate of 80% is estimated for survey research that aims to represent all pharmacy schools and colleges. Figure 4.1 indicates that out of 362 questionnaires that were issued, only 281 were filled and returned implying a response rate of 78%.

Figure 4.1: Response rate

Demographics Data

The demographic analysis presented in Table 4.2 provides insights into two aspects: the duration of business operation and the level of education of the respondents.

The data reveals a relatively even distribution across the different categories of business operation duration. The largest group is comprised of businesses that have been in operation for 3 to 5 years (22.8%), closely followed by those in operation for less than 3 years (22.1%). Businesses that have been in operation for 11 to 15 years constitute 20.3% of the

sample, while those in operation for 6 to 10 years make up 18.5%. The smallest group is businesses that have been in operation for more than 15 years, representing 16.4% of the sample.

The majority of respondents hold an Undergraduate Degree (36.7%). Those with a Certificate form the second largest group (20.6%), followed by respondents with a Master's Degree (16.7%). Respondents with a Diploma constitute 14.6% of the sample, while those with a High School Certificate make up 8.5%. The smallest group is comprised of respondents with a PhD, representing only 2.8% of the sample. The total respondents were 281.

Table 4.2 Demographics data

Demographics on how long have you been in business	Frequency	Percent	
Less than 3 years	62	22.1	
3 to 5 years	64	22.8	
6 to 10 years	52	18.5	
11-15 years	57	20.3	
More than 15 years	46	16.4	
Demographics on Level of Education			
High school certificate	24	8.5	
Certificate	58	20.6	
Diploma	41	14.6	
Under Graduate Degree	103	36.7	
Master	47	16.7	
PhD	8	2.8	
Total	281	100.0	

Descriptive Statistics

A Likert scale was used in the surveys to measure respondents' degrees of agreement. The scale went from 1 to 5, with 1 representing significant disagreement and 5 representing strong agreement. Measures of central tendency were used to explain variables in respects to the objective of the study.

Descriptive statistics on digital payment process

Table 4.3 indicates a descriptive statistic for different items representing digital payment process the results shows that: electronic processing of bills to taxpayers is efficient: With a mean of 4.04, the majority of the 281 respondents agree that the electronic processing of bills is efficient. The standard deviation of 0.836 indicates that the responses are fairly close to the mean. The negative skewness (-.252) suggests that the distribution of responses is slightly skewed towards the higher end of the scale (Agree and Strongly Agree). The negative kurtosis (-.907) indicates that the distribution has lighter tails and a flatter peak than the normal distribution.

Digital processing of payment slip is fast: The mean of 4.05 suggests that most respondents agree that the digital processing of payment slips is fast. The standard deviation of 0.818 shows that the responses are fairly close to the mean. The negative skewness (-.132) and kurtosis (-1.392) suggest a distribution similar to the first item.

Mobile payment of taxes is cost-efficient: The mean of 4.03 indicates that most respondents agree that mobile payment of taxes is cost-efficient. The standard deviation of 0.823 shows that the responses are fairly close to the mean. The negative skewness (-.208) and kurtosis (-.929) suggest a distribution similar to the first two items.

Inclusion of electronic fund transfers has seen timely payment of Value Added Tax due: The mean of 4.06 suggests that most respondents agree that the inclusion of electronic fund transfers has resulted in timely payment of Value Added Tax. The standard deviation of 0.802 shows that the responses are fairly close to the mean. The negative skewness (-.110) and kurtosis (-1.435) suggest a distribution similar to the previous items.

Table 4.3: Descriptive statistics digital payment process

Items	N	Mean	Std. Dev	Skewness	Kurtosis
Electronic processing of bills to taxpayers is efficient	281	4.04	.836	-.252	-.907
Digital processing of payment slip is fast	281	4.05	.818	-.132	-1.392
Mobile payment of taxes is cost efficient	281	4.03	.823	-.208	-.929
Inclusion of electronic fund transfers has seen timely payment of Value Added Tax due	281	4.06	.802	-.110	-1.435

Descriptive statistics on Tax invoice management system

Table 4.4 indicates descriptive statistics in regards to tax invoice management system

Our business enjoys input tax while trading with registered Value Added Tax suppliers: The mean score is 4.07, which is closer to "Agree" (4) on the Likert scale. This suggests that most respondents agree that their business enjoys input tax while trading with registered Value Added Tax suppliers. The standard deviation is 1.070, indicating that the responses vary around the mean. The negative skewness (-.794) and kurtosis (-.713) suggest that the distribution of responses is slightly skewed towards higher scores and has lighter tails, meaning fewer extreme scores.

Electronic Tax Register invoice is issued to all Value Added Tax transactions: The mean score is 4.06, indicating that most respondents agree that an Electronic Tax Register invoice is issued to all Value Added Tax transactions. The standard deviation is 1.062, showing some variation in responses. The negative skewness (-.769) and kurtosis (-.728) suggest a slight skew towards higher scores and fewer extreme scores.

Our business keeps records for electronic Tax Invoice: The mean score is 4.00, which exactly corresponds to "Agree" on the Likert scale. This suggests that most respondents agree that their business keeps records for electronic Tax Invoices. The standard deviation is 1.059, indicating some variation in responses. The negative skewness (-.672) and kurtosis (-.833)

suggest a slight skew towards higher scores and fewer extreme scores.

Our business monitors sales by use of ETR receipts: The mean score is 3.99, which is close to "Agree" on the Likert scale. This suggests that most respondents agree that their business monitors sales using ETR receipts. The standard deviation is 1.062, indicating some variation in responses. The negative skewness (-.688) and kurtosis (-.805) suggest a slight skew towards higher scores and fewer extreme scores.

Table 4.4: Descriptive statistics Tax invoice management system

Items	N	Mean	Std. Dev	Skewness	Kurtosis
Our business enjoys input tax while trading with registered Value Added Tax suppliers	281	4.07	1.070	-.794	-.713
Electronic Tax Register invoice is issued to all Value Added Tax transactions	281	4.06	1.062	-.769	-.728
our business keeps records for electronic Tax Invoice	281	4.00	1.059	-.672	-.833
Our business monitors sales by use of Electronic Tax Register receipts	281	3.99	1.062	-.688	-.805

Descriptive statistics on withholding Value Added Tax system

Table 4.5 indicates descriptive statistics on the responses on the items related to withholding Value Added Tax system.

Improved relations between taxpayers and KRA officers translate to WHVAT compliance: The mean score is 4.12, suggesting that most respondents agree or strongly agree with this statement. The standard deviation is 1.050, indicating a moderate spread of responses around the mean. The negative skewness (-.904) suggests that the distribution of responses is skewed towards higher scores (Agree or Strongly Agree). The negative kurtosis (-.482) indicates that the distribution has lighter tails and a flatter peak than the normal distribution.

Enhanced customer service delivery is attributed to WHVAT compliance: The mean score is 4.01, again indicating that most respondents agree or strongly agree. The standard deviation is 1.054, showing a similar spread of responses to the first item. The negative skewness (-.741) and kurtosis (-.698) suggest a distribution skewed towards higher scores and a flatter peak than the normal distribution.

We remit all the withholding tax collected at our business: The mean score is 3.98, which is close to 4 (Agree), suggesting that most respondents agree with this statement. The negative skewness (-.670) and kurtosis (-.794) indicate a distribution skewed towards higher scores and a flatter peak than the normal distribution.

I always remit the taxes withheld on/in time: The mean score is 4.06, indicating that most respondents agree or strongly agree. The negative skewness (-.796) and kurtosis (-.597) suggest a distribution skewed towards higher scores and a flatter peak than the normal distribution.

The amounts withheld and remitted to KRA are correctly stated: The mean score is 4.00, indicating that most respondents agree with this statement. The negative skewness (-.715) and kurtosis (-.575) suggest a distribution skewed towards higher scores and a flatter peak than the normal distribution.

Descriptive statistics withholding Value Added Tax system

Items	N	Mean	Std. Dev	Skewness	Kurtosis
Improved relations between taxpayers and KRA officers translate to WHVATcompliance	281	4.12	1.050	-.904	-.482
Enhanced customer service delivery is attributed to WHVAT compliance	281	4.01	1.054	-.741	-.698
We remit all the withholding tax collected at the our business	281	3.98	1.054	-.670	-.794
I always remit the taxes withheld on/in time	281	4.06	1.038	-.796	-.597
The amounts withheld and remitted to KRA are correctly stated	281	4.00	1.005	-.715	-.575

Descriptive statistics on taxpayer perception

Table 4.6 shows the descriptive statistics of taxpayer perceptions on various items the interpretation of the results is as follows:

Usage of public funds influences the willingness to pay tax in Kenya: With a mean of 4.03, it indicates that the majority of the respondents agree or strongly agree with this statement. The standard deviation of 1.079 shows some variability in responses. The negative skewness and kurtosis values suggest that the distribution of responses is slightly skewed towards higher values (Agree/Strongly Agree) and has lighter tails and a flatter peak than a normal distribution.

Responsibility of the Government to provide quality services to its citizens: The mean score of 4.01 suggests that most respondents agree or strongly agree that it's the government's responsibility to provide quality services. The standard deviation of 1.081 indicates some variability in responses. The negative skewness and kurtosis values suggest a slight skew towards higher values and a flatter distribution compared to a normal distribution.

Relations between KRA staff and taxpayers is positive: The mean score of 3.98 suggests that respondents generally agree with this statement. The standard deviation of 1.077 shows some variability in responses. The negative skewness and kurtosis values suggest a slight skew towards higher values and a flatter distribution compared to a normal distribution.

Probabilities of being detected by the tax authority for not declaring the exact income are low: The mean score of 3.86 suggests that respondents are somewhat uncertain or agree with this statement. The standard deviation of 1.055 shows some variability in responses. The negative skewness and kurtosis values suggest a slight skew towards higher values and a flatter distribution compared to a normal distribution.

Table 4.6: Descriptive statistics taxpayer perception

Items	N	Mean	Std. Dev	Skewness	Kurtosis

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It is perceived that usage of public funds influences the willingness to pay tax in Kenya 281 4.03 1.079 -.762 -.750

We perceive it the responsibility of the Government to provide quality services to its citizens. 281 4.01 1.081 -.740 -.780

We perceive that the relations between KRA staff and taxpayers is positive 281 3.98 1.077 -.707 -.803

We perceive that the probabilities of being detected by the tax authority for not declaring the exact income that I receive are low. 281 3.86 1.055 -.547 -.906

Descriptive statistics on Value Added Tax compliance

Table 4.7 demonstrations the descriptive statistics for a survey on Value Added Tax compliance. The results are as follows;

We file our returns accurately: The mean score is 4.11, which is closer to "Agree" (4) on the Likert scale. This suggests that most respondents agree that they file their returns accurately. The standard deviation is 1.010, indicating that responses vary around the mean. The negative skewness (-.789) indicates that the distribution of responses is skewed towards higher values, and the negative kurtosis (-.606) suggests that the distribution has lighter tails and a flatter peak than the normal distribution.

Our business pays Value Added Tax by the due date because we believe it is morally right: The mean score is 4.01, suggesting that most respondents agree with this statement. The standard deviation is 1.038, indicating some variation in responses. The negative skewness (-.645) and kurtosis (-.845) suggest a distribution skewed towards higher values and a flatter peak than the normal distribution.

We always remit our Value Added Tax to KRA in time: The mean score is 3.81, which is closer to "Agree" (4) on the Likert scale, suggesting that most respondents agree with this statement. The standard deviation is 1.086, indicating a wider spread of responses. The negative skewness (-.401) and kurtosis (-1.150) suggest a distribution skewed towards higher values and a flatter peak than the normal distribution.

I compute and pay my Value Added Tax correctly and in good time as stipulated by the law: The mean score is 4.08, suggesting that most respondents agree with this statement. The standard deviation is 1.049, indicating some variation in responses. The negative skewness (-.755) and kurtosis (-.749) suggest a distribution skewed towards higher values and a flatter peak than the normal distribution.

Table 4.7: Descriptive statistics Value Added Tax compliance

Items	N	Mean	Std. Dev	Skewness	Kurtosis
We file our returns accurately	281	4.11	1.010	-.789	-.606
Our business pays Value Added Tax by the due date because we believe it is morally right	281	4.01	1.038	-.645	-.845
We always remit our Value Added Tax to KRA in time	281	3.81	1.086	-.401	-1.150
I compute and pay my Value Added Tax correctly and in good time as stipulated by the law	281	4.08	1.049	-.755	-.749

Factor Analysis

Sufficient dimension reduction (SDR) techniques are a class of supervised dimension-reduction approaches that aim to reduce dimensionality while retaining information about a target variable of interest. However, current SDR approaches often require more observations than the number of dimensions according to .(Jha et al., 2021).

Validity Analysis

Results in Table 4.8 showed that the KMO value was 0.623 which was above the recommended minimum threshold of 0.5. This statistic implies that the statements in the questionnaire were adequate. In addition, results of the Bartlett roundness test yielded a chi-square statistic of 41.373 and a p-value of 0.000<0.05.

Table 4.8: KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.623	
Bartlett's Test of Sphericity	Approx. Chi-Square	41.373
	df	10
	Sig.	.000

Factor analysis Diagnostic test using scree plots

The scree plot is a graphical approach for plotting the correlation matrix's eigenvalues versus the number of elements. The eigenvalues show the proportion of variation explained by each component. The scree plot can assist in determining the best number of elements to maintain by locating the point when the curve's slope abruptly changes (the "elbow"). A scree plot with a distinct elbow suggests that the data are appropriate for factor analysis.

Digital payment process

Figure 4.2 shows a scree plot for digital payment process with elbow on component 2 indicating that digital payment process is sufficient for factor analysis.

Figure 4.2: Scree plot digital payment process

Tax invoice management system

Figure 4.3 shows that tax invoice management system has a precise elbow indicating that the data are appropriate for factor analysis.

Figure 4.3: Scree plot Tax invoice management system

Withholding Value Added Tax system

Figure 4.4 shows that withholding Value Added Tax system has a precise elbow indicating that the data are appropriate for factor analysis.

Figure 4.4: Scree plot withholding Value Added Tax system

Taxpayer perception

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Figure 4.5 shows that taxpayer perception has a precise elbow indicating that the data are appropriate for factor analysis.

Figure 4.5: Scree plot taxpayer perception

Value Added Tax compliance

Figure 4.6 shows that Value Added Tax compliance has a precise elbow indicating that the data are appropriate for factor analysis.

Figure 4.6: Scree plot Value Added Tax compliance

Exploratory Factor loading

The scree plots and Factor extraction loadings were used to determine the factors that were selected according to L. B. (2013) The scree plot identified the point at which the eigenvalues level off, indicating that the remaining factors are not sufficient for extraction. The factors above this point are retained, and the factors below this point are discarded. Factor loadings in a factor analysis represent the strength and direction of the relationship between observed variables (items) and latent factors. Value Added Tax Compliance (VATC1 to VATC4): VATC1: This item has a high factor loading of .847 on the first latent factor. VATC2: This item has a high factor loading of .884 on the first latent factor. VATC3: This item has a substantial factor loading of .740 on the first latent factor. VATC4: This item has a substantial factor loading of .748 on the first latent factor.

Items related to Value Added Tax compliance (VATC1 to VATC4) are strongly associated with the first latent factor, from the scree items VATC1 is retained.

Digital Payment Process (DPP1 to DPP4): DPP1: This item has a very high factor loading of .967 on the second latent factor. DPP2: This item has a very high factor loading of .971 on the second latent factor. DPP3: This item has an extremely high factor loading of .980 on the second latent factor. DPP4: This item has a high factor loading of .928 on the second latent factor. Items related to the digital payment process (DPP1 to DPP4) are strongly associated with the second latent factor. from the scree items DPP1 is retained

Tax Invoice Management System (TIMS1 to TIMS4): TIMS1: This item has a very high factor loading of .938 on the third latent factor. TIMS2: This item has a very high factor loading of .937 on the third latent factor. TIMS3: This item has an extremely high factor loading of .948 on the third latent factor. TIMS4: This item has a high factor loading of .902 on the third latent factor. Items related to the tax invoice management system (TIMS1 to TIMS4) are strongly associated with the third latent factor. TIMS1 is retained

Withholding Value Added Tax System (WVS1 to WVS5): WVS1: This item has a high factor loading of .832 on the fourth latent factor. WVS2: This item has a very high factor loading of .957 on the fourth latent factor. WVS3: This item has a very high factor loading of .927 on the fourth latent factor. WVS4: This item has a substantial factor loading of .894 on the fourth latent factor. WVS5: This item has a high factor loading of .832 on the fourth latent factor.

Interpretation: Items related to the withholding Value Added Tax system (WVS1 to WVS5) are strongly associated with the fourth latent factor. Factors WVS1 is retained

Taxpayer Perception (TPP1 to TPP4): TPP1: This item has a very high factor loading of .959 on the fifth latent factor. TPP2: This item has a very high factor loading of .970 on the fifth latent factor. TPP3: This item has a very high factor loading of .965 on the fifth latent factor. TPP4: This item has a substantial factor loading of .890 on the fifth latent factor.

Interpretation: Items related to taxpayer perception (TPP1 to TPP4) are strongly associated with the fifth latent factor. Factors TPP1 is retained.

Table 4.9: Factor Extraction

	Value Added Tax Compliance	digital payment process	Tax invoice management system	withholding Value Added Tax system	taxpayer perception
VALUE ADDED TAXC1	.847				
VALUE ADDED TAXC2	.884				
VALUE ADDED TAXC3	.740				
VALUE ADDED TAXC4	.748				
DPP1		.967			
DPP2		.971			
DPP3		.980			
DPP4		.928			
TIMS1			.938		
TIMS2			.937		
TIMS3			.948		
TIMS4			.902		
WVS1				.832	
WVS2				.957	
WVS3				.927	
WVS4				.894	
WVS5				.832	
TPP1					.959
TPP2					.970
TPP3					.965
TPP4					.890

Regression Assumptions

Regression assumptions are used to determine the statistical suitability of the regression models within a study. Assumptions for homoscedasticity, normality, multicollinearity, autocorrelation, and linearity are tested. In certain circumstances, violating these assumptions will not affect the core study outcomes. In other circumstances, assumption violations jeopardize the validity of study (Garson, 2012).

Normality test

Normality test was conducted in table 4.9 The Shapiro-Wilk test is a statistical test used to assess whether a given sample comes from a normally distributed population.

The Shapiro-Wilk test for digital payment process revealed p-value of .624. Since the p-value (.624) is greater than the

conventional significance level of 0.05, Therefore, the data for the digital payment process variable appears to be normally distributed.

For the Tax Invoice Management System variable, the Shapiro-Wilk test resulted a p-value of .490. Similar to the previous case, the p-value exceeds the standard threshold of 0.05, indicating that there is no significant departure from normality. Thus, the distribution of the Tax Invoice Management System variable is normal.

The Shapiro-Wilk test for the Withholding Value Added Tax System variable produced a p-value of .866. Once again, the p-value is greater than 0.05, suggesting that there is no evidence the findings can be inferred that the data for the Withholding Value Added Tax System variable follows a normal distribution.

The Shapiro-Wilk test for the Taxpayer Perception variable yielded a p-value of .679. As the p-value exceeds 0.05, there is no significant departure from normality, and we fail to reject the null hypothesis. Consequently, the distribution of the Taxpayer Perception variable is considered to be consistent with a normal distribution.

Table 4.10: Normality Tests

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Digital payment process	.952	281	.860	.996	281	.624
Tax_invoice management system	.955	281	.090	.995	281	.490
withholding Value Added Tax system	.941	281	.680	.997	281	.866
taxpayer perception	.978	281	.700	.996	281	.679

a. Lilliefors Significance Correction

Heteroscedasticity test

Table 4.11 shows the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity was applied to the residuals with the null hypothesis (Ho) stating constant variance. The test statistic, chi2(1), has a p-value of 0.781, which exceeds the conventional significance level of 0.05. Therefore, we fail to reject the null hypothesis. The results suggest that there is no significant evidence to indicate the presence of heteroskedasticity in the residuals.

Based on the Breusch-Pagan / Cook-Weisberg test results, this implies that the assumption of homoskedasticity is not violated, and the variance of the residuals appears to be constant across the range of observed values.

Table 4.11: Heteroscedasticity test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: residuals
chi2(1)
Prob > chi2 = 0.781
= 3.445

Multicollinearity test

The multicollinearity test in table 4.12 shows VIF for digital payment process is 1.006<10, Tax invoice management system has VIF of 1.014<10, withholding VALUE ADDED TAX system has a VIF of 1.005<10. Lastly the moderator variable taxpayer perception is VIF is 1.015<10. The low VIF figures indicate that the variables are not correlated meaning that the assumption is not violated.

Table 4.12: Multicollinearity test

Model		Collinearity Statistics	
		Tolerance	VIF
1	Digital payment process	.994	1.006
	Tax invoice management system	.986	1.014
	withholding VALUE ADDED TAX system	.995	1.005
	taxpayer perception	.985	1.015

a. Dependent Variable: Value Added Tax compliance

Linearity test

Table 4.13 indicates the test for linearity which test for deviation from linearity is not statistically significant, p = 0.103>0.05, indicating that the linear relationship is present between the predictors and the predicted variables. It is essential to explore the nature of this non-linearity further to better understand the underlying patterns in the data.

Table 4.13: Linearity test

		Sum of Squares	df	Mean Square	F	Sig.
VALUE ADDED TAX Compliance * Residuals	Between Groups	(Combined)	5.996	3	1.999	5.985	.001
		Linearity	4.468	1	4.468	13.378	.000
		Deviation from Linearity	1.529	2	.764	2.289	.103
	Within Groups		92.502	277	.334		
	Total		98.498	280			

Correlation Analysis

The correlation matrix is used to determine the strength direction and significance in the relationship between system automation and Value Added Tax compliance. Table 4.14 shows that the control variable firm age has a positive and significant relationship with Value Added Tax compliance r=-0.311, p=0.003<0.05. Further digital payment process has a positive and significant relationship with Value Added Tax compliance r=-0.579, p=0.000<0.05. Indicating that Value Added Tax compliance tends to improves with a better digital payment process. Further analysis shows that Tax invoice management system has a positive and significant relationship with Value Added Tax compliance r=-0.534, p=0.000<0.05. Indicating that improving Tax invoice management system improves Value Added Tax compliance. Withholding Value Added Tax system indicates a positive and significant relationship with Value Added Tax compliance r=-0.573, p=0.000<0.05. Lastly taxpayer perception has a positive and significant relationship with Value Added Tax compliance r=-

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0.508, p=0.000<0.05. Indicating that as taxpayer perception improves Value Added Tax compliance tends upwards.

Table 4.14: Correlation Matrix

		Value Added Tax WVTS	Firm Age	DPP	TIMS	TPP
Value Added Tax	Pearson Correlation	1				
Firm Age	Pearson Correlation	.311	1			
Digital payment process	Pearson Correlation	.579**	.447	1		
Tax invoice management system	Pearson Correlation	.534**	.123	.931**	1	
Withholding Value Added Tax	Pearson Correlation	.573**	.002	.940**	.968**	1
Taxpayer perception	Pearson Correlation	.508	.007	.011	.013	-.018

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

Regression Analysis

The main objective was to determine the moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The first step before introduction of the moderator variable the effect of system automation on Value Added Tax compliance is determined using a regression model.

The model summary on table 4.15 indicates a that the system automation had a positive relationship on Value Added Tax Compliance R=0.597. The study shows that system automation controlled by the firm age causes a 35.6% variation on Value Added Tax compliance. The remaining 64.40 % is caused by factors not captured in the model.

Table 4.15: Model Summary effect of system automation on Value Added Tax compliance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.597	0.356	0.347	.47935

The analysis of variation caused on Value Added Tax compliance by the digital payment process, Tax invoice management system, withholding Value Added Tax system controlled for firm age was conducted. Table 4.16 shows that F statistic 51.067 and p value of 0.000<0.05. Indicating that the variation caused is statistically significant.

Table 4.16: ANOVA effect of system automation on Value Added Tax compliance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.077	4	11.692	51.067	0.000
	Residual	63.422	276	0.229		
	Total	98.498	280			

a. Dependent Variable: Value Added Tax Compliance

Direct effect of system automation on Value Added Tax compliance

The regression equation is as follows;

Y=3.125+0.005FA+0.429DP+0.483TS+0.637WS

Table 4.17 shows that at a constant of 3.125 a unit change in digital payment process causes a 0,429 improvement in Value Added Tax compliance. A 0.483 improvement Value Added Tax compliance is caused by a unit change in Tax invoice management system. A unit change in withholding Value Added Tax system causes an increase of 0.637 in Value Added Tax compliance. Lastly a unit change in firm age causes a 0.005 increase in Value Added Tax compliance, the change in statistically significant indicating the age of the business significantly controls for the effects of system automation on Value Added Tax compliance.

Table 4.17: Regression effect of system automation on Value Added Tax compliance

Model		Standardized Coefficients		Un-standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.125	0.123		25.407	0.000
	Firm Age	0.005	0.002	0.003	2.500	0.041
	Digital payment process	0.429	0.078	0.230	5.500	0.000
	Tax invoice management system	0.483	0.102	0.247	4.735	0.000
	Withholding Value Added Tax system	0.637	0.114	0.341	5.588	0.000

a. Dependent Variable: Value Added Tax Compliance

Hierarchical model

The moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya, was determined by conducting a hierarchical regression model breaking down the moderating effect of taxpayer perception on the relationship between each independent variable and Value Added Tax compliance. According to Baron and Kenny (1986) three distinctive steps are followed in the process of moderation

The first step is to demonstrate a significant relationship between the independent variable (system automation) and the dependent variable (Value Added Tax compliance) without considering the moderating variable (taxpayer perception). To achieve this, a regression analysis was conducted to establish this relationship. The next step is to show the effect of taxpayer perception on Value Added Tax compliance by conducting a regression analysis with taxpayer perception as the independent variable and Value Added Tax compliance as the dependent variable.

The step that follows is to introduce the interaction terms between system automation variables and taxpayer perception in the regression model. These interactions terms are the product of the scores of system automation variables and taxpayer perception. Next, examine whether the interaction terms are significant through a hierarchical regression model. If the interaction term is significant, it suggests that taxpayer perception moderates the relationship between system automation and Value Added Tax compliance. Lastly if the interaction is significant, simple slopes are analyzed to

understand the nature of the moderation. This involves examining the effect of system automation on Value Added Tax compliance at different levels of taxpayer perception.

Figure 4.7 indicates a simple illustration of the hierarchical model

Figure 4.7: Hierarchical model

Source (Baron & Kenny, 1986)

The ANOVA model 5 indicates that after adding taxpayer perception as a moderator system automation causes a significant variation on Value Added Tax compliance. F statistic = 17.236 p value =0.000<0.05. Changes in the F statistic indicate that there is moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance.

Table 4.18: ANOVA taxpayer perception and system automation on VALUE ADDED TAX Compliance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.077	4	11.692	51.067	0.000
	Residual	63.422	276	0.229		
	Total	98.498	280			
2	Regression	34.171	5	6.834	29.216	0.000
	Residual	64.327	275	0.234		
	Total	98.498	280			
3	Regression	33.824	6	5.637	23.883	0.000
	Residual	64.674	274	0.236		
	Total	98.498	280			
4	Regression	33.593	7	4.799	20.186	0.000
	Residual	64.905	273	0.238		
	Total	98.498	280			
5	Regression	33.135	8	4.142	17.236	0.000
	Residual	65.363	272	0.240		
	Total	98.498	280			

a. Dependent Variable: VALUE ADDED TAX Compliance

Table 4.19 shows the model summary process of moderation, the model progress shows an R square change as the Variation changes from model 1 to model 5. Model 5 shows the final model after moderation occurs. The model shows that R=0.356, The coefficient of determination indicates that after moderating the relationship between system automation and Value Added Tax compliance the variation caused was 35.6%. The remaining 64.4% of the variation can be attributed to factors not analyzed in this study.

Table 4.19: Model Summary

	Model 1	Model 2	Model 3	Mode 4	Model 5
Constant	3.116(0.096)**	3.268(0.126)**	3.564(0.277)**	3.571(0.279)**	3.580(0.293)**
Firm Age	0.005(0.002)**	0.004(0.001)**	0.004(0.001)**	0.003(0.001)**	0.003(0.001)**
Digital -payment process		0.429(0.078)**	0.433(0.078)**	0.278(0.104)**	0.355(0.128)** 0.371(0.145)**
Tax invoice Management System		0.482(0.102)**	0.477(0.101)**	0.473(0.101)**	0.551(0.221)** 0.502(0.113)**
Withholding VALUE ADDED TAX System		0.636(0.114)**	0.627(0.114)**	0.623(0.114)**	0.618(0.114)** 0.553(0.241)**
Taxpayer Perception		0.089(0.026)**	0.270(0.085)**	0.274(0.085)**	0.276(0.087)**
dp-tpp		0.244(0.023)**	0.131(0.065)**	0.109(0.020)**	
tims tpp		0.119(0.043)**	0.041(0.017)**		
wvs-tpp		0.103(0.023)**			
R2	0.336	0.341	0.343	0.347	0.356
Change in R2		0.005	0.002	0.004	0.009
F statistic	51.067	3.429	1.439	5.042	5.008
F-Sig	0.000	0.000	0.000	0.000	0.000

Regression moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance

The regression equation for the hierarchical process of moderation were;

$$Y=3.125+0.005FA+0.429DP+0.483TS+0.637WS,$$

$$Y=3.268+0.004FA+0.433DP+0.477TS+0.627WS+0.089TP$$

$$Y=3.564+0.004FA+0.278DP+0.473TS+0.623WS+0.270TP+0.244DP*TP$$

$$Y=3.571+0.003FA+0.355DP+0.551TS+0.618WS+0.274TP+0.131DP*TP+0.119TS*TP$$

$$Y=3.580+0.003FA+0.371DP+0.502TS+0.553WS+0.276TP+0.109DP*TP+0.041TS*TP+0.103WS*TP\varepsilon$$

The regression table 4.19 indicates that at a constant of 3.580 a unit change in digital payment process causes a 0.371 improvement in Value Added Tax compliance. A 0.502 improvement Value Added Tax compliance is caused by a unit change in Tax invoice management system. A unit change in withholding Value Added Tax system causes an increase of 0.553 in Value Added Tax compliance. A unit change in taxpayer perception causes an increase of 0.276 in Value Added Tax compliance. The moderating effect of taxpayer perception on relationship between Digital payment process and Value Added Tax compliance is positive and statistically significant $\beta=0.109$. The moderating effect of taxpayer perception on relationship between Tax invoice management system and Value Added Tax compliance is positive and statistically significant $\beta=0.041$. The moderating effect of taxpayer perception on relationship between withholding Value Added Tax system and Value Added Tax compliance is positive and statistically significant $\beta=0.103$. Lastly a unit change in the control variable Firm age causes a significant increase in Value Added Tax compliance $\beta=0.003$.

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Hypotheses Testing

The hypothesis tests were conducted and summarized on table 4.20.

The first hypothesis was that Digital payment process has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The test found that digital payment process has a significant effect on Value Added Tax compliance $p=0.000<0.05$, therefore the null hypothesis is rejected.

The second null hypothesis was that Tax invoice management system has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The test found that Tax invoice management system has a significant effect on Value Added Tax compliance $p=0.000<0.05$, therefore the null hypothesis is rejected.

The third null hypothesis was that Withholding Value Added Tax system has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The test found that Withholding Value Added Tax system has a significant effect on Value Added Tax compliance $p=0.000<0.05$, therefore the null hypothesis is rejected.

The fourth hypothesis taxpayer perception has no significant moderating effect on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study found that taxpayer perception has a significant moderating effect on the relationship between system automation and Value Added Tax compliance $p=0.026<0.05$ therefore the null hypothesis is rejected

The hypothesis was subdivided into three;

a) H04a: taxpayer perception has no significant moderating effect on the relationship between Digital payment process and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study found that taxpayer perception has a significant moderating effect on the relationship between Digital payment process and Value Added Tax compliance $p=0.020<0.05$ therefore the null hypothesis is rejected.

b) H04b: taxpayer perception has no significant moderating effect on the relationship between Tax invoice management systems and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study found that taxpayer perception has a significant moderating effect on the relationship between Tax invoice management systems and Value Added Tax compliance $p=0.017<0.05$ therefore the null hypothesis is rejected.

c) H04c: taxpayer perception has no significant moderating effect on the relationship between Withholding Value Added Tax system and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study found that taxpayer perception has a significant moderating effect on the relationship between Withholding Value Added Tax system and Value Added Tax compliance $p=0.023<0.05$ therefore the null hypothesis is rejected.

Table 4.20: Summary of Hypothesis testing to after 4.12.4

Hypothesis P-value results

H01 Digital payment process has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya 0.000 Reject H01

H02 Tax invoice management has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.000 Reject H02

H03 Withholding Value Added Tax system has no significant effect on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.000 Reject H03

H04 taxpayer perception has no significant moderating effect on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.026 Reject H04

H04a taxpayer perception has no significant moderating effect on the relationship between Digital payment process and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.020 Reject H04a

H04b taxpayer perception has no significant moderating effect on the relationship between Tax invoice management systems and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.017 Reject H04b

H04c taxpayer perception has no significant moderating effect on the relationship between Withholding Value Added Tax system and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. 0.023 Reject H04c

Discussion of Findings

This section of the study recaps the findings.

Digital payment process and Value Added Tax compliance

The first specific objective was to determine the effect of digital payment process on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study sought to investigate the nature of the relationship between digital payment process and Value Added Tax compliance through a correlation analysis which found that there is a positive and significant relationship between the digital payment process and Value Added Tax compliance $r= 0.579$ ($p=0.000<0.05$), this indicates that as digital payment processes improve Value Added Tax compliance is likely to have a positive upward trend, this may not necessarily mean a precise direct correlation. Further insight into the regression model shows that there is a positive effect of digital payment process on Value Added Tax compliance $\beta=0.371$ ($p=0.000<0.05$) indicating that as digital payment processes increase, there is a corresponding increase in Value Added Tax compliance. The positive effect observed implies that businesses using digital payment methods are less likely to engage in tax evasion related to Value Added Tax. Authorities can leverage this insight to encourage the adoption of digital payment systems as a means to reduce tax evasion and enhance overall tax revenue collection. The findings concur with Ajape, Afara and Uthman (2017) sought to find out the effect of e-payment system on tax administration and tax revenue generation at Lagos state revenue services. A sample of 110 employees was chosen and collected data was

processed in form of descriptive statistics. Results indicated that digital payments of taxes enhanced revenue collection at the Lagos state as well as on the efficiency of tax administration.

Tax invoice management system and Value Added Tax compliance

The second specific objective was to establish the effect of Tax invoice management system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. A look at the correlation analysis found that there is a positive and statistically significant relationship between Tax invoice management system and Value Added Tax compliance r= 0.534 (p=0.000<0.05), The findings insinuate that tax invoice management systems significantly contribute to improve the rates of Value Added Tax compliance, the significance indicates that there is a less than 5% chance that this occurs by chance. The regression analysis indicated that there is positive and significant effect of Tax invoice management system on Value Added Tax compliance β=0.502 (p=0.000<0.05). This means that tax invoice management systems have a direct positive influence in improving Value Added Tax compliance among firms, adopting more efficient systems would be impactful to improving Value Added Tax compliance. The study concurs with a study by Obert et.al., (2018) who focused on e-tax systems and its role on tax compliance in Zimbabwe. The study focused on taxpayers in Harare. In this study primary data was sourced and processed in line with the tenets of descriptive statistics. The results were that e-tax systems significantly improved tax compliance for both large taxpayers and small taxpayers.

Withholding Value Added Tax system and Value Added Tax compliance

The third specific objective was to determine the effect of withholding Value Added Tax system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The correlation matrix indicates that withholding Value Added Tax system has a positive and significant relationship with Value Added Tax compliance r= 0.573 (p=0.000<0.05), indicating that as withholding Value Added Tax systems improve Value Added Tax compliance numbers soar, and that the significant below 0.05 indicates that the improves are less likely to occur by chance. The regression model indicated that there is a positive and statistically significant effect of withholding Value Added Tax system on compliance β=0.553 (p=0.038<0.05). This implies that the implementation of a withholding Value Added Tax system is associated with an increase in Value Added Tax compliance this suggests that businesses and taxpayers are more likely to adhere to Value Added Tax regulations when a withholding mechanism is in place. The study concurred with a study by Ndumia, (2014) who said that WHVAT was scrapped owing to among other reasons, the fact that not all Value Added Tax amount withheld was remitted to KRA's account at the Central Bank of Kenya (CBK) which adversely affected the overall Value Added Tax revenue performance. WHVAT was re-introduced in 2014 in Kenya and the authority argues that it has increased Value Added Tax performance attributing such performance on the WHVAT framework.

Taxpayer perception on relationship between System Automation and Value Added compliance

The fourth specific objective was to determine the moderating effect of taxpayer perception on relationship between: Digital payment process and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. Tax invoice management system and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya and Withholding Value Added Tax system and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The correlation matrix found that there is a positive and significant relationship between taxpayer perception and Value Added Tax compliance r= 0.508(p=0.000<0.05), the positive correlation suggests that as taxpayer perception increases, Value Added Tax compliance also tends to increase. Tax authorities can leverage this insight to develop more effective compliance strategies. Focusing on enhancing taxpayer perceptions through communication, education, and transparency initiatives could lead to higher compliance rates. The regression analysis further found the moderating effect of taxpayer perception on relationship between Digital payment process and Value Added Tax compliance was significant β=0.109 (p=0.000<0.05). The moderating effect of taxpayer perception on relationship between Tax invoice management system and Value Added Tax compliance was significant β=0.041 (p=0.0423<0.05). Last but not least the moderating effect of taxpayer perception on relationship between Withholding Value Added Tax system and Value Added Tax compliance was significant β=0.103 (p=0.000<0.05). The study concurs with Abdul–Razak and Adafula, (2013) who evaluated taxpayers' attitude and how it influences tax compliance decisions in Tamale Ghana. The study established that people are closely connected to the amount of money they pay as taxes. The tax rates that are paid in Ghana are considered to be too high. Moreover, the load of taxes that are paid directly influences the attitudes of people and this shows how they see the taxation system thus their decisions regarding compliance. The study further established that, the accountability or transparency levels by the government failed to meaningfully influence the attitudes held by taxpayers. The findings however concur with the study.

Summary, Conclusion and Recommendations

Summary of Findings

Digital Payment Process and Value Added Tax Compliance

The first objective was to determine the effect of digital payment process on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. Correlation analysis revealed a positive and significant relationship between the digital payment process and Value Added Tax compliance, suggesting that as digital payment processes improve, Value Added Tax compliance tends to

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exhibit a positive trend. The regression model affirmed a positive effect, implying that businesses utilizing digital payment methods are less likely to engage in Value Added Tax-related tax evasion. Authorities could leverage this insight to promote the adoption of digital payment systems for enhanced tax revenue collection.

Tax Invoice Management System and Value Added Tax Compliance

The second specific objective was to establish the effect of Tax invoice management system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. Correlation analysis demonstrated a positive and statistically significant relationship, indicating that effective tax invoice management systems contribute significantly to improved Value Added Tax compliance rates. The regression analysis confirmed a direct positive influence, suggesting that adopting more efficient systems would be impactful in enhancing Value Added Tax compliance.

Withholding Value Added Tax System and Value Added Tax Compliance

The third specific objective was to determine the effect of withholding Value Added Tax system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. Correlation analysis indicated a positive and significant relationship, signifying that as withholding Value Added Tax systems improve, Value Added Tax compliance increases. The regression model further supported this effect, implying that the implementation of a withholding Value Added Tax system is associated with an increase in Value Added Tax compliance, indicating greater adherence to Value Added Tax regulations.

Taxpayer Perception on System Automation and Value Added Tax Compliance

The fourth objective was to determine the moderating effect of taxpayer perception on the relationship between digital payment processes, tax invoice management systems, withholding Value Added Tax systems, and Value Added Tax compliance. The correlation analysis identified a positive and significant relationship between taxpayer perception and Value Added Tax compliance. Regression analysis revealed the presence of a significant moderating effects of taxpayer perception on the relationships between digital payment processes, tax invoice management systems, and withholding Value Added Tax systems and Value Added Tax compliance. Enhancing taxpayer perceptions through communication and education could lead to higher compliance rates.

Conclusions

The general objective of the study was to determine the moderating effect of taxpayer perception on the relationship between system automation and Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya

The first objective was to determine the effect of digital payment process on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The results indicated a positive and significant correlation, supported by the regression model, suggesting that improvements in digital payment processes contribute to enhanced Value Added Tax compliance. This insight provides an opportunity for authorities to leverage digital payment systems as a means to discourage Value Added Tax -related tax evasion and promote more effective tax revenue collection.

The second objective was to establish the effect of Tax invoice management system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The study found a positive and statistically significant relationship, implying that effective tax invoice management systems play a significant role in improving Value Added Tax compliance rates. Adopting more efficient systems can be seen as a practical strategy to enhance overall Value Added Tax compliance among SMEs.

The third objective was to determine the effect of withholding Value Added Tax system on Value Added Tax compliance among small and medium enterprises in Eldoret town, Kenya. The results revealed a positive and significant correlation, with the regression model further confirming the positive influence of implementing withholding Value Added Tax systems on Value Added Tax compliance. This suggests that the adoption of such systems is associated with increased adherence to Value Added Tax regulations.

The fourth objective examined the moderating effect of taxpayer perception on the relationship between digital payment processes, tax invoice management systems, withholding Value Added Tax systems, and Value Added Tax compliance. The study identified a positive and significant relationship between taxpayer perception and Value Added Tax compliance, with regression analysis indicating a significant moderating effect. Enhancing taxpayer perceptions through effective communication and education emerged as a potential strategy to improve Value Added Tax compliance rates.

Recommendations

KRA is recommended to enhance and actively promote the adoption of digital payment systems among SMEs. Incentives, such as tax benefits or reduced transaction fees, can be considered to encourage businesses to transition to digital payment processes. KRA is recommended to explore the implementation of withholding Value Added Tax systems and provide guidance on their setup and operation. The KRA should consider conducting awareness campaigns to improve taxpayer perception on the importance of tax remittance and compliance.

Further Research

Further research on the effects of tax incentives on Value Added Tax compliance should be conducted.Further research on the effect of tax education on Value Added Tax compliance should be conducted.Future research may done to find out whether or not other factors such as tax incentives and compliance cost have influence on Value Added Tax compliance performance.

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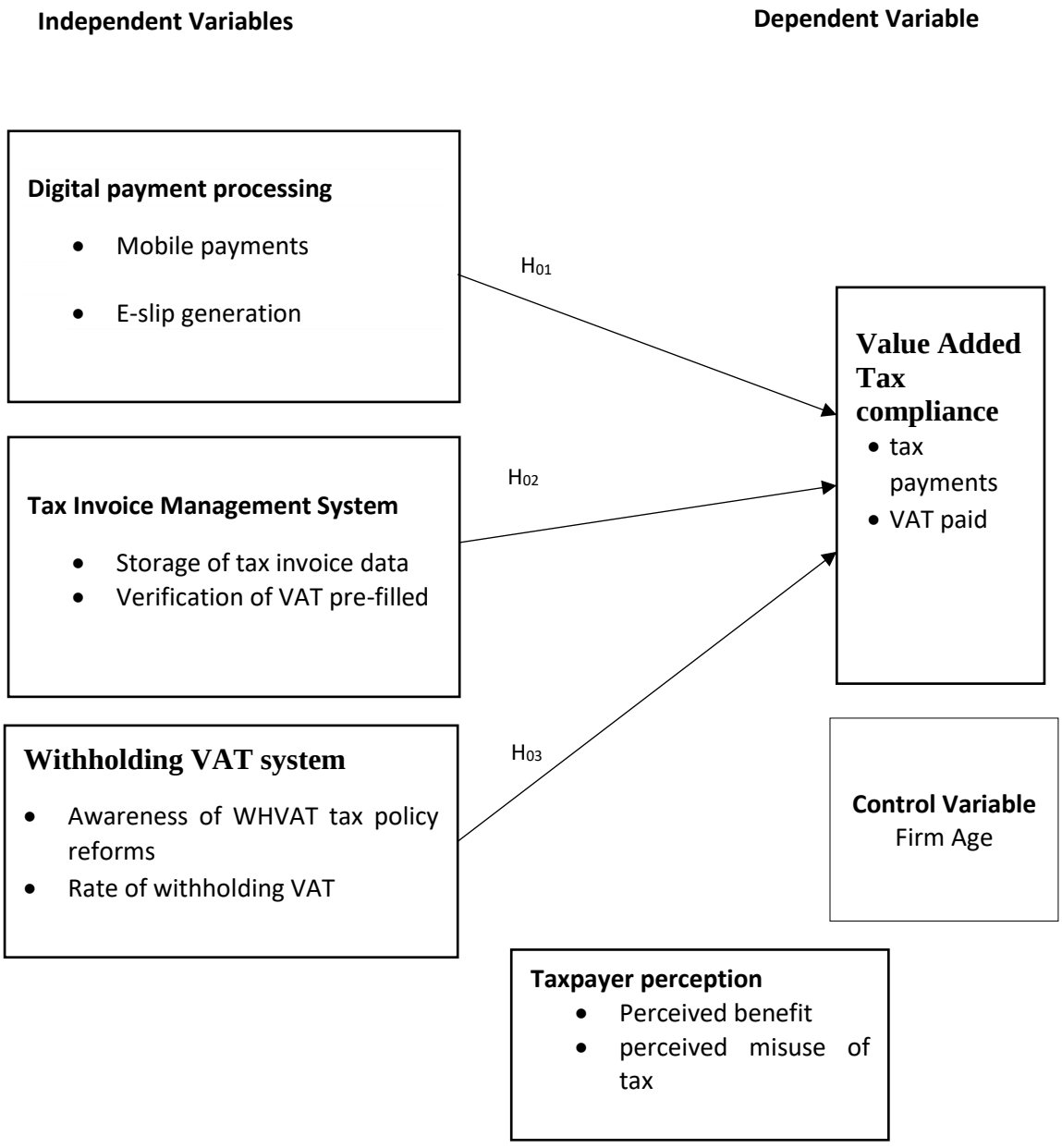
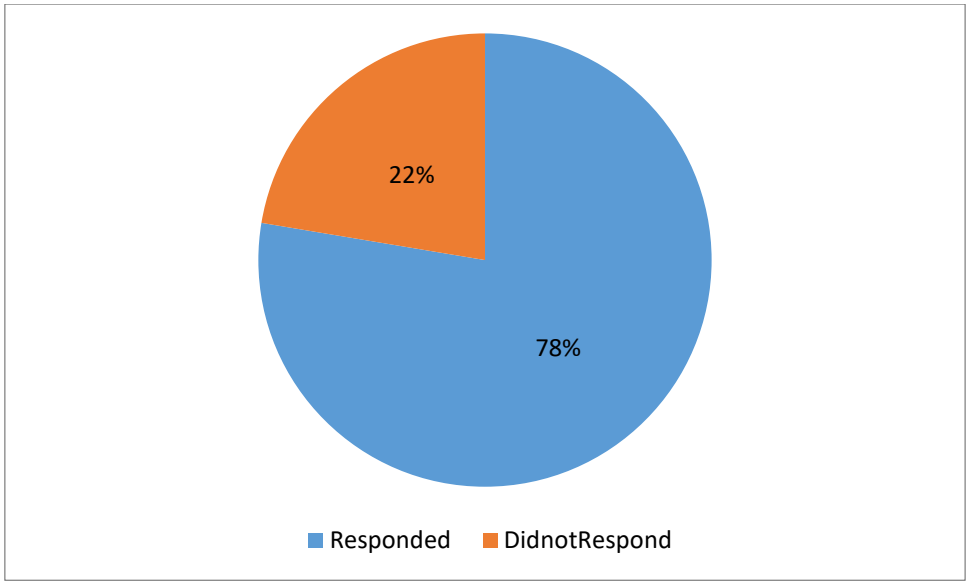
Conceptual Framework

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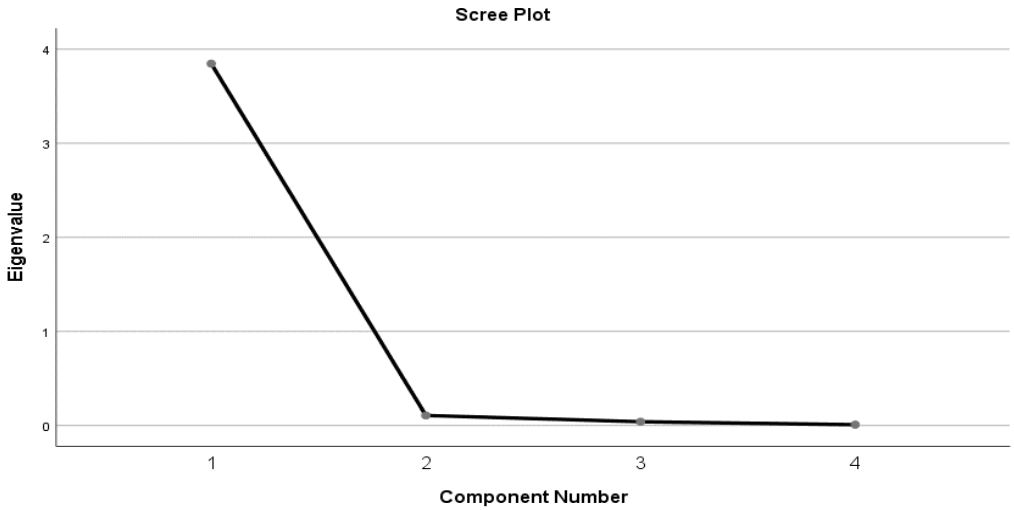
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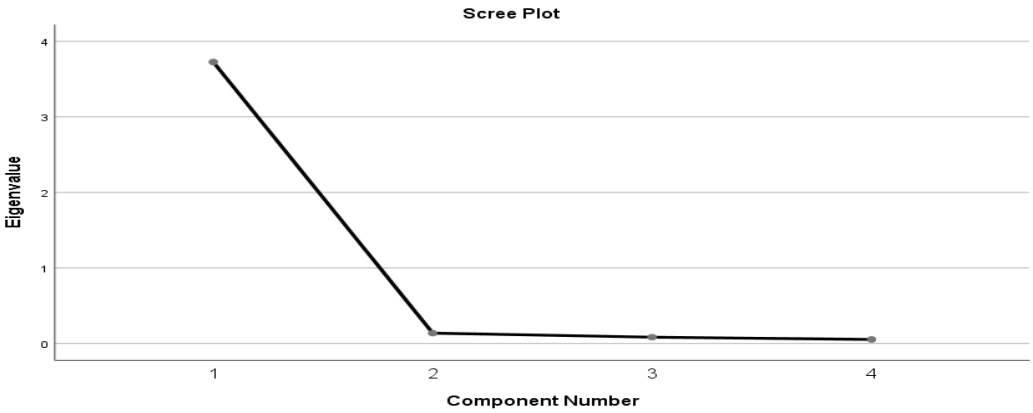
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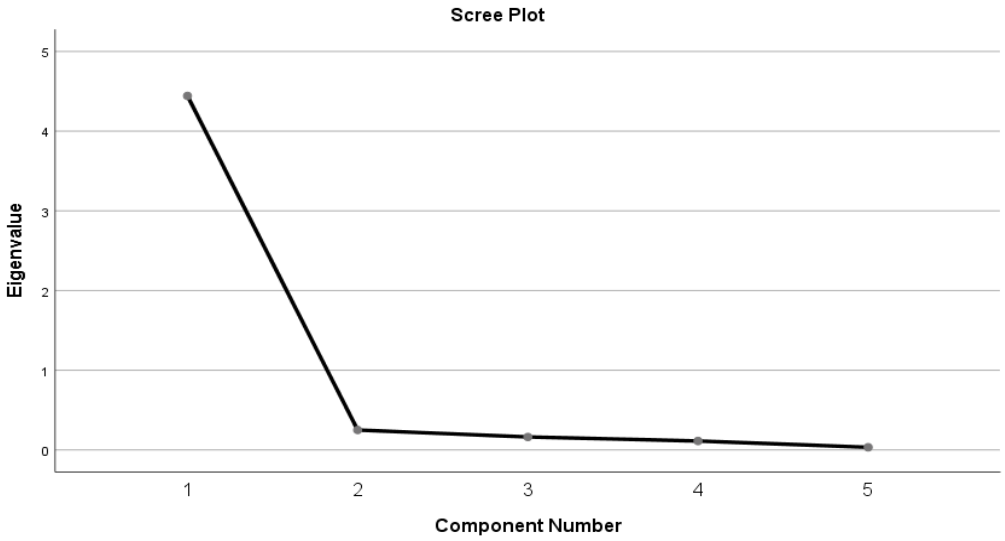
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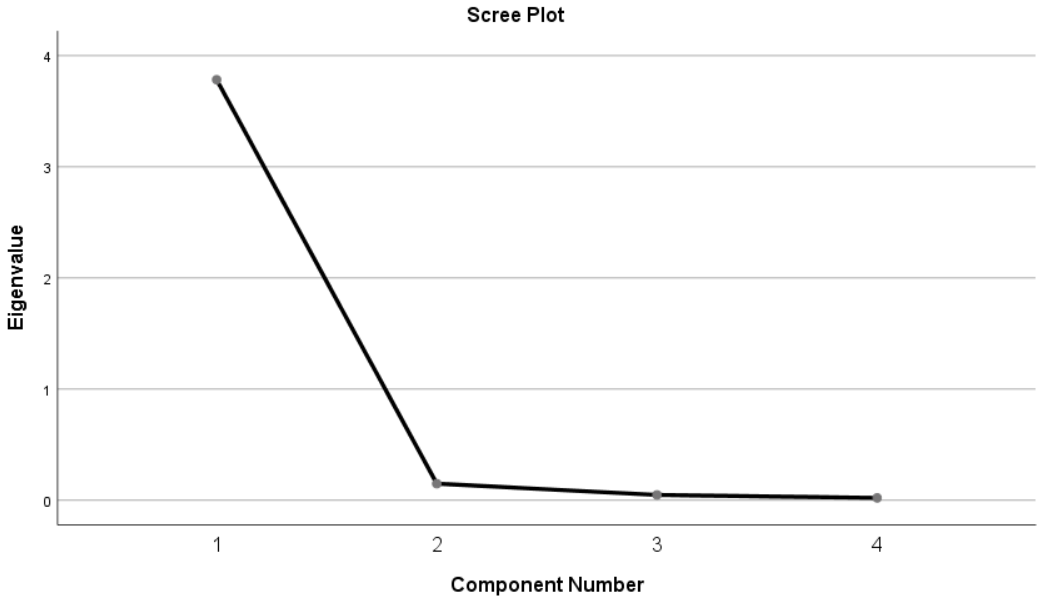
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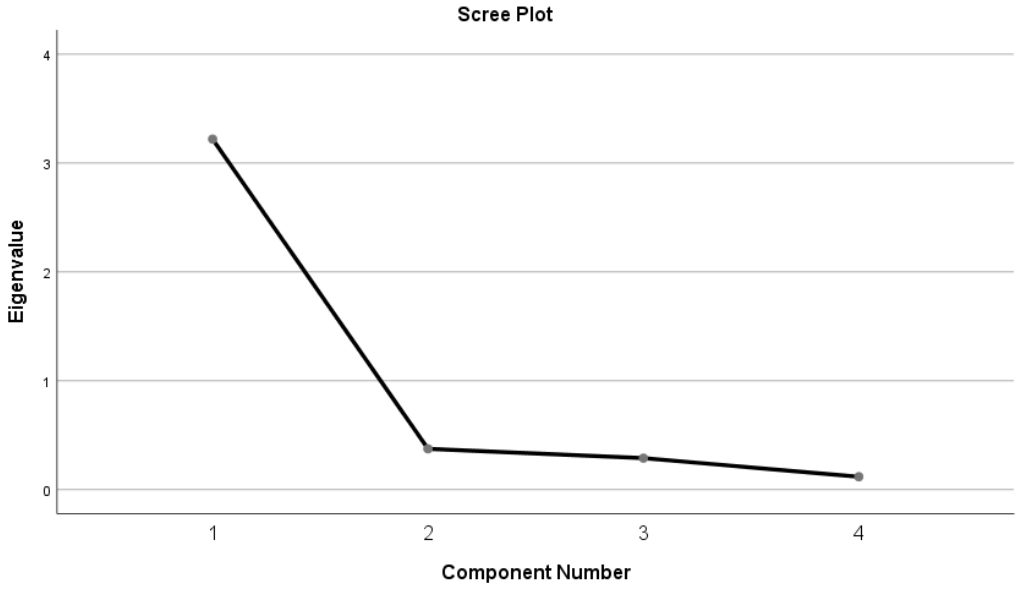
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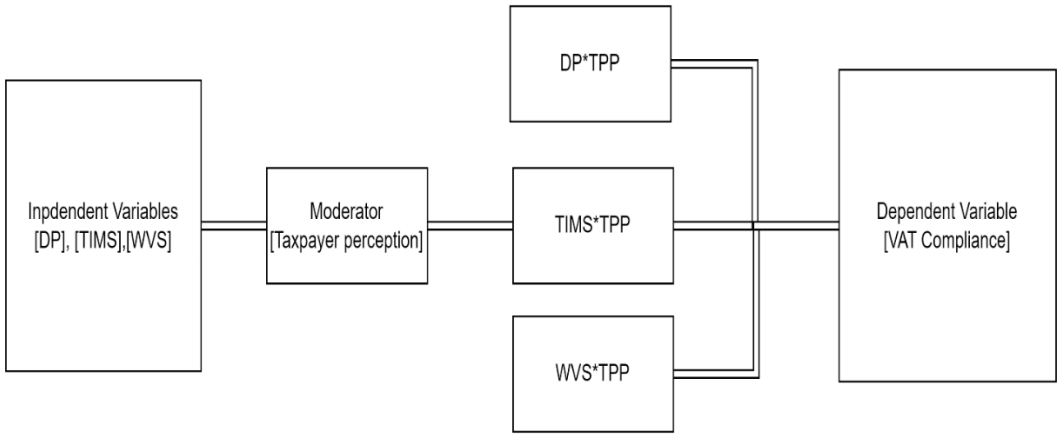
Inpdendent Variables
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[Taxpayer perception]
DP*TPP
TIMS*TPP
WVS*TPP
Dependent Variable
[VAT Compliance]