

**SOCIO-ECONOMIC DETERMINANTS OF PAY AS YOU EARN TAX
COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES IN RUIRU
MUNICIPALITY, KENYA.**

BY:

JAMES MBURU MACHARIA

**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
ACCOUNTING AND FINANCE IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF TAX AND CUSTOMS
ADMINISTRATION (Tax Administration), SCHOOL OF BUSINESS AND
ECONOMICS
MOI UNIVERSITY**

© 2023

DECLARATION

I hereby declare that this research project is my original work and has not been submitted for the award of degree in any other institution.

Signature Date

JAMES MACHARIA

REG: KESRA /105/0032/2021

This research project is submitted for examination with our approval as university supervisors.

Signature Date

PROF. JOSEPHAT CHEBOI

Department of Accounting & Finance

Moi University

Signature Date

DR. ROBERT ODUNGA

Department of Accounting & Finance

Moi University

DEDICATION

I would like to dedicate this work to my wife Milkah Wamucii and my Children Shawnflyn Macharia, Brandon Wangai and Jeslyn Wanjiru who have without holding back; supported me all through during the period of my study, may God bless you.

ACKNOWLEDGEMENT

I would like to acknowledge my supervisor's Dr Robert Odunga and Prof Josephat Cheboi for their dedicated support, advice, guidance and continuous evaluation and supervision of my work. I would also like to extend this gratitude to the administration of Kenya School of Revenue Administration and Moi University through the University library and the library staff that enabled me to access the various materials used in compiling this work. Last but not least, I wish to express my utmost gratitude to the Almighty God for giving me the endurance and resilience to accomplish this research proposal.

ABSTRACT

In Kenya, research indicates that many small and medium businesses are not fully compliant to the existing tax regulations; those who do register often fail to keep adequate records, file tax returns, and settle their tax liabilities promptly. The Pay As You Earn (PAYE) system was introduced in Kenya in 1986 with the objectives of speeding up the collection of tax revenue, reducing administrative collection cost and more importantly introducing convenience into the tax system. For the purpose of ensuring compliance with the PAYE system, rules were appended to section 37 of the Income Tax Act which should be observed by employers whenever they make payments to employees in the form of emoluments. Despite Small and Medium Enterprises tax reforms, most developing countries where Small and Medium Enterprises sector account for such a significant percentage of GDP (average 41%) continue to be tax non-compliance. Therefore, the purpose of carrying out this study was to examine the effect of socio-economic determinants of pay as you earn tax compliance among small and medium sized enterprises in Ruiru municipality, Kenya. The study specifically sought to determine the effects of compliance cost, taxpayer education and Peer influence on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality. The study was anchored by the following supporting theories: Economic theory of tax compliance being the main theory followed by, the ability to pay theory, Psychology theory, and optimal tax theory. Target population was 1,478 registered Small and Medium Enterprises in Ruiru Municipality in Kiambu County and a sample of 314 was selected using stratified sampling method. The study used explanatory research design. Data was collected through the use of close-ended questionnaire; The data was analyzed using descriptive and inferential statistics. The study results showed that compliance cost had a negative and significant effect with $\beta_1 = -.305$ $p = 0.004 < 0.05$ taxpayer education had a positive and significant effect $\beta_2 = .328$ $p = 0.001 < 0.05$ peer influence had a positive and significant effect $\beta_3 = .290$ $p = 0.000 < 0.05$. The study concludes that: compliance cost, taxpayer education, and peer influence affect PAYE Compliance among SMEs in Ruiru Municipality. The study recommends that KRA should pay more attention on taxpayer education and peer influence since it's statistically significant with PAYE compliance. KRA should also focus more on compliance cost to enhance taxpayer satisfaction and compliance. Therefore, further studies need to be done on effect of taxpayer perception on pay as you earn tax compliance as well as the effect of behavioral factors on PAYE compliance.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT.....	iv
TABLE OF CONTENTS	v
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
DEFINITION OF TERMS	xiii
CHAPTER ONE	1
1.0 Introduction.....	1
1.1 Background of the Study	1
1.1.1 PAYE Tax Compliance	4
1.1.2 Small and Medium Enterprises (SMEs).....	10
1.2 Statement of the Problem.....	12
1.3 Objectives of the Study	14
1.3.1 General Objective.....	14
1.3.2 Specific Objectives.....	15
1.4 Research Hypotheses	15
1.5 Significance of the Study	15
1.6 Scope of the Study	17
CHAPTER TWO	18
LITERATURE REVIEW	18
2.0 Introduction.....	18
2.1 Review of Concepts	18
2.1.1 Concept of Tax Compliance	18
2.1.2 Pay As You Earn Tax Compliance.....	19

2.1.3 Compliance Cost	20
2.1.4 Tax Payer Education.....	21
2.1.5 Peer influence	22
2.2 Theoretical Framework	23
2.2.1 Economic (Deterrent) Theory of Tax Compliance	24
2.2.2 The Ability to pay Theory of Taxation	25
2.2.3 Psychology Theory	26
2.2.4 Optimal Taxation Theory.....	27
2.3 Empirical Review.....	28
2.3.1 Compliance Costs and Pay As You Earn Tax Compliance.....	28
2.3.2 Tax Payer Education and PAYE Tax Compliance	29
2.3.3 Peer influence and Pay As You Earn Tax Compliance	32
2.4 Summary of Literature and Research gaps	33
2.5 Conceptual Framework.....	35
CHAPTER THREE	37
RESEARCH METHODOLOGY.....	37
3.0 Introduction.....	37
3.1 Research Design.....	37
3.2 Target Population	37
3.2.1 Study Area	38
3.3 Sampling Method.....	38
3.3.1 Sampling Size and Sampling Technique	39
3.3.2 Sampling frame	40
3.4 Data Collection	40
3.5 Data Collection Procedures.....	41
3.6 Pilot Study.....	41
3.6.1 Validity of Research Instruments.....	42

3.6.2 Reliability of Research Instruments	43
3.7 Assumptions of Regression.....	44
3.7.1 Testing for Normality	45
3.7.2 Testing for Multicollinearity.....	45
3.7.3 Homoscedasticity	45
3.7.4 Linearity Test.....	46
3.8 Data Analysis	46
3.9 Measurement of Variables.....	47
3.10 Operationalization and Measurement of Variables	48
3.11 Ethical Consideration.....	49
CHAPTER FOUR.....	50
DATA ANALYSIS, PRESENTATION AND INTERPRETATION.....	50
4.1 Introduction.....	50
4.2 Response Rate.....	50
4.3 Reliability of the actual data	51
4.4 Demographic information.....	52
4.4.1 Years of operation.....	52
4.4.2 Annual turnover	52
4.4.3 Number of staff in an enterprise.....	53
4.5 Descriptive Statistics.....	54
4.5.1 Compliance cost	54
4.5.2 Taxpayer Education	55
4.5.3 Peer Influence.....	56
4.5.4 PAYE Compliance.....	57
4.5.5 Exploratory Factor Analysis	58
4.6 Assumptions of Regression.....	59
4.6.1 Diagnostic Tests.....	59

4.6.2 Normality Test	60
4.6.3 Multicollinearity Test	60
4.6.4 Homoscedasticity test.....	62
4.6.5 Linearity test.....	62
4.7 Correlation Analysis.....	63
4.8 Regression Analysis	64
4.8.1 Overall Regression Analysis of Compliance Cost, Taxpayer Education and Peer Influence on PAYE Compliance.....	66
4.8.2 Regression Coefficient	67
4.9 Discussion of the Findings.....	67
4.9.1 Effect of compliance cost on PAYE compliance	67
4.9.2 Effect of Taxpayer Education on PAYE compliance.....	68
4.9.3 Effect of Peer Influence on PAYE compliance.....	68
4.10 Test of Hypotheses	69
CHAPTER FIVE	71
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	71
5.1 Introduction.....	71
5.2 Summary of Findings.....	71
5.2.1 Effect of Compliance cost on PAYE compliance	71
5.2.2 Effect of Taxpayer Education on PAYE compliance.....	72
5.2.3 Effect of Peer Influence on PAYE compliance.....	72
5.3 Conclusions.....	73
5.4 Limitations of the Study.....	73
5.5 Recommendation	74
5.5.1 Implications to policy makers	74
5.5.2 Implications to theory and Practice	74
5.6 Suggestions for Further Research	75

REFERENCES	76
APPENDICES	81
Appendix I: Cover Letter	81
Appendix II: Questionnaire.....	82
Appendix III: Research Letter	87
Appendix IV: NACOSTI Research Licence	88
Appendix VI: Plagiarism Report.....	89

LIST OF TABLES

Table 2.1: Summary of Research Gaps.....	34
Table 3.1: Target Population.....	38
Table 3.2: Sampling Frame and Sample Size	40
Table 3.3: Reliability Results.....	44
Table 3.4: Operationalization and Measurement of Variables	48
Table 4.1: Reliability tests	51
Table 4.2: Demographics on years of operation	52
Table 4.3: Annual turnover	53
Table 4.4: Demographics on number of staff	53
Table 4.5: Compliance cost.....	54
Table 4.6: Taxpayer Education	55
Table 4.7: Peer Influence	56
Table 4.8: PAYE Compliance.....	57
Table 4.9: Factor Analysis	58
Table 4.10: Tests of Normality	60
Table 4.11: Multicollinearity Test	61
Table 4.12: Homoscedasticity test	62
Table 4.13: Linearity Test.....	63
Table 4.14: Correlation Analysis	64
Table 4.15: Multiple Linear Regression analysis Model Summary	65
Table 4.16: ANOVAa	65
Table 4.17: Overall Regression Analysis of Compliance Cost, Taxpayer Education and Peer Influence on PAYE Compliance.....	66
Table 4.18: Summary of Hypothesis Testing	70

LIST OF FIGURES

Figure 2.1: Conceptual Framework	36
Figure 4.1: Response Rate	51

LIST OF ABBREVIATIONS

ATO	Australian Tax Office
GDP	Gross domestic product
KRA	Kenya Revenue Authority
OECD	Organization for Economic Co-operation and Development
PAYE	Pay-As-You-Earn
SAS	Self-assessment system
SMEs	Small and Medium Enterprises
TCC	Tax Compliance Costs

DEFINITION OF TERMS

Pay As You Earn. Refers to a system of income tax withholding by employers or an income-based system for loan repayment (ATO, 1999)

Peer influence: Peer influence is defined as pressure from friends, relatives, business colleagues, and partnerships that also has an impact on a person's decision-making (Bobek et al. 2013).

Small and Medium Enterprises (SMEs) (2016) SMEs is defined according to the number of employees. The report categorized MSMEs into three different types: micro (1-9 employees), small (10-49 employees) and medium (50-99 employees) sized establishment (KNBS, 2016). Enterprises can also be classified according to their annual turnover as follows: those with turnover less than Kshs. 500,000 are referred to as micro enterprises. Those with turnover between Kshs. 500,000 and Kshs. 5 million are referred to as small enterprises while those with turnover between Kshs. 5 million and Kshs. 800 million are referred to as medium enterprises. (World Bank, 2019)

Social economics: Is a branch of economics that focuses on the social behavior of the economic relationship. It explores how social norms, ethics, common movements evolving, and other social philosophies affect consumer behavior and form patterns in purchasing from the general public it's also the design of an efficient tax system that would be fair, equitable, and simple to understand, OECD. (2016)

Tax Compliance costs: Tax compliance costs is defined as all the costs borne by businesses and individuals for complying with tax regulation, excluding the costs of the taxes themselves. To comply with tax provisions, both

businesses and individuals bear tax substantive costs and tax administrative costs. (Brink & Lee 2020) The study adopts the same meaning.

Tax Compliance: Tax compliance is defined as the adherence to the administrative rules of lodging and paying taxes on time. This includes compliance with the reporting requirements, procedural rules and regulations. This entails filing tax returns on time, reporting all the income and claiming the right deductions and where taxes are due making tax payments on time full payment of all taxes due (Braithwaite, 2009). The study adopts the same meaning.

Taxpayer Education: Tax education can be explained as a way of informing or making awareness to individuals and corporates with regard to tax laws (Ahmad, 2016).

CHAPTER ONE

1.0 Introduction

This chapter highlights the background of the study, statement of the problem, purpose of the study, specific objectives of the study, research hypotheses, justification of the study, scope of the study, and limitation of the study.

1.1 Background of the Study

Taxation is a term used when a taxing authority, usually a government, levies or imposes a financial obligation on its citizens or residents. Paying taxes to governments or officials has been a mainstay of civilization since ancient times. Some types of tax includes; income tax corporation tax, Pay as You Earn, Rental Income Tax, Value Added Tax, Excise duty tax, capital gains and Turnover tax KRA (2021)

The “Pay As You Earn” method of deducting income tax from salaries and wages applies to all income from any office or employment of both residents and non-residents. Employment income is assessable on accrual basis; that is, over the period it has been earned and become due for payment. The time the income is received is, therefore, immaterial. Income from employment or services rendered is chargeable to tax under section 3(2) (a) (ii) of the Income Tax Act, cap 470 laws of Kenya (KRA, 2022).

Germany and Britain signed an agreement with Switzerland about recovering some tax revenue from accounts held by their citizens in Swiss banks. South America has the world’s largest shadow economy compared with its G.D.P. followed by Africa and Europe, where income hidden from the tax authorities amounts to about 20.5 percent of G.D.P. That compares with 10.8 percent in North America (Association, 2020). In 2019, it cost governments worldwide about 5.1 % of their Gross domestic Product

(GDP). In Europe tax evasion constitutes about 8% of the GDP of economies in the region. In North and South America, tax evasion costs economies 2% and 10% of their GDP respectively. Even in the most advanced economies in the world, tax evasion undermines revenue collection substantially (Bassey, (2019)).

In Egypt, SMEs are taxed under a uniform tax (or patent) on as business segment irrespective of the size or turnover of the individual enterprise or indicator-based systems which use external indicators as proxy for business income (also used in Italy, Spain, and Argentina) (IFC, 2019). Further, taxation of SMEs can be based on agreement between taxpayer and the tax administration as used in Syria (OECD, 2020). However, according to Mage, (2019) despite these SMEs tax reforms, most developing countries where SMEs sector account for such a significant percentage of GDP (average 41%) continue to be tax non-compliance. Therefore, tax authorities in Africa should review their tax regime as a poorly executed tax system leads to low efficiency, high collection charges, time wastage and reduced tax compliance among most tax payers (McKenzie, 2021). Existing empirical evidence critically shows that small and medium enterprises are adversely affected by tax compliance costs. The hardest hit is those whose scale of operation is small. Their argument is that they should not be placed in the same footing with their counterparts which in most cases have the means. There should be a level playing ground for all small and medium enterprises.

A study by, Parliamentary Budget Office of Uganda (2019) shows that the government could have increased the tax base by approximately Ushs.79.3 billion if the tax evasion among SMEs was addressed. The question as to why some people pay tax while others do not has raised a lot of concern among economists, governments

and tax administrators alike. Tax revenues have, for quite some time, remained low relative to the number of both registered and non-registered firms and individuals who are legally qualify to pay tax. Continued low revenue collection levels for government is detrimental to economic development of this nation (Cobham, 2019).

A large segment of the informal sector, especially the SMEs in Industrial area in Nairobi exhibit low tax compliance levels. Of the three East African countries of Kenya, Uganda, and Tanzania, tax evasion as a function of GDP is high. Uganda loses the least amount in tax evasion: In 2019, it lost 856 million USD, followed by Tanzania at 1.9 billion USD, and Kenya loses slightly over 2 billion USD. In 2011, the informal economy constituted 33% of the GDP in Kenya and represented 7% of total government expenditure.

Dominance of SMEs in Kenya just like other developing economies do exist and are usually operated by entrepreneurs with a keen interest in entrepreneurship. Kenya's 2022 overall GDP is projected at 5.2% with small and medium enterprises contributing 50%. They constitute 98% of all the businesses in Kenya and create 30% of jobs annually (National Economic Survey, 2022). The Kenya informal sector comprises of small and medium enterprises that are family owned and usually have no well-defined structures. Under the micro small and medium enterprises Act of 2012: a micro enterprise is that which that has an annual turnover of Kshs. 500,000 and employs less than 10 employees. On the other hand, a medium enterprise has an annual turnover ranging from 5,000,000 and 800,000,000 that employs between 50 to 99 employees (African Review, 2020).

Without a doubt, the Kenyan economy is largely dominated with small and medium enterprises that engage in both retail and wholesale business. The most common

SMEs are Mobile money banking agents, salons, barbers, Jua kali artisans, tailors, Green grocer traders, shops, technology-based companies, bakery, wood, metal, import and export businesses works among others. However, despite the immense role they play to the economy, SMEs in Kenya are succumbing to various challenges. According to Deloitte Kenya Economic Outlook (2019), SMEs growth is hindered by limited market access, poor infrastructure, business turbulence, inadequate knowledge and skills. This is well articulated by the National Economic Survey (2020) that noted that most SMEs do not celebrate their second and fifth birthday respectively. This raises the question on the sustainability of those SMEs in long run. Perhaps because of their informal and reflective business model that does not embrace research and development.

1.1.1 PAYE Tax Compliance

Tax compliance refers to fulfilling all tax obligations as specified by the law freely and completely. It means submitting a tax return within the stipulated period, correctly stating income and deductions, paying assessed taxes by due date and paying levied taxes. If a taxpayer fails to meet any of the above obligations, then they may be considered to be non-compliant OECD (2019)

PAYE tax compliance is an area of concern for all governments and tax authorities worldwide, and it continues to be an important issue that must be addressed. Regardless of time and place, the main concern faced by all tax authorities is that it has never been easy to persuade all taxpayers to comply with the regulations of a PAYE tax system. Voluntary PAYE tax compliance is a person's act of completing the Income tax form, declaring all taxable income accurately and disbursing all payable

taxes within the stipulated period without having to wait for follow up action from the tax authorities (Singh 2020).

In contrast to the majority of employed people, who in many countries are paid salaries with PAYE taxes having been deducted at source, informal sector investors often need to self-assess and self-report their income and pay taxes "out of their pocket." They not only pay their PAYE tax but need to take account of various types of business taxes such as corporate tax, property taxes and payroll taxes. They also need to collect other taxes such as VAT and withhold taxes such as personal income taxes in cases where they have at least one employee (Isaac et al., 2019). When the level of PAYE tax compliance is low, the government's revenue collection always falls behind targets. During the 2011/2012 financial year, KRA reported a tax shortfall of Ksh12.7 Billion therefore leading to a tax deficit.

Small and Medium Enterprises (SMEs) are considered as a key engine of economic growth in developing and developed countries (Garson, 2018). SMEs in Kenya are considered as sources of employment generation, economic growth, and social transformation. A significant proportion of the SMEs are formal, while majority fall within the informal economy based on their size, location, ownership, status of formality and economic activity, together, as major job providers, they produce a significant share of total value added, and provide a large segment of the poor and middle-income populations with affordable goods and services (KNBS, 2018)

Small businesses uniquely generate a substantial amount of revenue for the tax system besides salary earning tax Payers who are only subjected to the income tax withheld from the majority of the tax Payers in the net tax. Moreover, the small enterprises (SMEs) contribute significantly to the informal economy that runs outside the tax net.

Many nations whose economies are on the development stages have witnessed the growth of SMEs as being the most rapid in the economy. Compliance to tax payment by these enterprises vary from one country to another, in some cases the proprietors voluntarily choosing to comply while in other cases compliance coming as a result of authorities enforcing the compliance (Kirchler, 2019).

Tax authorities should constantly involve all stakeholders before they implement any tax law so as to have an intuitive understanding of the applicability of those laws. They should acknowledge that most large companies begun like SMEs, and should thus encourage them to grow, as that shall generate more revenue in future to the government. Therefore, SMEs ought to be nurtured as they are the cornerstone of indigenous entrepreneurship that has the capacity to stimulate economic vibrancy and provide employment opportunities to most job seekers. Developing economies should thus create conducive environment for SMEs as they are of great significance to microeconomic stability of any economy. They should address problems and challenges undermining their existence such as perceived tax burden. The government should be at the forefront of mobilizing domestic savings for investment, come up with favorable laws that enable SMEs to access finances from lending institutions, as well as, encouraging foreign direct investments that are likely to generate more business and employment opportunities that lower poverty levels to significant levels.

This is likely to enhance personal income and advancement in technology (Jones, 2019). SME's role in economic vibrancy should not be overlooked as it has potential to open up remote regions as compared to large establishments that are concentrated in major towns. They ensure equitable distribution of wealth among households. For this reason, ideal and considerate tax policies need to be adopted so as to ensure

voluntary compliance and efficient utilization of resources other than strangle entrepreneur initiatives that they so much seek to safeguard. As the revenue generated through taxation of taxpayers is an important stream of income for government. An economy will be at stand still if individuals and businesses fail to remit their taxes as and when they are due. There would be no passable roads, running water, sewerage or power, thus tax compliance among taxpayers should be given the seriousness it deserves.

Kenya relies on unified tax policies and an administrative system jointly administered by the initial three members of the EAC. This was a legacy of British colonial administration that all the three countries inherited at independence. At that point, the government's three main sources of tax revenue were: income tax; customs and excise duties; and Inland Revenue. Changes in both policies and administration were collaboratively determined and minimal until early 1970s. Following a decision to assign responsibility for income tax to each EAC member state, Kenya adopted the community legislation and enacted the Income Tax Act of 1973 (A.D.B, 2010).

Thereafter, three distinct phases of major initiatives in tax policy reforms can be discerned for Kenya. Tax policies introduced during the third phase: 2003/04 to 2008/09 Key changes to tax policy made by the NARC government (2003-2008) and coalition government (2008-2009) has so far evolved around ensuring equity, further widening the tax base, promoting increased investment and reducing the tax compliance burden. To promote equity GoK widened income tax bands by 5% in 2004/05. Tax bands had remained unchanged since 2002. In the same year, GoK also increased personal relief by 10%. From 16 June 2006, GoK increased the threshold turnover for VAT from Kshs 3 million p.a. to Kshs 5 million p.a. with a view to

reducing the compliance burden for three quarters of registered taxpayers who either file nil returns, or whose turnover is not substantial (ADB, 2019).

In Kenya, Small and Medium Enterprises (SMEs) play a vital role in the economic development of Kenya in a number of ways including; by increasing competition, fostering innovation, generating employment and an important source of goods and services. According to Kenya National Bureau of Statistics, (2016) SMEs was defined according to the number of employees. The small (10-49 employees) and medium (50-99 employees) sized establishment. However, the tax authorities have been unable to harness it; as it constitutes a sector that has not been harnessed fully in many countries (Marti, 2010; Hanefah, Ariff & Kasipillai, 2012).

Compliance cost of tax compliance refers to the expenses incurred by taxpayers in order to fulfill their tax obligations. In other words, this cost refers to the expenses incurred by taxpayers in order to comply with the requirements of the tax provisions. In particular, the cost of tax compliance, as evidenced by the review of the relevant literature below, includes expenses related to the preparation, drafting, and submission of tax returns, and to the monitoring of relevant tax legislation. It is treated as a “hidden” taxation cost (Tran-Nam et al., 2000). Therefore, if the tax system is characterized by excessive complexity, it leads to higher tax compliance costs (McMillan, 2020).

McMillan, (2020) identified compliance costs as one of the three components of the social costs of taxation. These social costs can be paraphrased as costs incurred by society in the process of transferring purchasing power from the taxpayers to the government. The other elements are administrative costs and deadweight efficiency loss from taxation. Administrative costs are the costs that exist besides the occurrence

of compliance costs that are borne by the companies. These costs are cited as costs that the government must also take into account as a public cost to ensure that the tax legislation is obeyed. For example, it obtains the costs to collect taxes and to maintain the system to collect the taxes. These are to some extent substitutable, for example when a country transfers from a system where the tax office calculates the tax owed, to a self- assessment system. As a consequence, an increased burden arises on the company. Together, the compliance costs and administrative costs are defined as the operating cost of taxation (Evans, 2020).

Tax education among taxpayers is to increase tax awareness; The tax Authority in Kenya should periodically carry out research to establish possible bottlenecks that are likely to face enforcement of tax laws among SMEs in Kenya. Tax regime in Kenya is not favorable to the growth of SMEs as they have not quite understood of what constitute it (Pratama, 2018). Most SMEs in Kenya are registered under business name while some are registered as limited companies though bear informal structures. Most SMEs literally have no separate legal entity and as a result, their lifespan depends to that of their respective owners (Olsen, 2019)

Peers influence is defined generally as a taxpayer's associates that can be relatives, friends, co-workers and colleagues (Jackson and Milliron, 2021). Peer groups have a potent effect on preferences, behaviour and personal values of taxpayers (Murray, 2019). Hence, Webley, et al. (2020) reported the significance of not ignoring the presence of peer impact when examining the tax compliance behaviour. Vanistendael, (2020). stated that peers' influences are reflected in taxpayer's anticipations in relation to the disapproval or approval of tax noncompliance, whereas Alm and McKee (1998) declared that the social norms are a major determinant of tax compliance.

Some previous studies on tax compliance behavior found a positive relation between tax compliance and peer influence (William, 2015; Bobek et al., 2013; Çevik and Yeniçeri, 2013; Tusubira and Nkote, 2021; On the other hand, some other studies on tax compliance behavior found a negative relation between tax compliance and peer influence (O'Shaughnessy, 2020; Alon and Hageman, 2019;). However, some other studies declared that the peer influence has no impact on the tax reporting decisions (Chan et al., 2020).

1.1.2 Small and Medium Enterprises (SMEs)

The definition of Small and Medium Enterprises (SMEs) differ from Country to country. For Kenya, Enterprises with 5 to 49 employees referred to as small scale enterprises, those with 50 to 99 employees referred to as medium enterprises with those with a 100 or more being referred to as large enterprises (Tambunan, 2019). Another method of classifying enterprises in Kenya is by how much their annual turnover is. According to World Bank (2019), enterprises are classified according to their annual turnover as follows: those with turnover less than Kshs. 500,000 are referred to as micro enterprises. Those with turnover between Kshs. 500,000 and Kshs. 5 million are referred to as small enterprises while those with turnover between Kshs. 5 million and Kshs. 800 million are referred to as medium enterprises.

Small and medium enterprises play a crucial role in the development of most countries in the world. In a lot of cases, SMEs come to be as a result of reduction in job security in big firms and the public sector, increase in education levels and innovation. Small and medium enterprises come up when an economy of a country is not doing well because of shrinking of employment in the public sector (Nagase, 2020). When the economy of a country is doing well SMEs survive better because factors like credit is easier to access and governments can improve other factors of

production such as infrastructure, states International Finance Corporation (IFC), (2019). Although there are other factors that play important roles in the survival of SMEs and if not addressed can cause their failure, the SMEs that survive with a strong economy are more than those that fail Organization for Economic Development and Cooperation (OECD, 2019).

A municipality is a department or a division which has powers to govern itself as granted by national and regional laws, which are more superior to it. It is different from the county since it may entail many small communities such as townships and villages. This is in addition to rural territory (Muriithi, 2019). The Ruiru Municipality covers an area of 201.36km² with headquarters in Ruiru town at the current Ruiru Sub County offices which were the offices for the defunct Municipal Council of Ruiru. It follows the boundary of the current Ruiru Sub County comprising Gitothua, Biashara, Gatongora, Kahawa Sukari, Kahawa Wendani, Kiuu, Mwiki and Mwihoko Wards. The Municipality borders Juja Sub County to the North, Githunguri and Kiambu Sub Counties to North West, Nairobi County to the South and Machakos County to South East. It lies between Nairobi City and Thika town and is 21km from Nairobi City Centre and 17km from Thika town.

Ruiru is a major town located in Kiambu County 3 Kilometers off Nairobi's City boundary and about 0.5 km from Kenyatta University Main Campus. It is the most populated urban Centre in the jurisdiction of Kiambu County. Ruiru is a dormitory town for the nation's capital and is connected by both rail and road. The town covers an area of 292 km² with Kahawa Wendani, Kahawa Sukari and Mwihoko being part of Ruiru Sub County (which defines the municipality).

1.2 Statement of the Problem

The Pay As You Earn (PAYE) system was introduced in Kenya in 1986 with the objectives of speeding up the collection of tax revenue, reducing administrative collection cost and more importantly introducing convenience into the tax system. For the purpose of ensuring compliance with the PAYE system, rules were appended to section 37 of the Income Tax Act which should be observed by employers whenever they make payments to employees in the form of emoluments.

Developed economies like America, Germany and Scandinavian countries have efficient tax system that encourages taxpayers to honor their tax obligation. It should be understood that if taxes are well designed, they can encourage voluntary tax compliance among SMEs. Interestingly, there has been a growing concern that SMEs are not efficiently taxed as they should be. The tax authorities however should not overdo it as it can frustrate small enterprises existence due to high operational costs (Marti, 2019). Italy loses €183 billion, or \$242 billion, to tax evasion a year, and its debt of €1.9 trillion represents just over 10 years of tax evasion. Countries like Italy and Greece have vowed to crack down on tax evasion and cash transactions for goods and services that fall below the authorities' radar (Tomala, 2020).

In Egypt, SMEs are taxed under a uniform tax (or patent) on as business segment irrespective of the size or turnover of the individual enterprise or indicator-based systems which use external indicators as proxy for business income (also used in Italy, Spain, and Argentina) (IFC, 2019). Further, taxation of SMEs can be based on agreement between taxpayer and the tax administration as used in Syria (OECD,

2018). However, according to Orgler, (2019) despite these SMEs tax reforms, most developing countries where SMEs sector account for such a significant percentage of GDP (average 41%) continue to be tax non-compliance. Therefore, tax authorities in Africa should review their tax regime as a poorly executed tax system leads to low efficiency, high collection charges, time wastage and reduced tax compliance among most tax payers (Farzabod, 2020).

The Kenya Revenue Authority reported that there are 6.1 million registered taxpayers (KRA, 2021). This is a small number/ percentage (35%) compared to the 17.4 million employed persons (Statista, 2022), and over 7 million small businesses (KNBS, 2022). Tax administration in Kenya relies on the formalization of employment and business activities. It starts with the registration of the taxpayer – be it as a corporate or an individual. In Kenya, the registration of taxpayers is often tied to formal employment and the registration of businesses. Some related studies, in particular (Lumumba, et.al. 2019; Omondi, 2020;) have investigated the relationship between education, tax audit and tax evasion; and also discussed about ethics on tax evasion in Kenya

In Kiambu County, examination of revenue records confirmed the existence of arrears of revenue Kshs.315,358,207.50 as at 30 June 2021 (KRA Kiambu, 2022). Target revenue on PAYE was Kshs 167,562,871 for the same period but only Kshs 98,451,634 was collected. The balance was Kshs 69,111,237 which was an improvement from the previous year. However, schedules indicating how balances for PAYE changed during the year under review were not easily accessible. In addition, ageing analyses for all the arrears were similarly not provided. As a result, it was not possible to establish how long the arrears had remained uncollected.

SMEs are often mentioned as a high-risk group in terms of tax compliance because their opportunities to evade are high (Kamleitner et.al 2019). Commissioner General of KRA John Njiraini, (2019) small businesses that are now the target for recruitment into the tax database do not keep adequate records; neither do they file their annual tax returns. In the small business context, opportunities for evasion are high and resources often scarce for field auditing therefore KRA have opted for a friendly approach in dealing with the tax Payers. A high percentage (45%) of SMEs according to past researches within Kenya have been found out to be non-compliant (tax evasion) to the various tax nets that they fall under (Perez, 2019). Tax non-compliance is often hard to prove.

There has been hostility between the tax Payers and tax collectors on issue relating to tax compliance in Kenya (Makori, 2019). Most SMEs do not pay the taxes and tax evasion among SMEs remains far above the ground, with a tax gap of about 35% and 33.1% in 2011 and 2012 respectively (KRA, 2015). Consequently, measures beyond tax audits are needed to tackle non-compliance (Tusubira & Nkote, 2021). The same case applies to Ruiru Municipality therefore this research proposal seeks to determine the Socio economic determinants of PAYE Tax Compliance among SMEs in Ruiru Municipality.

1.3 Objectives of the Study

The study was guided by the following general and specific objectives

1.3.1 General Objective

The general objective of the study was to establish the socio-economic determinants of pay as you earn tax compliance among small and medium enterprises in Ruiru municipality, Kenya.

1.3.2 Specific Objectives

The specific objectives of the study were to:

- i. Determine the effects of compliance cost on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.
- ii. Establish the effects of taxpayer education on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.
- iii. Determine the effects of Peer influence on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.

1.4 Research Hypotheses

The study was guided by the following hypotheses:

H₀₁: Compliance costs has no statistically significant effect on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.

H₀₂: Tax Payer education has no statistically significant effect on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.

H₀₃: Peer influence has no statistically significant effect on Pay as You Earn Compliance among Small and Medium Enterprises in Ruiru Municipality.

1.5 Significance of the Study

The results of this study will help the government to institute the necessary legislative and administrative measures to enhance PAYE compliance in cases of voluntary compliance and enforce compliance in cases of non-compliance. Kenya Revenue Authority is interested in maximizing revenue collections and thus will find the study useful in instituting measures, policies, and initiatives to address or minimize

noncompliance and thus enhance revenue collection. Tax Practitioners assist tax Payers to interpret the complicated tax laws and help them to apply the law to their tax returns. This study will be of help to practitioners since it helps them understand various challenges faced by tax Payers towards voluntary compliance and help them advice their clients accordingly.

From this study, The SMEs will evaluate their level of understanding on the current legal framework of PAYE which regulates their compliance. They will also understand the impact of compliance cost on PAYE compliance. The study is of importance to the general public since it will highlight various challenges faced by tax Payers in the quest towards full compliance and the possible solutions to these challenges. To other researchers the survey is a basis for further research, more so, when seeking to research on enhancing revenue collection through other systems that either supplement or substitute self- assessment system.

Researcher will find the study of great significance. From the study findings, researchers and academicians will able to get recommendations on areas of further studies related to PAYE Compliance. Researchers will also be able to use the study as a point of reference on any other academic document or publication related to PAYE and how it affects compliance.

1.6 Scope of the Study

The study focused on determining the Socio economic determinants of PAYE Tax Compliance among SMEs in Ruiru Municipality. The predictor variables were compliance cost, taxpayer education and peer influence. The dependent variable was PAYE Tax compliance. The choice of Socioeconomics is due to effects on social processes. In general it analyzes how modern societies progress, stagnate, or regress because of their local or regional economy, or the global economy. In this study primary data was used by administering structured questionnaires. The study employed explanatory research design. The study was guided by and Economic (Deterrent) Theory of Tax Compliance which is the main theory. followed by Ability to pay Theory of Taxation, Psychology Theory, Optimal Taxation Theory The geographical scope of this study is registered business owners in Ruiru Municipality and the target population was 1478 SMEs comprising of Green grocer traders, general shops and kiosks, salons and barbers, tailors and hotels operating within the Ruiru Municipality, Kenya. The study was conducted on June 2023 to September 2023.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discussed the literature related to the research objectives which was to establish the socio economic determinants of PAYE Compliance among SMEs in Ruiru Municipality. The chapter also covered on concepts, theories that underlie the study, the empirical review of literature, the summary of the literature review and research gap which is followed by conceptual framework.

2.1 Review of Concepts

This section contains review of concepts such as tax compliance as dependent variable and compliance cost, taxpayer education and Peer influence as independent variable. These variables are assumed to affect the dependent variable of the study which in this case is PAYE tax compliance in Ruiru Municipality.

2.1.1 Concept of Tax Compliance

Tax compliance refers to fulfilling all tax obligations as specified by the law freely and completely. It means submitting a tax return within the stipulated period, correctly stating income and deductions, paying assessed taxes by due date and paying levied taxes. If a taxpayer fails to meet any of the above obligations, then they may be considered to be non-compliant, OECD (2019) Tax compliance was measured with tax registration, filling of returns and payments of tax. In Kenya, taxpayers are issued with a Tax compliance certificate as a proof of having filed and paid all your taxes (KRA, 2015)

2.1.2 Pay As You Earn Tax Compliance

According to Dostie et al, (2019) PAYE tax is levied on employees based on their aggregate pay. It is deducted directly from the employer's fund and directly tied to employing a worker. This tax deduction is different from other statutory deduction such as social contributions to employment insurance, health and safety at work, disability and contribution to pension plan. Social contributions' costs are usually shared between the employer and employee varying according to employee's salary but it can also be paid only by the employer unlike PAYE tax which is deducted directly from employee's salary. PAYE tax collects approximately 25% of total revenue in OECD countries (OECD 2019).

Pay As You Earn (PAYE) tax is a tax under the provisions of Section 5 of the Income Tax ACT, CAP 470 laws of Kenya. It is a tax that is collected from employment income of individuals. This applies to weekly wages, monthly salaries, annual salaries, bonuses, commissions, non-cash benefits and any other form of income (Income Tax Act, CAP 470). As noted under the Third Schedule of the Income Tax Act employee's income are taxed using a graduated scale with the lowest being 10 per cent and the highest 30 per cent. The tax calculated is usually deducted at source and is done by the employer who then remits the amount to the tax authorities.

Kariba (2020) did a study on analysis of tax reform policies and tax revenues in Kenya. In her study secondary data was used to collect data and the study found out that there was significant improvement in tax revenue after implementation of reform policies. The amount withheld are treated as advance payments of income tax due.

2.1.3 Compliance Cost

Compliance cost refers to all costs that are associated with corporate tax compliance in the form of time and money (Das-Gupta, 2019). Mayer (2019) also indicate that corporate tax compliance cost includes all the resources that are expended by firms in complying with tax regulations. Such cost comes in the form of staff costs associated with furnishing tax returns, payments to external tax professionals and other incidental costs associated with tax compliance such as postage, phone calls, printing and travelling. Currently, there exists an extensive literature on tax compliance cost measurement and estimating the various elements of tax compliance costs including accounting costs, computational costs, social and psychological compliance costs. Broadly, tax compliance cost is categorized into both computational and planning costs Mayer (2019)

There has been a consistent and extensive ongoing debate on the extent to which taxation and tax compliance costs affect general business growth. The major source of revenue for governments of both developed and developing countries alike is corporate tax. However, compliance with tax policies comes with both direct and indirect costs on the firm which needs to be investigated properly (Jackson, 2021). The complexity that is associated with tax regulations and policies has become a widely discussed subject in both economic and public finance literature (Fremont, 2019). For instance, in Ethiopia, tax revenue collection has increased over the years and has covered 70% of government expenditure.

Research evidence shows that tax regulatory compliance cost in South Africa makes a large portion of the total regulatory cost of a firm Gayer (2021) In spite of the various studies measuring the impact of the tax burden on business growth, very little

empirical studies exist on how tax compliance cost affect international trade Kahn, (2020) Even though research on tax compliance in developed countries started since the 1930s, empirical research on the concept in developing countries only started in the 1990s and this creates a research gap as far as Africa is concerned (Susila & Pope, 2019).

2.1.4 Tax Payer Education

Taxpayer education refers to programs aimed at teaching taxpayers about their tax rights, responsibilities and legal requirements. It also refers to the method of educating the people about the whole process of taxation and why they should pay tax (Gitaru, 2019). Education attainment is an important determinant of tax evasion (Richardson, 2019). It usually relates to a taxpayer's ability to comprehend and comply or not comply with income tax laws. Enhancing the level of general fiscal knowledge, tax compliance improves because of more positive perceptions about taxation.

Increased knowledge of tax evasion opportunities has a negative influence on tax compliance as it assists non-compliance. However, the vast majority of studies examining the impact of education on tax evasion use a taxpayer's general education level as the approach to measure education Kažemekaitytė (2019). Higher PAYE tax knowledge is also assumed to lead to higher PAYE compliance rates (Evans, 2019).

Tax Education has long been established in both the formal and informal educational system in Ghana. In the formal educational system many scholars and institutions have defined and have been involved in building the professional competencies of individuals leading to the award of certificates. Kiefer, D (2020). Tax education, in which ever form, is important and influences revenue mobilization in any nation. Tax

education equally has a relationship to tax accountability, compliance and overall revenue mobilization. It is against this background that Sigauke, (2020). asked Ghana Revenue Authority (GRA) to guarantee forceful and continued government funded support to help administrators in the informal area to become tax compliant. He noticed that tax obligatory and self-assessment taxpayers would help develop the economy through the mobilization of the required local revenues.

2.1.5 Peer influence

Peer influence is defined as pressure from friends, relatives, business colleagues, and partnerships that also has an impact on a person's decision-making (Bobek et al. 2013). In this study's context, the term 'peer' is widely used to refer to a taxpayer's peers, family, relatives, co-workers, and other acquaintances (Jackson and Milliron 2021). It is also characterized as the effect of important people on the tax behavior decisions of SME owner-managers, contributing to the formulation of their perspectives of whether to comply or evade paying tax (Obaid et al. 2020). Chan et al. (2021), as social psychologists, provided an intellectual explanation, that when peers and close referents are evading a commitment, people close to them are more likely to act in the same manner. Furthermore, individuals may consider acting illegally once they see such violations being committed by a peer (Davis et al. 2018). Peer groups have a significant influence on a person's opinions, attitudes, and behaviour (Al Zeer et al. 2019). If taxpayers are affected by their peers in a profound manner, their decisions, personal beliefs, and attitudes would be affected as well (Sritharan et al, 2019).

Tse, (2019). pointed out that taxpayers' expectations with regard to the rejection or acceptance of tax evasion, are influenced by their peers. However, from a taxation

perspective, peer influence is regarded as a main factor affecting the tax behavior of taxpayers (Alm et al. 2020). Peers have an influence on their colleagues' relevant tax compliance. Although peer influence studies are not new in Jordan, the majority have largely focused on direct taxes, with only a few focusing on indirect taxes and their impact on tax compliance. The relationship between peer influence and indirect tax evasion among SME owner-managers is generally understudied, notably in Jordan. Therefore, peer influence and its effects on tax evasion may differ from those in other studies on developed countries. Based on the social influence theory and this relationship, it can be concluded that taxpayers' decisions of whether to comply with, or evade, tax payments, are influenced by their peers' opinions. Thus, having a more negative perception of others' tax evasion behaviour may increase tax compliance, and vice-versa (Çevik and Yeniçeri 2018). Some prior studies found that peer influence had a significant positive effect on tax evasion (Bhutta et al. 2019)

2.2 Theoretical Framework

This section examines some related literature on previous work done on related studies and looks at the thematic areas stated in the objective. Theories try to help one understand the problem and make it known what other researchers view on the subject matter. The following are the theories used to understand the Socio Economic determinants of PAYE Compliance among SMEs. The theories includes Economic (Deterrent) Theory of Tax Compliance which is the main theory of the study followed by The Ability to pay Theory of Taxation, Psychology Theory, Optimal Taxation Theory

2.2.1 Economic (Deterrent) Theory of Tax Compliance

The Economic Theory approach to tax compliance goes back to the economic deterrence model, developed by Allingman and Sandmo (1972). This theory is of the view that most countries rely on increased checks and severity of penalties as the main vehicle for enforcing tax compliance. The economic deterrence model has been widely used to explain the relationship between tax evasion and tax compliance. The economic theory model of tax compliance emphasizes on the use of enforcement tools to achieve the required levels of tax compliance. Deterrence measures include employing methods like, timely and continuous taxpayer audits, post clearance audits, increased surveillance to curb smuggling, regional tariff balances as well as strict and hefty penalties for tax evaders. Taxpayers can also be accorded better tax knowledge through regular sensitization programs, advertisements and public awareness forums (Fischer et al., 1992).

This model postulates that rational decisions are made by taxpayers while taking into consideration the various economic gains accruing to them. If they realize that costs associated with tax evasion detection are higher than the expected tax evasion benefits, they are likely to comply with the tax laws and regulations. If the expected costs of evasion are lower than the expected benefits they will have a higher incentive of being non-compliant. Therefore, it is enough to check taxpayers more frequently and impose more severe penalties to limit tax evasion (OECD, 2012). This approach, in its simplicity, seems to be very convincing. However, no tax administration has the capacity to frequently check all taxpayers and impose severe penalties. Rational taxpayers may well factor this into their calculations and choose to continue evading taxes. In addition, practice does not confirm the theory, there is much less tax evasion

than the model would imply. Other factors, sociological and psychological, for instance, determine actual levels of tax compliance.

The economic deterrence model has over the years, undergone series of modifications and extensions, and still enjoys prominence in most studies on taxpayer compliance. However, it has also been criticized as not being realistic in explaining taxpayer compliance, since it predicts a general substantial noncompliance beyond what is obtainable in reality (Slemrod, 2007). Rethi (2012) and Slemrod, (2007), observed that in spite of the existence and use of audits and penalties (which are the key components of the deterrence model), tax evasion has remained, and continuously posed significant threats to countries' economies, through loss of revenue. Besides, it has also been observed (even proven in studies) that there are people who never evade taxes, even when the probability of detection is zero (Sour, 2004).

2.2.2 The Ability to pay Theory of Taxation

The idea of a progressive income tax that is, that people with the ability to pay more should pay a higher percentage of their income is centuries old. In fact, it was espoused by none other than Adam Smith, considered the father of economics, in 1776. Smith wrote: "The subjects of every state ought to contribute toward the support of the government, as near as possible, in proportion to their respective abilities; that is in proportion to the revenue which they respectively enjoy under the protection of the state." This theory states that the taxation should be levied according to an individual's income or ability to pay and is the basis of progressive tax where the tax rate increases by the increase of the taxable amount (Jones et al, 2011).

This theory is indeed the most equitable tax system for people with greater income or wealth and can afford to pay more taxes should be taxed at a higher rate than people

with less individual income tax and has been widely used in industrial economies. The basic tenet of this theory is that the burden of taxation should be shared by the members of society on the principles of justice and equity and that these principles necessitate that the tax burden is apportioned according to their relative ability to pay.

(Chigbu, and Ebimobowei, resonate with this theory (2012) and offered further suggestions such as taxpayers of small and micro enterprises should pay unconditionally and according to their paying capacity. This theory falls relevant to the study as majority of taxpayer in small and micro enterprises on the bracket of TOT tax, which is simpler and cheaper since the tax is levied on the total turnover tax which is 1% which is filed and paid on a quarterly basis. This is related with the study above where compliance in small and micro enterprises is an issue under study.

2.2.3 Psychology Theory

Weigel and Hessing (1987) found that ethics, attitudes and moral beliefs impacted upon tax compliance behavior according to the psychological theory of tax compliance. This theory explains that taxpayers are influenced by psychological factors. This theory suggests that a taxpayer may be willing to pay his/her tax obligations even when the probability of being detected is low. It is deeply entrenched on one's morality unlike the deterrence theory that emphasizes the need to coerce taxpayers for non-compliance.

It emphasizes the need to change one's attitudes towards tax systems; through tax awareness education (Hendy, 2018; Eriksen & Fallan, 2006). Perception of an ethnic group being treated unfairly, and tax education. The study did not assess a number of possible determinants of tax compliance and therefore there is need to expand the variables. Cummings (2019) supports the theory in his study where he said taxpayers

can feel morally justified in evading taxes if they feel that the quality of public goods and services are unsatisfactory. In most economies, tax evasion rate is low when the provision of public goods and services is satisfactory. Taxpayers will end up complying with their tax obligations if they feel that their government is honest, democratic and participatory and also if the taxpayers feel they play a meaningful role in governance. The theory is crucial in this study since explains how moral and ethics can play a role for an individual to be tax compliance or not. This will help the researcher to understand how small and medium enterprises perceive the usefulness of paying their tax liability.

2.2.4 Optimal Taxation Theory

Optimal tax theory by Ramsey developed in 1927 revolves on the idea that designing and implementing a tax reduces inefficiency and distortion in the market under given economic constraints. Other things being equal, if a tax-payer must choose between two mutually exclusive economic projects (say investments) that have the same pre-tax risk and returns, the one with the lower tax or with a tax exemption would be chosen by a rational actor. Thus, economists argue that taxes generally distort behavior (Wheeler, 2016).

The standard theory of optimal taxation posits that a tax system should be chosen to maximize a social welfare function subject to a set of constraints. The literature on optimal taxation typically treats the social planner as a utilitarian: that is, the social welfare function is based on the utilities of individuals in the society. In its most general analyses, this literature uses a social welfare function that is a nonlinear function of individual utilities. Nonlinearity allows for a social planner who prefers, for example, more equal distributions of utility (Lemuria & Carter, 2020). According to Lemuria & Carter (2020) it is often assumed that everyone in society has the same

preferences over, say, consumption and leisure. Sometimes this homogeneity assumption is taken one step further by assuming the economy is populated by completely identical individuals.

This theory is advocated in this study because not only does it take into account the preferences of individuals, but also the technology involved in tax collecting. A practical application of this, for example, is implementing value-added taxes, a tax on the purchase price of a good or service, to correct tax evasion. He argues that any future tax literature needs to focus less on consumer preferences and more on tax collecting technology.

2.3 Empirical Review

This section also commonly referred to as systemic literature review is an analysis of empirical studies to provide an answer to the research questions. It is based on the analysis of data or evidence gathered by other researchers to be able to arrive at a conclusion. The purpose of an empirical review of related studies is to be able to identify gaps in their research as well as critique their work.

2.3.1 Compliance Costs and Pay As You Earn Tax Compliance

Usang et al., (2021).) defined TCC as all the costs borne by businesses and individuals for complying with tax regulation, excluding the costs of the taxes themselves. To comply with tax provisions, both businesses and individuals bear tax substantive costs (they might need to purchase specific software to fill in tax returns (Brink & Lee 2019) and tax administrative costs. As tax system implementation is largely concerned with information processing, the bulk of costs of tax compliance are caused by information obligations, for instance, record keeping, filing in tax returns with data.

The investigation of tax compliance costs faced by businesses and potential solutions to reduce these, form a particularly important field of research. Not only can businesses benefit directly from reduced compliance costs (external tax advisors and tax professionals' fees, equipment, books, subscriptions to tax journals, training seminars, hardware, software, etc.), they can minimize the amount of time that employees in their accounting departments spend on matters that do not produce added value (Cuccia, 2020). These employees could then spend more time on productive work that creates added value for themselves, the businesses that they represent, and the national economy as a whole (Yilmaz & Coolidge, 2018). In addition, tax compliance costs include the psychological costs associated with stress, frustration, and anger caused by tax compliance efforts in highly complex tax environments (Sandford et al., 2019).

While the issue of tax compliance costs for businesses has long occupied the thoughts of economists in developed countries (Coolidge, 2021), it has not yet been explored at both a theoretical and an applied scientific level in relation to Greece. In the context of the assumption that these costs form a significant part of businesses' total operating costs, this paper seeks to highlight and investigate the issue, given the weaknesses of the Greek tax system. In addition, understanding the relationship between taxes and compliance costs can help us to focus on compliance cost management efforts in areas that have greater impacts (Williams, (2021).

2.3.2 Tax Payer Education and PAYE Tax Compliance

Taxpayer education can be described as a method of educating the people about the whole process of taxation and why they should pay tax (Aksnes, 2019). It assists taxpayers in meeting their tax obligations to the government. This means that the

primary existence of taxpayer education is to encourage voluntary compliance amongst taxpayers. According to Mascagni, (2020) argued that tax payer education is in three folds: impart knowledge as regards tax laws and compliance; change taxpayer's and attitude towards taxation increases tax collection through voluntary compliance. With Kenya Revenue Authority (KRA) as the main tax authority, Taxpayer Education Unit was formed in the year 2005. It was formerly known as Taxpayer Services under the Commissioner for Corporate Support Services. It then moved to the Marketing & Communication Division in 2008 as a section mandated with internal and external education. Its function is compiling and disseminating effective practices through advocacy programs to stakeholders and taxpayers.

Tax Education to the SMEs becomes necessary when the objective of raising tax revenue, at the changing environment; particularly from the official tax assessment is considered (Normala, 2020). At the same time, achieving tax compliance and improving revenue generation is not an easy task. However, this problem can be minimized through tax education Kimungu and Kileva, 2019). Some observed evidence on the ground shows that there have been hostilities between the taxpayers and tax collectors on issues relating to tax compliance. Hostility towards tax compliance date back to the History of Taxation, "Taxes are considered a problem by everyone. Not surprising, taxation problems date back to the earliest recorded history" (Mannan,. 2020).

The degree of tax compliance with tax regulations and rules to a great extent depends on the level of taxpayer knowledge. As a result, low literacy levels create taxpayer uncertainty about tax regulation requirements, thus resulting in high levels of unintentional non – compliance (Li, et al., 2019), Thus, the literacy levels of taxpayers on rules of tax have an impact on the level of taxpayer compliance. Individual ability

to fill tax return forms, incident of errors while filing tax returns forms and individual interest in learning about tax are critical determiners of taxpayer literacy levels on taxation procedures and regulations.

Self-assessment system (SAS) places a great importance on education as a factor in improving tax compliance since the taxpayer needs to be knowledgeable on laws governing taxation and their implementation. This enables taxpayers falling within the target bracket to correctly calculate and make payments (Lam, et al., 2019). Taxpayer understanding of tax laws and requirements influences their ability to comply. Knowledge passed on to the taxpayers expounds there understanding on why the taxes are required, how they are utilized and consequences for noncompliance which increases their willingness to be tax compliant. Taxpayer education helps to tailor attitude towards taxation with positive altitude reduces the desire to evade taxes. This is motivated by knowledge on why, when and how the taxes are due or utilized (Lam, et al., 2019); Palil & Fariq, 2020).

Taxpayer understanding of tax laws and requirements influences their ability to comply. Knowledge passed on to the taxpayers expounds there understanding on why the taxes are required, how they are utilized and consequences for noncompliance which increases their willingness to be tax compliant. Taxpayer education helps to tailor attitude towards taxation with positive altitude reduces the desire to evade taxes. This is motivated by knowledge on why, when and how the taxes are due or utilized (Kumar, et al., 2019).

The impact of taxpayer awareness and compliance costs on tax compliance among small scale traders in Nakuru city, Kenya, was studied by Omondi and Theuri (2019). The research was motivated by tax compliance's economic deterrent and

psychological theories. Descriptive research design was employed in the analysis. A sample size of 302 was drawn from the target population of 1416 small scale traders approved by the Nakuru County Government. Using standardized questionnaires, data was obtained. The data was also coded; both inferential and descriptive statistics were used to quantitatively interpret it. Then the knowledge was summarized in the form of tables and charts. The findings revealed that tax awareness and education has a positive and significant effect on the tax compliance ($\beta_2 = 0.315$), and the cost of compliance has a significant effect on the level of tax compliance ($\beta_1 = 0.416$).

2.3.3 Peer influence and Pay As You Earn Tax Compliance

Peer influence is one of the variables that determines tax compliance in the Fischer's model. Past literature has ascertained the importance of peer influence. The term peers refer to taxpayers' associates which could be relatives, friends, co-workers as well as contemporaries. They are believed to regularly communicate or deliberate on the tax compliance choices amongst themselves (Bidin & Sinnasamy, 2019; Peer influence is regarded as the effect of people who are significant for SMEs' owner-managers as well as the social influences such as close friends, family members, current or future manager and spouse and significant others (Hanno & Violette, 1996). Several of the preceding literatures found peer influence as having a significant impact in the determination of compliance decision (Blanthorne & Kaplan, 2008; Bobek, et al., 2007). Furthermore, Wenzel (2002) argued that peer influence has 'significant effect' on tax compliance behaviour. Hence, Lefebvre et al. (2020) reported the significance of not ignoring the presence of peer impact when examining the tax compliance behaviour. Among SMEs, peers have influences on the tax compliance behaviour of their counterparts and SMEs will evade tax payment if they feel that their peers were evading without punishment (Alshira'h, 2019; Bidin & Sinnasamy, 2018). Therefore,

this study defines peer influence as the effect of people who are significant for SMEs' owner-managers on their tax compliance decision, thus contributing in shaping their attitude towards tax compliance.

Prior literatures on tax compliance behaviour found a positive relationship between tax compliance and peer influence (Bobek et al., 2019; McGee et al., 2020; Tusubira & Nkote, 2021). On the other hand, some other studies on tax compliance behaviour found a negative relationship between tax compliance and peer influence (Palil et al., 2021). However, some other studies declared that the peer influence has no impact on the tax reporting decisions (Borrego et al., 2018). In Malaysia, Bidin and Sinnasamy (2018) found that peer influence has a significant negative relationship with excise duty compliance. On other hand, some other studies on tax compliance behaviour found a negative relationship between tax compliance and peer influence Moreover, Alshira'h (2019) indicated that there are inconsistent results regarding peer influences and sales tax compliance.

2.4 Summary of Literature and Research gaps

In brief, this chapter outlines the theoretical framework, which establishes the theories and concepts that govern this research. The theories anchoring this study are deterrence theory purports that taxpayers are influenced by economic motives and trade on the probability that their actions will not be detected; psychological theory that posits that taxpayers are influenced by psychological factors rather than the fear of detection. Another theory discuss at length was the Ability to Pay Theory of taxation which stipulate that the taxation should be levied according to an individual's income or ability to pay and is the basis of progressive tax where the tax rate increases by the increase of the taxable amount.

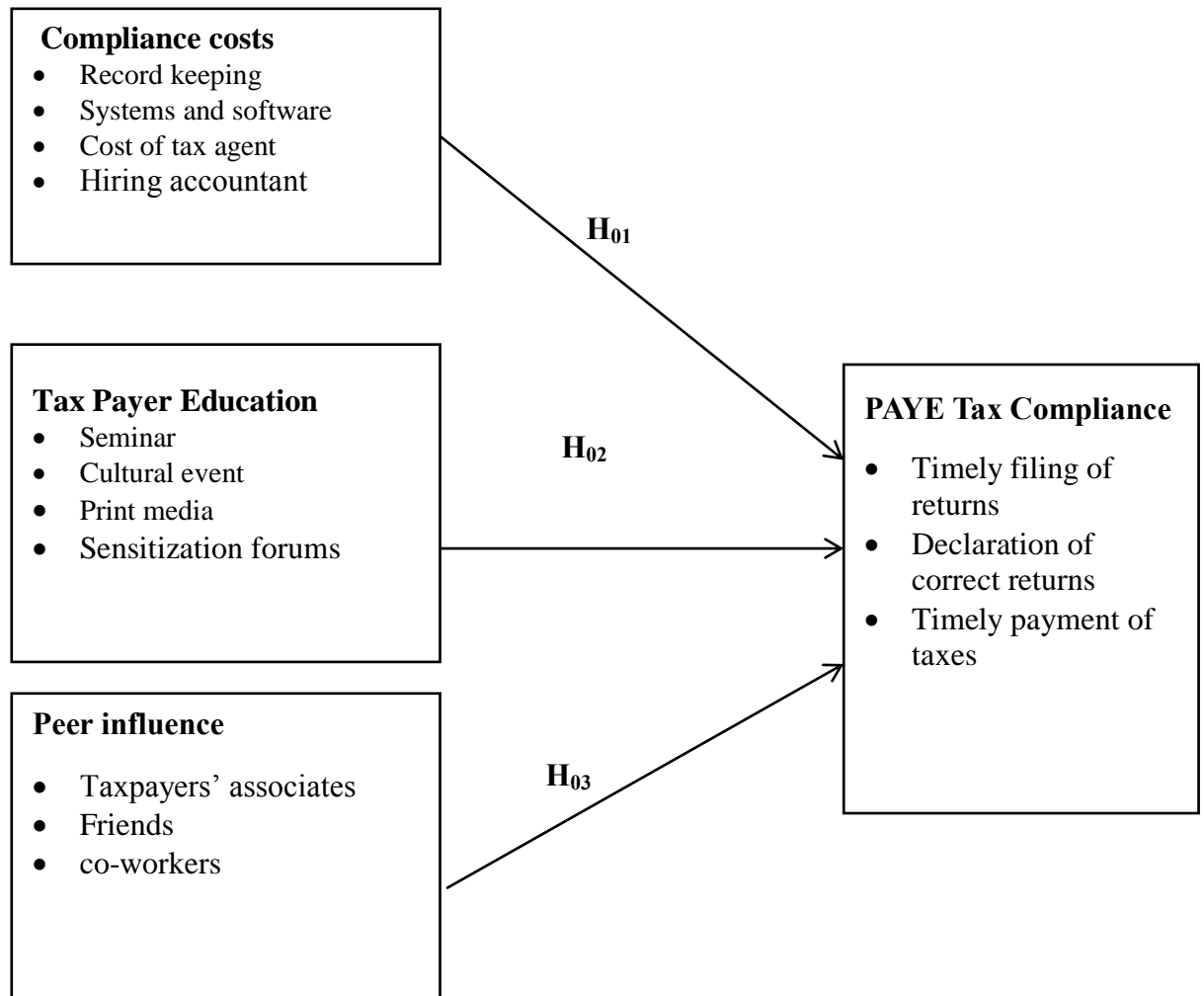
This was followed by empirical literature which reviewed related study and highlighted their findings. The conceptual framework on the other hand outlines the relationship that exists between dependent and independent variables.

Table 2.1: Summary of Research Gaps

Author	year	Concept	Gap
Atawodi	(2019)	Factors that affect tax compliance among SMEs in Nigeria noted that a high tax rate mostly aids non-compliance and affect the growth of SMEs as most tend to stagnate in the informal sector.	contextual gap
Kariba	(2020)	Analysis of tax reform policies and tax revenues in Kenya. In her study secondary data was used to collect data and the study found out that there was significant improvement in tax revenue after implementation of reform policies	methodological gap
Tusubira & Nkote, Makori,	2021 & 2018	Most SMEs do not pay the taxes and tax evasion among SMEs remains far above the ground, with a tax gap of about 35% and 33.1% in 2011 and 2012 respectively (KRA, 2020). Consequently, measures beyond tax audits are needed to tackle non-compliance (Tusubira & Nkote, 2021). The same case applies to Ruiru Municipality	conceptual gap

2.5 Conceptual Framework

Conceptual framework is a theoretical structure of assumptions, principles, and rules that holds together the ideas comprising a broad concept (Zikmund,2020). The major function of conceptual framework is that it enables the researcher to find links between the existing literature and his own research goals (Greener, 2018). The independent variables of this study are the following; compliance cost was measured by Record keeping Systems and software cost of tax agent; Taxpayer education was measured by Seminar, Cultural event and Print media and Peer influence which was measured by Taxpayers' associates and Friends and co-workers. These variables are assumed to affect the dependent variable of the study which in this case is pay as you earn tax compliance which was measured by Timely filing of returns, Declaration of correct returns and Timely payment of taxes. The conceptual frame work is presented in Figure 2.1

Independent variables**Dependent variable****Figure 2.1: Conceptual Framework****Source: Researcher, (2023)**

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter covers the methodology, research design, procedures that was used, a description of the research area, an outline of the study population, sample size, sampling techniques, data sources, research instruments, data collection procedures, data analysis and presentation.

3.1 Research Design

This research adopted explanatory research design which tries to explain the nature of certain relationships and investigates the causal relationship between variables. Other scholars have previously used the design successfully, and came up with credible and reliable conclusions (Muriungi *et al*, 2020). The study concentrated on SMEs within Ruiru Municipality. The data was gathered at a particular point in time with the intention of explaining the nature of the existing conditions, identifying the standards against which existing conditions can be compared by determining the relationship between specific events (Kothari, 2019).

3.2 Target Population

According to Mugenda and Mugenda (2013), target population entails an entire group of persons or things which have similar features which are preferred by the researcher. Target population consisted of a group of entities or elements which must be huge than or distinct from sampled group from which the researcher drew conclusions about the interested population. The target population comprised of 1478 registered business owners SME's in Ruiru Municipality in Kiambu County (KRA, 2022).

Table 3.1: Target Population

Sector of Enterprise	Target Population
Green Grocer Traders	323
General shops & kiosks	286
Salons and Barber shops	432
Hotels	214
Tailors	223
Total	1478

Source: Researcher (2023)

3.2.1 Study Area

The study was conducted in Ruiru is a municipality and sub-county in Kiambu County, Kenya. It sits within the greater Nairobi Metropolitan region. According to the 2019 national population census, Ruiru is the 4th largest urban centre in Kenya by population

3.3 Sampling Method

This section presents the methods that was used for sampling, the procedure of sampling and eventually how the final study sample was reached from the target population and the details of how data was obtained, processed and analyzed. Sampling is selecting a given number of subjects from a defined population as representative of that population. The study adopted a stratified sampling technique in selecting respondents. The sampling procedure describes the list of all population units from which the sample will be selected (Smith, 2020).

3.3.1 Sampling Size and Sampling Technique

Sampling is a means of selecting a part of a group from a population to represent the characteristics of the entire group or the population of interest. Sampling reduces the time needed to complete the study as well as the costs involved. Saunders et al (2018) assert that where a sample is utilized rather than the whole population, there is a possibility of collecting more information on every indicator of interest. (Saunders, Lewis and Thornhill, 2000). The usefulness of the information gathered depends on the specific characteristics of the respondents being relied upon. This is usually achieved by carefully designing the sampling frame. According to Smith (2020), a sampling frame is a list of elements from which the sample is actually drawn and is closely related to the population. By adopting this approach, the researcher ensures that the sampling frame is current, complete and relevant for the attainment of the study objectives.

The sample size (n) was calculated by using the Yamane method:

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

Where,

n = Sample size, N = population size, and e = Margin of error (MoE), $e = 0.05$

The sample size will therefore calculated as follows

$$n = \frac{1478}{1 + 1478(0.05)^2}$$

$$n = 314$$

A sample of 314 participants were proportionately using the formula n/N where n is the sample size and N is the target population.

3.3.2 Sampling frame

For this study, the sampling frame for the target population was the registered SMEs in Ruiru Municipality. Lavrakas (2020) defines a sampling frame as a list of the target population from which the sample is selected and that for descriptive survey designs, a sampling frame usually consists of a finite population. Polit, Beck, and Owen (2020) refer to a sampling frame as the technical name for the list of the elements from which the sample is chosen. Kothari (2019) argued a sampling frame to be a list that contains the names of all the elements in a universe. The study was restricted to SMEs in Ruiru Municipality. The SMEs was stratified into: Green Grocer traders, General shops & kiosks, General shops & kiosks, Salons and Barber shops, Hotels and Tailors.

Table 3.2: Sampling Frame and Sample Size

Sector of Enterprise	Target Population	Sample size
Green Grocery traders	323 *314/1478	69
General shops & kiosks	286*314/1478	61
Salons and Barber shops	432*314/1478	92
Hotels	214*314/1478	45
Tailors	223*314/1478	47
Total	1,478	314

Source: Researcher (2023)

3.4 Data Collection

Creswell (2002), defines data collection as a means by which information is obtained from the selected subjects of an investigation. Primary data was used in this study which is the quantitative data. The primary research data was collected using a questionnaire as the essential instrument for data gathering. The questionnaire was

formatted to contain sections reflecting the study variables. It will then be evaluated and comparison made so as to select the most accurate information from the respondents. The quantitative data was analyzed and presented in tables and figures. Primary data was collected using a structured questionnaire that has four sections. The first section had data on the respondent, while the other three sections each answered questions based on the three research objectives. The questionnaire had close-ended questions. A research assistant was engaged in the administration of the questionnaire and ensures that distribution of the questionnaire was done within the appropriate time to allow the respondent's time to properly complete the questionnaire.

3.5 Data Collection Procedures

According to Kumar (2011), when selecting a method for collecting data, the demographic characteristics of the study population should be considered. It is good to know the study population's attitude and interest towards participating in the study. The researcher obtained an introductory letter from the University in order to collect data from the field. Drop and pick method of administering questionnaires was used. The researcher informed the respondents that the instruments being administered is for research purpose only and the response from the respondents would be kept confidential.

3.6 Pilot Study

According to (Cooper & Schindler, 2006), a pilot test should range from 1% to 10% depending on the sample size. For this reason the study carried out a pilot test; where a total of 31 questionnaires were issued to respondents from Thika municipality as a different geographical area. Piloting was carried out in the neighboring Thika municipality to establish the reliability and validity of the research instrument

(Mugenda & Mugenda, 2013). The reliability of the questionnaire was determined by subjecting it to a pilot study. “The pilot study involved 10% of the sampled respondents hence, 31 respondents were randomly picked from Thika municipality.

3.6.1 Validity of Research Instruments

Validity is the degree to which an instrument measures what it is supposed to measure. (Kothari, 2004) Therefore, the term refers to the extent to which an instrument asks the right questions in terms of accuracy. There are four main validity test of the questionnaire namely; face validity, content validity, construct validity and criterion or concrete validity. Prior to the main survey, a pilot study was done whereby questions in the questionnaire were validated and the questionnaire adapted based on the pilot study.

The content validity of the research instrument for this study was determined through piloting, where the responses of the subjects were checked against the research objectives. For a research instrument to be considered valid, the content selected and included in the questionnaire must be relevant to the variable being investigated.

The researcher performed the pilot test with a randomly selected sample of 28 respondents. Content validity of the instrument was also be tested using a research expert’s opinion, who was the research supervisor. The research expert independently judged the validity of the items in the questionnaire in relation to research objectives.

Validity test is used to gauge the accuracy of the data collection instrument and if data collected is credible in providing answers to the research questions (Leung, 2015).

This study adopted content validity and construct validity. Content validity is the fitness of actual data in relation to what it was expected to collect (Leung, 2019). One way of improving content validity is use of experts in the field that the research is based on thus; the researcher were involve tax experts in the process of constructing the tool of data collection to improve on content validity. Construct validity, the questionnaire was divided into a number of sections so that under each section, information regarding a specific objective was gathered besides ensuring that the same closely tied with the study's conceptual framework. The factor analysis was used to validate the questionnaire with factor loading at 0.5.

3.6.2 Reliability of Research Instruments

The study tested the reliability for consistency of the research instrument. Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. In order to test the reliability of the instruments, internal consistency techniques were carried using Cronbach's Alpha.

The alpha value ranges between 0 and 1 with reliability increasing with the increase in value (Mugenda, 2008; Bryman, 2012). According to (Mugenda, 2008), a coefficient of 0.7 is a commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicated good reliability.

Table 3.3 shows the reliability statistics for the study variables. Using Cronbach's alpha test of reliability, the pilot results indicated that the reliability of Taxpayer education was 0.964.; the reliability of the compliance cost was 0.856; the reliability of the peer pressure was 0.790; the reliability of PAYE tax compliance was 0.821. The

study results revealed that all the variables gave an alpha test value of greater than 0.70, therefore all the items were regarded reliable

Table 3.3: Reliability Results

Variables	Alpha value	Number of Items	conclusion
Taxpayer education	0.964	5	reliable
Compliance cost	0.856	5	reliable
Peer pressure	0.790	5	reliable
PAYE tax compliance	0.821	5	reliable

Source: Research Data (2023)

3.7 Assumptions of Regression

Diagnostic tests assist in verifying the nature of the data and aids in specifying the model applicable for the study in order to ensure that the regression results are unbiased, consistent and efficient (Yihua, 2010). This study was carried out to test the relevant diagnostic tests before embarking on model estimation. The diagnostic tests relevant for this study was to test violation of panel error assumptions relating to normality, homoscedasticity and multicollinearity.

3.7.1 Testing for Normality

An assumption of the OLS regression model that impacts the validity of all tests is that residuals behave normal (Oscar, 2007). This study was the Shapiro Wilk test, a non-graphical test for normality, so as to determine whether residuals behaved normally. The Shapiro Wilk test was used to test the null hypothesis that the distribution of the residuals is normal (Oscar, 2019). If the p-value is found greater than 0.05 ($p > 0.05$), the study would fail to reject the null (at 95%) and thereafter conclude that the residuals is normally distributed.

3.7.2 Testing for Multicollinearity

According to Kumari (2008), the existence of a linear relationship among the independent variables is called Multicollinearity. Multicollinearity can cause large forecasting error and make it difficult to assess the relative importance of individual variables in the model. This study opted for both the Variance Inflation Factor (VIF) and Tolerance to test for multicollinearity. The Tolerance Statistics values of below 0.10 ($1/vif < 0.10$) would indicate a problem with multicollinearity (Oscar, 2007). The study will also opt for reciprocal of Tolerance also known as Variance Inflation Factor (VIF) to check for multicollinearity. The variance inflation factor shows how much the variance of the coefficient estimate is being inflated by multicollinearity (Belsley, Edwin & Roy, 1980). Therefore, a Variance Inflation Factor more than 10 ($VIF > 10$) would indicate trouble with multicollinearity (Oscar, 2007).

3.7.3 Homoscedasticity

In regression analysis, homoscedasticity means a situation in which the variance of the dependent variable is the same for all the data, which implies that the error is constant along the values of the dependent variable. The best way for checking

homoscedasticity is to make a scatterplot with the residuals against the dependent variable.

3.7.4 Linearity Test

The importance of testing for linearity lies in the fact that many statistical methods require an assumption of linearity of data. This occurs when data is sampled from a population that relates the variables of interest in a linear fashion. This means that before using common methods like linear regression, tests for linearity must be performed (Geiger, Parthasarathy, Kuyel, Jin, & Chen, 2005). Linearity test was done for each variable was drawn to check on the possibility of the data arriving from a linear population

3.8 Data Analysis

Data collected from the questionnaire was analyzed using descriptive and inferential statistics. In particular, descriptive statistics encompassed frequencies, percentages, means and standard deviations while inferential statistics constituted Pearson's product moment correlation coefficient and multiple regression analysis. The findings were presented in form of tables and was interpreted and discussed in line with the study objectives. The multiple regression analysis was used to determine whether the group of factors proposed together predict or assess the relationship between governance practices and performance of road construction projects in Kenya. (Neuman, 2019). The study was a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree for analysis purpose. Likert scale is easy to use in respondent –centered and stimulus-centered studies (Patton, 2012).

A multivariate regression model was applied to determine the relative importance of each of the four variables with respect to the relationship between Compliance cost,

taxpayer education and Peer influence on PAYE Tax Compliance among SMEs in Ruiru Municipality.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

Y = the dependent variable (PAYE Compliance among SMEs in Ruiru Municipality)

β_0 = Constant Term

$\beta_1, \beta_2,$ and β_3 = Are constants regression coefficients representing the condition of the independent variables to the dependent variables (Beta coefficients)

X_1 = compliance cost

X_2 = Taxpayer Education

X_3 = Peer influence

3.9 Measurement of Variables

The study's data was collected by using a structured questionnaire. The 5-Point Likert scale was used as a measurement tool for the variables and a multiple regression analysis adopted to analyze the study's findings. The dependent variable is the Pay As You Earn Compliance. The variable was measured by Timely and accurate filing of returns, Declaration of correct returns, Timely payment of taxes based on questionnaire a five point Likert scale validated by (KRA), 2021).

The independent variables of this study are the following; compliance cost was measured by Record keeping Systems and software cost of tax agent The data was collected by using a structured questionnaire. The 5-Point Likert scale was used as a measurement validated by (Brink & Lee 2020) Taxpayer education was measured by Seminar, Cultural event and Print media based on questionnaire a five point Likert scale validated by Pail, 2010. Peer influence which was measured by Taxpayers' associates and Friends and co-workers. The data was collected by using a structured

questionnaire. The 5-Point Likert scale was used as a measurement validated by Frey & Torgler, 2007

3.10 Operationalization and Measurement of Variables

Table 3.4: Operationalization and Measurement of Variables

Variable	Indicator	Source/ Author	Measurement	Data analysis
<u>Independent</u> Compliance cost	<ul style="list-style-type: none"> • Record keeping • Systems and software • Cost of tax agent • Hiring accountant 	Pail, 2010	5-point Likert scale	Multiple regression
<u>Independent</u> Taxpayer education	<ul style="list-style-type: none"> • Seminar • Cultural event • Print media • Sensitization forums education 	(Brink & Lee 2020)	5-point Likert scale	Multiple regression
<u>Independent</u> Peer influence	<ul style="list-style-type: none"> • Taxpayers' associates • Friends • co-workers 	Frey & Torgler, 2007	5-point Likert scale	Multiple regression
<u>Dependent</u> PAYE Compliance among SMEs	<ul style="list-style-type: none"> • Timely and accurate filing of returns • Declaration of correct returns • Timely payment of taxes 	(KRA), 2021)	5-point Likert scale	Multiple regression

3.11 Ethical Consideration

After the data is collected, the researcher was ethical in using the information gathered only for the purpose so stated and not for any other use. The researcher made this work by first obtaining a permit to collect data from National Commission for Science Technology and Innovation (NACOSTI) which assisted in winning confidence of the respondents and also obtained introductory letters from Moi University. This research endeavored to obtain an informed consent from the respondents before undertaking to collect data from the field. Objectives of the research was explained and made known to the respondents so as to solicit their informed consent. High level of confidentiality on the information was provided by respondents through filling of questionnaires was maintained. The researcher also ensured that the data collected was confined to academic purpose only and that the respondents participate voluntarily without coercion or bribery. Therefore, while approaching the respondents, an assurance was given that all the ethical behavior was observed and any information received by the researcher was used and treated with all the confidentiality and used solely for academic purpose. The researcher ensured that the respondents were not coerced into participating in the research and giving any specific information by assuring them that any information they give is at their will.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter deals with the data analysis and findings of the study to determine the Socio economic determinants of PAYE Tax Compliance among SMEs in Ruiru Municipality. It is divided into response rate, diagnostic tests, the presentation of findings, the tests of hypotheses, interpretation of results and results of regression analysis. Descriptive statistics is used to present the preliminary findings, while the inferential statistics are used in the tests of hypotheses.

4.2 Response Rate

Data analyzed in this chapter was obtained from 258 SMEs form Ruiru Municipality out of the targeted 314 SMEs in Ruiru Municipality. The response rate was 82% which is adequate as it compares fundamentally well with other studies conducted. Sekaran (2004) argues that any response rate above 75% is classified as best and appropriate for any study. Mugenda and Mugenda (2012) aver that a response rate of 50% is adequate, 60% and above good and above 70% very good. The response rate of 82% found in this study was therefore quite adequate. Some of the reasons for non-response is some respondents wanted to be incentivized which the researcher termed as unethical, some felt the information requested was too sensitive while others were just unwilling to cooperate.

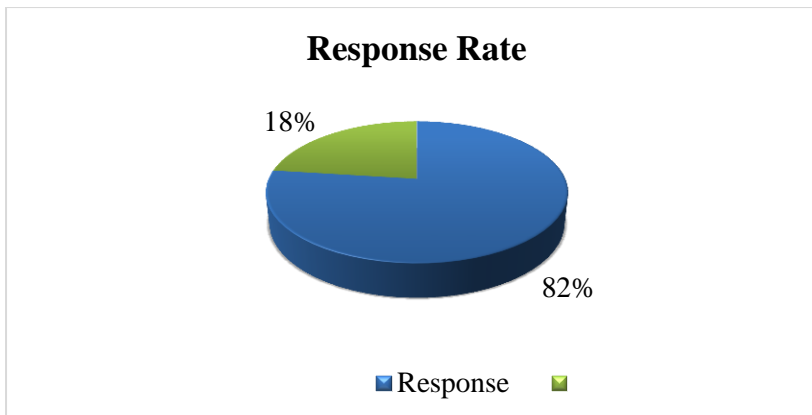


Figure 4.1: Response Rate

4.3 Reliability of the actual data

A reliability test answers to the consideration whether the procedures of data collection and analysis will generate the same results on other occasions or will other observers make similar observations and arrive at the same conclusions from the raw data (Smith et al., 2019). According to (Evans 2020), a coefficient of 0.7 is a commonly accepted. Therefore the reliability of actual data was conducted on 10% of the sample size on a population. Since all the item met the threshold of 0.7 and above, it can therefore be comfortably concluded that the reliability of the questionnaire is adequate and can be relied upon to produce information and results for study conclusions.

Table 4.1: Reliability tests

Variables	Cronbach's Alpha	No. of Items
Taxpayer education	0.912	5
Compliance cost	0.826	5
Peer influence	0.788	5
PAYE compliance	0.931	5

Source: Research Data (2023)

4.4 Demographic information

The research questionnaire sought to investigate the demographics of the respondents, in terms of years of business has been in existence and the annual business turnover.

4.4.1 Years of operation

The respondents were asked to indicate how long the business has existed. The results from the demographics for the years of existence shown in table 4.2 indicated that 1.9% business existed for less than 1 year. 8.9% businesses existed for 1- 3 years. Additionally, 26.3 % businesses existed for 4- 6 years. Further, 27.9% businesses existed for 7- 10 years. Lastly 34.9% businesses existed for more than 10 years.

Table 4.2: Demographics on years of operation

	Frequency	Percentage %
Less than 1 year	5	1.9
1 - 4 years	23	8.9
4 - 6 year	68	26.3
7 - 10 years	72	27.9
More than 10 years	90	34.9
Total	258	100

Source: Researcher (2023)

4.4.2 Annual turnover

The study found it of significance to seek to understand the respondents' average annual sales. The respondents were asked to indicate the annual turnover. The results presented in Table 4.3 shows that majority 37.9% of the respondents had of between 500,001-1,000,000. 29.1% of the respondents had a turnover between 1,000,001 - 5,000,000. Further, results showed that 22.1% of the respondents had a turnover of below 500,000. While 10.8% of the respondents had the lowest turnover of above

5,000, 0001. This implies majority of the respondent had a turnover between 500,001-1,000,000.

Table 4.3: Annual turnover

	Frequency	Percent
Below 500,000	57	22.1
500,001-1,000,000	98	37.9
1,000,001-5,000,000	75	29.1
Above 5,000,001	28	10.8
Total	258	100

4.4.3 Number of staff in an enterprise

The results from the demographics for the number of staff in an enterprise shown in table 4.4 indicated that 29.4% were in micro enterprises. 36.4% were in small enterprises. Lastly 34.1% businesses were micro enterprise

Table 4.4: Demographics on number of staff

	Frequency	Percentage %
Micro 1-9	76	29.4
Small 10-49	94	36.4
Medium 50-99	88	34.1
Total	258	100

Source: Researcher (2023)

4.5 Descriptive Statistics

The study utilized descriptive statistics including means and standard deviations in this subsection.

4.5.1 Compliance cost

Table 4.5 the agreement was made by respondent that, the cost of filling Returns is reasonable with a (mean=4.21). I find cost of hiring accountant is expensive with a (mean=4.34). The agency costs are convenient with a (mean=4.38). I-tax has helped in reducing compliance cost with a (mean=3.25). The costs of full compliance as compared to the costs of non-compliance is high with a (mean=3.84).

Table 4.5: Compliance cost

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1= Strongly Disagree

	Mean	Std. Dev	Skewness	Kurtosis
The cost of filling Returns is reasonable.	4.21	0.876	-1.024	0.402
I find cost of hiring accountant is expensive.	4.34	0.694	-1.128	1.967
The agency costs are convenient	4.38	0.730	-1.030	0.694
I-tax has helped in reducing compliance cost	3.25	0.919	-0.662	-0.767
The costs of full compliance as compared to the costs of non-compliance is high	3.84	1.013	-0.544	-0.774

Survey Data (2023)

4.5.2 Taxpayer Education

Table 4.6 results shows that, through broadcast I'm aware of PAYE compliance with a (mean=4.19). I learn a lot from KRA website on changes in law with regard to PAYE taxes with a (mean=4.42). Where there are changes in the law, timely dissemination of such information improves my tax compliance with a (mean=4.33). Sensitization forums such adverts on television have improved my PAYE tax compliance with a (mean=4.15). The KRA customer care department sufficiently educates make me aware of tax law stipulations with regard to PAYE tax hence enabling be fully compliance with a (mean=4.02).

Table 4.6: Taxpayer Education

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1= Strongly Disagree

	Mean	Std. Dev	Skewness	Kurtosis
Through broadcast I'm aware of PAYE compliance	4.19	0.801	-1.080	1.183
I learn a lot from KRA website on changes in law with regard to PAYE taxes.	4.42	0.639	-1.104	2.662
Where there are changes in the law, timely dissemination of such information improves my tax compliance	4.33	0.708	-0.835	0.786
Sensitization forums such adverts on television have improved my PAYE tax compliance	4.15	0.792	-1.035	2.154
The KRA customer care department sufficiently educates make me aware of tax law stipulations with regard to PAYE tax hence enabling be fully compliance	4.02	0.743	-0.095	-1.016

Survey Data (2023)

4.5.3 Peer Influence

In regards to peer influence on Table 4.7 the respondent agreed that, my friends give me advice on tax filing with a (mean=4.19). I and my friends share thoughts and opinions on PAYE tax compliance with a (mean=3.57). We always help each other with PAYE tax information with a (mean=4.17). My friends discourages me not to pay my taxes with a (mean=3.88). I always help my friends on filling taxes with a (mean=4.25).

Table 4.7: Peer Influence

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1= Strongly Disagree

	Mean	Std. Dev	Skewness	Kurtosis
My friends give me advice on tax filing	4.19	0.744	-0.387	-0.917
I and my friends share thoughts and opinions on PAYE tax compliance.	3.57	0.854	0.121	-0.670
We always help each other with PAYE tax information	4.17	0.889	-0.651	-0.721
My friends discourages me not to pay my taxes	3.88	1.042	-0.567	-0.850
I always help my friends on filling taxes	4.25	0.781	-1.265	1.887

Survey Data (2023)

4.5.4 PAYE Compliance

Table 4.8 the agreement was made by respondent that, I have always declared actual income received from all sources to the tax authority honestly without being forced to with a (mean=4.29). I do not follow the stipulated tax rules and regulations because of the fear of the risks of being checked with a (mean=4.27). W I have registered as taxpayer for all the taxes it qualifies for without being forced to with a (mean=4.00). My business pays all taxes on time with a (mean=4.24). SMEs like mine files taxes accurately with a (mean=4.05).

Table 4.8: PAYE Compliance

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1= Strongly Disagree

	Mean	Std. Dev	Skewness	Kurtosis
I have always declared actual income received from all sources to the tax authority honestly without being forced to	4.29	0.871	-1.413	1.589
I do not follow the stipulated tax rules and regulations because of the fear of the risks of being checked.	4.27	0.760	-0.492	-1.117
I have registered as taxpayer for all the taxes it qualifies for without being forced to	4.00	0.855	-0.790	0.240
My business pays all taxes on time	4.24	0.790	-0.828	0.178
SMEs like mine files taxes accurately	4.05	0.802	-0.418	-0.309

Survey Data (2023)

4.5.5 Exploratory Factor Analysis

The exploratory factor analysis matrix are the results for validity test gives loading that is the correlation between each variable and each factor. A factor is an underlying dimension that account for several observed variables (Mugenda, 2002). The cells result from the Table 4.9 reveal factor loadings which gives values over 0.5 and none is more than 0.948 implying linear relationship, interval or near interval data lack of high multi-collinearity. Kervin (2009) suggested that any factor loading below 0.4 is weak and those between 0.5 and 0.6 are moderate. While values which are less than 0.3, the results of the factor analysis probably will not be very useful in the research. Thus, from results of the factor loading results were all above 0.5 which indicate that the factor strongly influences the variable.

Table 4.9: Factor Analysis

	CC	TE	PI
Compliance cost			
The cost of filling Returns is reasonable...	0.654		
The cost of hiring accountant is expensive...	0.732		
Cost of bookkeeping for many years is too high ...	0.840		
Tax has helped in reducing compliance cost....	0.902		
The costs of full compliance is high....	0.902		
Taxpayer Education			
I'm aware of PAYE compliance		0.685	
I learn a lot from KRA website.....		0.864	
Information improves my tax compliance...		0.752	
TV adverts have improved my PAYE compliance. .		0.728	
The KRA customer care sufficiently educates me..		0.948	

Peer Influence

My friends give me advice on tax filing ...

0.563

I and my friends share thoughts on PAYE tax compliance...

0.900

We always help each other with PAYE tax information...

0.925

My friends discourages me...

0.820

I always help my friends ...

0.764

Extraction Method: Principal Component Analysis**Survey Data (2023)****4.6 Assumptions of Regression**

Glasser, (2008), States that all statistical procedures have certain underlying assumptions, which can vary in their strictness. While the violation of these assumptions may not affect the substantive conclusions of the research in some cases, in other cases it can significantly undermine the validity and meaningfulness of the research findings. (Garson, 2012) Verifying that one's data fulfils the assumptions of the statistical procedure being used is a standard requirement in all journal articles, theses, and dissertations based on quantitative research. Various tests were performed, including those for normality test, Multicollinearity, linear and homoscedasticity

4.6.1 Diagnostic Tests

Before data is subjected to regression analysis, diagnostic tests are done to ensure that the data does not violate important assumptions of regression analysis. The tests are discussed in the following subsections.

4.6.2 Normality Test

In statistics, normality tests are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed. This study adopts the Shapiro-Wilk test as it is the most powerful normality test. Shapiro-Wilk test of less than 0.05 implies that there is significant deviation of data from a normal distribution. The study's data set was subjected to a normality test and the results are shown in Table 4.10. The data presented was normally distributed as shown and the results for Shapiro-wilk had p values greater than 0.05, 0.091 for compliance cost, 0.103 for taxpayer education, 0.077 for peer influence and 0.184 for PAYE compliance which means the assumption of normality was not violated. The findings of the tests are shown in Table 4.9.

Table 4.10: Tests of Normality

	Statistic	Shapiro-Wilk df	Sig.
Compliance cost	0.732	258	0.091
Taxpayer education	0.790	258	0.103
Peer influence	0.800	258	0.077
PAYE compliance	0.765	258	0.184

a. Lilliefors Significance Correction

4.6.3 Multicollinearity Test

Multicollinearity is a phenomenon whereby high correlation exists between the independent variables. It occurs in a multiple regression model when high correlation exists between these predictor variables leading to unreliable estimates of regression coefficients. This leads to strange results when attempts are made to determine the

extent to which individual independent variables contribute to the understanding of dependent variable (Creswell, 2020).

The consequences of Multicollinearity are increased standard error of estimates of the Betas, meaning decreased reliability and often confusing and misleading results. Multicollinearity test was conducted to assess whether high correlation existed between one or more variables in the study with one or more of the other independent variables. Variable Inflation Factor (VIF) measured correlation level between the predictor variables and estimated the inflated variances due to linear dependence with other explanatory variables. It was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance.

A common rule of thumb is that VIFs of 10 points to severe multi-collinearity that affects the study. A tolerance threshold value of below 0.2 indicates that collinearity is present (Ary, Jacobs & Sorensen, 2020). The results revealed no problem with multicollinearity. The variables of the study indicated VIF values of between 1.001 and 1.117 which is less than 10. This indicated that the data set displayed no multicollinearity.

Table 4.11: Multicollinearity Test

Model	Coefficients ^a	
	Collinearity Statistics	VIF
	Tolerance	
(Constant)		
Compliance cost	0.983	1.018
Taxpayer education	0.926	1.117
Peer Influence	0.999	1.001

a. Dependent Variable: PAYE Compliance

4.6.4 Homoscedasticity test

Many statistical procedures, based on the assumption of homoscedasticity of the populations under study, are highly sensitive to deviations of the population variances from equality. It is therefore critical to test for homoscedasticity Kutner et al., (2020). The assumption of even distribution of residuals is crucial in linear regression, as it affects the validity of the statistical inferences made from the model. Violation of this assumption leads to heteroscedasticity, where the variance of the residuals is not constant across the range of the independent variable, and can lead to biased and inconsistent estimators of the regression coefficients; Montgomery et al., (2012). This phenomenon is known as heteroscedastic dispersion. Table 4.12 shows a p value of $0.893 > 0.05$ therefore the assumption of homoscedasticity was not violated.

Table 4.12: Homoscedasticity test

Homoscedasticity test

Prob > chi2 = 0.893

Source: Research Data, (2023)

4.6.5 Linearity test

In order establish that the correlation of the dependent and independent variables is linear, linearity tests were carried out. Linearity is determined by looking at the deviation of a variable from the linearity metric that has an alpha of 0.05. According to Csörgő (1985), 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.

Table 4.13: Linearity Test

			Sum of	Df	Mean	F	Sig.
			Squares		Square		
PAYE compliance*	Between Groups	(Combined)	7.324	13	.563	1.670	.070
		Linearity	.425	1	.425	1.141	.189
		Deviation from Linearity	5.671	13	.436	1.523	.079
Within Groups			116.120	243	.477		
Total			122.216	257			

Source: Research Data, (2023)

4.7 Correlation Analysis

Correlation analysis is a statistical tool used to observe the relationship between two incessant variables. It measures the degree of linear association between the variables using the correlation coefficient, ranging from -1 to +1, according to Thode (2019). Correlation analysis as aforesaid measures the degree of association and strength between variables. Pearson correlation analysis was done to determine the relationship between study variables. A correlation coefficient value (r) in the range of 0.1 to 0.29 is considered weak, 0.3 to 0.49 is considered moderate while 0.5 to 1.0 is considered strong extracts from O'Brien, 2007. Table 4.14 indicate that compliance cost had negative correlation and significantly associated with with PAYE compliance ($r = -0.601$ and $p = 0.000 < 0.05$), taxpayer education is positively correlated and significantly associated with with PAYE compliance ($r = 0.572$ and $p = 0.001 < 0.05$), peer influence is positively correlated and significantly associated with with PAYE compliance ($r = 0.624$ and $p = 0.000 < 0.05$)

Table 4.14: Correlation Analysis

		PAYE compliance	Compliance cost	Taxpayer education	Peer Influence
PAYE compliance	Pearson Correlation Sig. (2-tailed)	1			
Compliance cost	Pearson Correlation Sig. (2-tailed) N	-.601** .000 258	1		
Taxpayer education	Pearson Correlation Sig. (2-tailed) N	.572** .001 258	.432** .002	1	
Peer influence	Pearson Correlation Sig. (2-tailed) N	.624** .000 258	.367** .000	.211** .000	1

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

Source: Research Data, (2023)

4.8 Regression Analysis

To determine the correlation between the dependent and independent study variables, regression analysis was carried out. The findings in Table 4.15, reveal that compliance cost, taxpayer education and peer influence had a positive correlation with with PAYE compliance up to 73.2% ($R=0.732$) and accounts for a variation of 53.5% ($R^2=0.535$). This implies that 46.5% of the change in PAYE compliance was caused by other factors which were not included in the study. The findings further reveal that even if the results adjust, the study would still account for 52.9% (Adjusted R^2 , 0.529) variation of PAYE compliance

Table 4.15: Multiple Linear Regression analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732 ^a	.535	.529	.40411

a. Predictors: (Constant), compliance cost, taxpayer education and peer influence

b. . Dependent Variable: PAYE compliance

Source: Research Data, (2023)

Further ANOVA tests were conducted to determine whether the model works in explaining the relationship among variables as postulated in the conceptual model. The findings from Table 4.16 show an F value of 10.533 with a significance level of 0.000 which is lower than the confidence level of 0.05, hence establishing the model is statistically significant. The implication is that compliance cost, taxpayer education and peer influence contributes significantly to changes in the PAYE compliance

Table 4.16: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.152	3	1.717	10.533	0.000
¹ Residual	41,480	254	0.163		
Total	46.632	257			

a. Dependent Variable: PAYE compliance

b. Predictors (Constant), compliance cost, taxpayer education and peer influence

Source: Research Data, (2023)

4.8.1 Overall Regression Analysis of Compliance Cost, Taxpayer Education and Peer Influence on PAYE Compliance

The study showed that there was negative and significant relationship between compliance cost and PAYE compliance at (β_1) -0.305, p value <0.05). A unit change in compliance cost decreases level of PAYE compliance by 0.305 units when holding other factors constant.

The study findings revealed that there was a positive and significant relationship between taxpayer education and PAYE compliance (β_2) 0.328 p value <0.05). A unit change in taxpayer education increases level of taxpayer education by 0.328 units when holding other factors constant.

The study further showed that there was a positive and significant relationship between peer influence and PAYE compliance (β_3) 0.290, p value <0.05). A unit change in peer influence increases PAYE compliance by 0.290 units when holding other factors constant.

Table 4.17: Overall Regression Analysis of Compliance Cost, Taxpayer Education and Peer Influence on PAYE Compliance

	Standardized		Unstandardized			Collinearity
	Coefficients B	Std. Error	Beta	T	Sig	Statistics Tolerance
(Constant)	0.422	0.075		5.626	0.000	
Compliance cost 1.018	-0.305	0.080	-0.298	-3.812	0.004	0.983
Taxpayer education 1.117	0.328	0.069	0.439	4.753	0.001	0.926
Peer influence 1.001	0.290	0.046	0.271	6.304	0.000	0.999

Source: Research Data, (2023)

4.8.2 Regression Coefficient

Multiple regression analysis was conducted as shown in Table 4.15 Substituting the

values in the Equation; $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

$$Y = 0.422 - 0.305 X_1 + 0.328 X_2 + 0.290 X_3 + \varepsilon$$

Where Y = PAYE compliance

X₁ = compliance cost

X₂ = taxpayer education

X₃ = peer influence

α = constants term

$\beta_1, \beta_2,$ and β_3 = regression coefficients of X₁, X₂, X₃, and ε = error item.

4.9 Discussion of the Findings

This chapter presents discussion of the results of various tests carried out on the study.

The results of each of the questions in this study will be discussed.

4.9.1 Effect of compliance cost on PAYE compliance

The first objective of the study was to determine the effects of compliance cost on PAYE Compliance among SMEs in Ruiru Municipality and from the findings this study was statistically significant with (β_1) -0.305 and p value of 0.004 which is less than 0.05 the convectional probability significance level. The findings were in agreement with Sapiei and Abdullah (2020) who indicated that corporate tax compliance cost includes all the resources that are expended by firms in complying with tax regulations. Such cost comes in the form of staff costs associated with furnishing tax returns, payments to external tax professionals and other incidental costs associated with tax compliance such as postage, phone calls, printing and travelling. The higher the costs of compliance the lower the tax compliance levels.

Usang et al., (2021).) defined TCC as all the costs borne by businesses and individuals for complying with tax regulation, excluding the costs of the taxes themselves. To comply with tax provisions, both businesses and individuals bear tax substantive costs (they might need to purchase specific software to fill in tax returns (Brink & Lee 2019) and tax administrative costs.

4.9.2 Effect of Taxpayer Education on PAYE compliance

The second objective of the study was to establish the effects of taxpayer education on PAYE Compliance among SMEs in Ruiru Municipality and from the findings this study was statistically significant with (β_2) 0.328 and p value of 0.001 which is less than 0.05 the convectional probability significance level. The findings were also revealed by According to Saad (2019) the only measure to increase tax compliance is through effective tax enlightenment. Those with better tax education demonstrate increased compliance as compared to those with no or have scanty tax education. Some theorists recommended tax education to be incorporated in school's curriculum. According to Mascagni, (2020) argued that tax payer education is in three folds: impart knowledge as regards tax laws and compliance; change taxpayer's and attitude towards taxation increases tax collection through voluntary compliance

4.9.3 Effect of Peer Influence on PAYE compliance

The third objective of the study was to establish the effects of taxpayer education on PAYE Compliance among SMEs in Ruiru Municipality and from the findings this study was statistically significant with (β_3) 0.290 and p value of 0.000 which is less than 0.05 the convectional probability significance level. The study were also revealed byWenzel (2002) argued that peer influence has 'significant effect' on tax compliance behaviour. Hence, Lefebvre et al. (2020) reported the significance of not ignoring the presence of peer impact when examining the tax compliance behavior.

Among SMEs, peers have influences on the tax compliance behaviour of their counterparts and SMEs will evade tax payment if they feel that their peers were evading without punishment. Peers who are tax compliant will impact their colleague to be tax compliant too.

4.10 Test of Hypotheses

The first hypothesis **H₀₁**: Compliance costs have no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality. Compliance cost has a negative relationship effect on PAYE compliance. The finding on table 4.18 revealed that (β_1) -0.305 and p value was less than 0.05, $\rho=0.004$ which implies that relationship was statistically significant therefore hypotheses was rejected

The second hypothesis **H₀₂**: Taxpayer education has no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality. Taxpayer education has a positive relationship effect on PAYE compliance. The finding on table 4.18 revealed that (β_2) 0.328 and p value was less than 0.05, $\rho=0.001$ which implies that relationship was statistically significant therefore hypotheses was rejected.

The third hypothesis **H₀₃**: Peer influence has no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality. Peer influence has a positive relationship effect on PAYE compliance. The finding on table 4.18 revealed that (β_3) 0.290 and p value was less than 0.05, $\rho=0.000$ which implies that relationship was statistically significant therefore hypotheses was rejected

Table 4.18: Summary of Hypothesis Testing

Hypothesis	P-value	Decision
H01- Compliance costs have no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality	(β_1) - 0.305 0.004	Reject H01
H02- Taxpayer education has no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality	(β_2) 0.328 0.001	Reject H02
H03- Peer influence has no statistically significant effect on PAYE Compliance among SMEs in Ruiru Municipality	(β_3) 0.290 0.000	Reject H03

Source: Research, 2023

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion on the thesis summary based on the earlier established research objectives. It further discusses major study findings, conclusions and eventually provides directions in the form of recommendations.

5.2 Summary of Findings

The overall objective of this study was to establish the socio-economic determinants of pay as you earn tax compliance among small and medium enterprises in Ruiru municipality, Kenya. In particular the study sought to determine the effects of compliance cost on PAYE Compliance among SMEs in Ruiru Municipality. To establish the effects of taxpayer education on PAYE Compliance among SMEs in Ruiru Municipality. To find out the effects of Peer influence on PAYE Compliance among SMEs in Ruiru Municipality. The study found out how friends share thoughts and influence tax compliance

5.2.1 Effect of Compliance cost on PAYE compliance

The first objective was to determine the effects of compliance cost on PAYE Compliance among SMEs in Ruiru Municipality. From the findings this study was statistically significant with (β_1) -0.305 and p value of 0.004 which is less than 0.05 the conventional probability significance level. Correlation analysis showed that compliance cost on PAYE compliance is negatively and significantly associated. Also the Regression analysis shows there was a positive significant relationship between compliance cost and PAYE tax Compliance. The finding revealed that (β_1) -0.305 and

p value was less than 0.05, $\rho=0.004$ which implies that relationship was statistically significant therefore hypotheses was rejected

5.2.2 Effect of Taxpayer Education on PAYE compliance

The second objective was to establish the effects of taxpayer education on PAYE Compliance among SMEs in Ruiru Municipality. From the findings this study was statistically significant with (β_2) 0.328 and p value of 0.001 which is less than 0.05 the convectional probability significance level. Correlation analysis showed that taxpayer education on PAYE compliance is negatively and significantly associated. Also the Regression analysis shows there was a positive significant relationship between taxpayer education on PAYE Compliance. The finding revealed that (β_2) 0.328 and p value was less than 0.05, $\rho=0.001$ which implies that relationship was statistically significant therefore hypotheses was rejected.

5.2.3 Effect of Peer Influence on PAYE compliance

The third objective was to find out the effects of Peer influence on PAYE Compliance among SMEs in Ruiru Municipality. From the findings this study was statistically significant with (β_3) 0.290 and p value of 0.000 which is less than 0.05 the convectional probability significance level. Correlation analysis showed that peer influence on PAYE compliance is negatively and significantly associated. Also the Regression analysis shows there was a positive significant relationship between peer influences on PAYE Compliance. The finding on table 4.17 revealed that (β_3) 0.290 and p value was less than 0.05, $\rho=0.000$ which implies that relationship was statistically significant therefore hypotheses was rejected

5.3 Conclusions

The study concludes that: compliance cost affect PAYE Compliance among SMEs in Ruiru Municipality. This is because taxpayer find that cost of hiring accountant and agency costs are expensive. The taxpayers were in agreement that I-tax has helped in reducing compliance cost.

On taxpayer education the study concluded that taxpayer education affect PAYE Compliance among SMEs in Ruiru Municipality. The respondents agreed in large extent that they learn a lot from KRA website on changes in law and where there are changes in the law, timely dissemination of such information improves my tax compliance.

The study concluded the peer influence affect PAYE Compliance among SMEs in Ruiru Municipality. The respondent were in agreement that they always help their friends on filling taxes and friends give them advice on tax filing

5.4 Limitations of the Study

According to Best and Kahn (1998) limitations are conditions beyond the control of the researcher that may place restriction on the conclusion of the study and their application to other situations. The study was limited by various ways since it was done in Ruiru Municipality Kiambu County. The study was constrained by unwillingness of the respondents in giving information as consequence of unexplained fear especially by tax administrators due to the crackdown that has been going on about tax evasion. However, some of the limitations were overcome by employing strategies such as visiting respondents on motorbikes, and also informing the respondents on the importance of the study.

5.5 Recommendation

Based on the objectives of the study, there exists a positive relationship between taxpayer education and peer influence and PAYE compliance however; there exists a negative relationship between compliance costs on PAYE compliance. The study recommends that the KRA should pay attention on taxpayer education and peer influence since it's statistically significant with PAYE compliance but more focus more on compliance cost to enhance taxpayer satisfaction and compliance.

5.5.1 Implications to policy makers

The study recommends that policy makers and Tax Practitioners to assist tax Payers to interpret the complicated tax laws and help them to apply the law to their tax returns. This study will be of help to practitioners since it helps them understand various challenges faced by tax Payers towards voluntary compliance and help them advice their clients accordingly.

From the study findings, SME Ruiru Municipality Kiambu County will be able to come up with favourable PAYE compliance planning policies that ensured that they meet the regulatory requirement on payment of PAYE and at the same time avoid being tax ignorant. It also may be likely that KRA maybe be considerate to offer more compliance solutions to the business

5.5.2 Implications to theory and Practice

This study adds on the existing empirical studies on the extent to compliance cost, taxpayer education and Peer influence on PAYE Compliance among SMEs in Ruiru Municipality. Researchers can contribute to theory by expanding the ability to pay theory, Psychology theory, Economic theory of tax compliance and optimal tax theory. This study will be of help to practitioners since it helps them understand

various challenges faced by tax Payers towards voluntary compliance and help them advice their clients accordingly.

5.6 Suggestions for Further Research

The study recommends the needs for more studies focusing on other factors not included in the study. The study was only limited to Ruiru Municipality Kiambu County and this calls the need for more studies that are national based to understand the effect of socio-economic determinants of pay as you earn tax compliance among small and medium enterprises. Therefore, further studies need to be done on effect of taxpayer perception on pay as you earn tax compliance. Future research could compare other factors affecting PAYE compliance across different industries and sectors in Kenya since only 53.5% % accounted for the variance caused on PAYE compliance in Kenya. This would provide a more comprehensive understanding of tax compliance behaviour in Kenya. Additionally, further study can be done on behavioral factors on PAYE compliance among others.

REFERENCES

- Abrams, J., & William, S. (2019). Taxpayer's behaviour and rental income tax compliance. *International Journal of Tax Administration*, 2(3), 101-120.
- Ackah, C., Giesecke, J., & Samake, D. (2016). Taxing Land in Africa: Challenges and Opportunities. International Growth Centre. 4, 29-34.
- Ajala, M. O., & Adegbe, F. F. (2020). Effects of information technology on effective tax assessment in Nigeria. *Journal of Accounting and Taxation*, 12(4), 126 -134.
- Ajzen I(1991) The Theory of planned Behaviour. Organizational behaviour and human decision processes. 50(2) 179-211 retrieved from <https://www.sciencedirect.com/science/article/abs/pii/074959789190020>
- Akhtar, I. (2016). Research Design. *SSRN Electronic Journal*.
- Ali, M., Fjeldstad, O. & Sjurson, O.I. (2016). To Pay or Not to Pay? Citizens' Attitudes towards Taxation in Kenya, Tanzania, Uganda and South Africa.
- Alm, J., & McKee, M. (1993). Taxpayer compliance: An economic analysis. *Journal of Economic Literature*, 31(4), 1678–1727.
- Bassey, O.U. (2019) Companies Income Taxation in Nigeria. CIBN Press Ltd., Lagos.
- Bird, R. M., & Torgler, B. (2019). Tax morale in Australia and Canada: An empirical exploration. *Journal of Applied Economics*, 9(2), 235-258.
- Braithwaite, V. (2019). *Defiance in Taxation and Governance. Resisting and Dismissing Authority in a Democracy*, Edward Elgar, Cheltenham.
- Braithwaite, V., Reinhart M. & Smart, M. (2019). 'Tax non-compliance among the under 30s: Knowledge, obligation or scepticism?' In: Alm, J., MartinezVazques,
- Brown. R.E., & Mazur. M.J. (2020). *Curbing Corruption and Promoting Transparency in Tax Administration*. Washington. National Academy Press.
- Chuttur M.Y. (2019). "Overview of the Technology Acceptance Model: Origins, Developments and Future Directions", Indiana University, USA. Sprouts: Working Papers on Information Systems, Vol.9, No.37
- Cooper, D.R. and Schindler, P.S. (2008) *Business Research Methods*. 12th Edition, McGraw Hill International Edition, New York.
- Creswell, J. W., and Creswell, J. D. (2019). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.
- Cuccia, A. D., & Maida, A. G. (2018). Tax compliance determinants and auditing: evidence from Italian excise taxes. *Journal of Financial Crime*, 24(3), 366-381.
- Cummings, D.E. and Overduin, J. (2019) Gastrointestinal Regulation of Food Intake. *Journal of Clinical Investigation*, 117, 13-23.
- Deakin, E. (2019). Sustainable development and sustainable transportation: strategies for economic prosperity, environmental quality, and equity. *Journal of Management*, 5(3).

- Djankov, S., Ganser, T., McLiesh, C., Ramalho, R., & Shleifer, A. (2016). The effect of corporate taxes on investment and entrepreneurship. *American Economic Journal: Macroeconomics*, 2(3), 31-64.
- Eriksen, K., & Fallan, L. (2006). Education and attitudes towards taxation: A report on a quasi experiment. *Journal of Economic Psychology*.
- Fauziati, P. (2021). The Impact of Tax Knowledge on Tax Compliance Case Study in Kota Padang, Indonesia. *Journal of Advanced Research in Business and Management Studies*, 2(1), 22-30.
- Fremont, A., Crespi, J., & Roush, M. (2019). Tax awareness. *Journal of Taxation*, 23(3), 473-481.
- Garson, G. D. (2018). Testing Statistical Assumptions. Blue Book Series, 1–52. <http://www.statisticalassociates.com/assumptions.pdf>
- Gayer, C. & Gilles, M. (2021). Property Taxation and Enhanced Tax Administration in Challenging Times. *Economic Papers* 463. European Commission. Available at ec.europa.eu/economy_finance/publications
- Hendy, P. (2018). Threats to small and medium sized enterprises from tax and other regulations. Australian taxation studies program small business tax symposium: Developing good tax policies for SMEs . Sydney: Entrepreneurship Press.
- Hoy, C., McKenzie, L. & Sinning, M. (2021). Improving Tax Compliance without Increasing Revenue, Evidence from Population-Wide Randomized Controlled Trials in Papua New Guinea. Policy Research Working Paper 9539.
- Isaac, O., Abdullah, Z., Aldholay, A. H. & Ameen, A.A. (2019). Antecedents and outcomes of internet usage within organisations in Yemen: *Asia Pacific Management Review*, 24(2), 335-35.
- Jackson, S.B., Shoemaker, P.A., Barrick, J.A. and Burton, F.G. (2021). “TaxPayers’ prepayment positions and tax return preparation fees”, *Contemporary Accounting Research*, Vol. 22 No. 2, pp. 409-47.
- Jones, R., & Williams, M. (2019). The Role of Tax Knowledge in SME Excise Duty Compliance: A Case Study of Urban Bottling Companies. *Journal of Taxation Research*, 15(2), 78-92.
- Kahn, B., & Shevlin, M. (2020). Tax awareness and behavior: An exploration of the cognitive, affective and behavioral components of tax compliance. *International Journal of Accounting*, 53(3), 423-440.
- Kakra, K. (2020). Tax Knowledge And Tax Compliance Of Small And Medium Enterprises In Ghana. *South East Asia Journal of Contemporary Business, Economics and Law*, 2(2).
- Kažemekaitytė A., & Pukeliene V., (2019). Tax Behaviour: Assessment of tax compliance in European Union Countries. *Sciendo*, vol. 95(2), 30-56.
- Kiefer, D. R., & Lander, G. (2020). Taxpayer Behavior: An Overview. *International Journal of Economics and Finance*, 12(4), 147-160.
- KIPPRA (2004), Tax Reform Experience in Kenya, Working Paper, No. 13, Nairobi: Kenya Institute for Public Policy Research and Analysis.

- Kothari, C.R. (2019) *Research Methodology: Methods and Techniques*. New Age International (P) Ltd., New Delhi.
- Kothari, C.R. (2019). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publisher. KRA (2020). *Revenue Administration Reforms in Kenya: Experience and Lessons*. Nairobi, Kenya Revenue Authority. Kenya
- Krichler E, (2019), *The Economic Psychology of Tax Behaviour*, Cambridge University Press
- Kumar, S., & Kumar, S. (2019). *Tax awareness*. In *Tax awareness* (pp. 1-6). Springer, Singapore.
- Lai, K. (2004) *Service Capability and Performance of Logistics Service Providers*. *Transportation Research Part E: Logistics and Transportation Review*, 40, 385-399.
- Lam, T., & Brown, J. (2019), *Taxpayer's behaviour and rental income tax compliance*. *International Journal of Social Science Research*, 6(3), 22–28.
- Li, Y., & Zhang, D. (2019). The effect of Tax awareness on residential rental income tax performance in China. *International Journal of Accounting and Taxation*, 4(2), 33-41.
- Mannan, D. K. A. (2020). *Socio-economic Factors of Tax Compliance: An Empirical Study of Individual Taxpayers in the Dhaka Zones, Bangladesh*. *The Cost and Management*, 48(6).
- Marti, L. O. (2019). *Taxpayers'attitudes and tax compliance behavior in Kenya*. *African Journal of Business and Management*, 112-123.
- Mascagni, G., & Santoro, F. (2018). *What is the role of taxpayer education in Africa? ICTD African Tax Administration Paper, 1*.
- Mayer, E. G. (2019). *Statistics in Psychosocial Lecture 8 Factor Analysis I Lecturer : Elizabeth Garrett-Mayer*. The Johns Hopkins University, 6–28. <http://ocw.jhsph.edu/courses/statisticspsychosocialresearch/pdfs/lecture8.pdf>
- McMillan, J. H., & Schumacher, S. (2020). *Research in education: Evidence based inquiry*. New Yor: Longman..
- Mohd, R. (2010). *Tax Education and tax compliance determinants in self_assessment system*. Birmingham: University of Birmingham.
- Morgan, K.R. (2002) *Blended Learning: A Strategic Action Plan for a New Campus*. University of Central Florida, Seminole.
- Mugenda, O. & Mugenda, A. (2013). *Research Methods: Qualitative and Quantitative Approaches 2nd Rev. Ed*. Nairobi: Act press.
- Mugenda, O. Mugenda. A.(2003). *Research methods: quantitative and qualitative approaches*.
- Mugenda, O.M. and Mugenda, A.G. (2009) *Research Methods, Quantitative and Qualitative Approaches*. ACT, Nairobi.

- Murray, L., Nguyen, H., Lee, Y.-F., Remmenga, M. D., & Smith, D. W. (2019). Variance Inflation Factors in Regression Models With Dummy Variables. Conference on Applied Statistics in Agriculture. <https://doi.org/10.4148/2475-7772.1034>
- Mustapha, B., & Sheikh, S. N. B. (2020). The influence of technology characteristics towards an online tax system usage: The case of Nigerians self-employed taxpayer. *International Journal of Computer Applications*, 105(14), 30-36.
- Nagase, Y. (2020). Taxation in Utopia: Required Sacrifice and the General Welfare. Natural Resource Governance institute. Legal Framework
- OECD. (2016). Tax Administration 2013: Comparative Information on OECD and Other Advanced and Emerging Economies. OECD Publishing, <http://dx.doi.org/10.1787/9789264200814-en>
- Olsen, J., Kasper, M., Enachescu, J., Benk, S., Budak, T., & Kirchler, E. (2019). Emotions and tax compliance among small business owners: An experimental survey. *International Review of Law and Economics*, 4(2).
- Orgler, B. and Schneider, F. (2019). Does Culture Influence Tax Morale? Evidence from Different European Countries. CREMA Working Paper No. 17. <http://www.crema-research.ch/papers/2004-17.pdf>
- Orodho J.A. (2009) Elements of Education and Social Science Research. Methods, Kanezja Publishers. •
- Orodho, A.J. (2003) Essentials of Educational and Social Science Research Methods. Mazola Publishers, Nairobi.
- Palil, M. & Fariq, M. (2021). Factors affecting tax compliance behavior in self-assessment system. *African Journal of Business Management*, 5(33).
- Palil, M. R. (2020). Tax knowledge and tax compliance determinants in self – assessment system in Malaysia. Doctoral dissertation, University of Birmingham.
- Parliamentary Service Commission. (2010). Unlocking the revenue potential in Kenya. Policy working paper series No. 2/2010.
- Perez, D. (2019). Taxpayer's Taxpayer perception: An Exploratory Study. *International Journal of Business and Management*, 14(4), 1–14.
- Pratama, A. (2018). Individual Taxpayer Characteristics and Taxpayer Knowledge. *Review of Integrative Business*, 5(5).
- Saad, N., Nadia, A., & Faten, B. (2019). The Effectiveness of Tax Investigation in Detecting Tax Evasion in Jordan. *International Journal of Accounting and Taxation*, 5(1), 1-8.
- Shareef MA, Kumar V, Kumar U, Dwivedi YK (2011) e-Government Adoption Model (GAM): differing service maturity level. *Gov Inform Q* 28:17–35.
- Sigauke, M. (2019). An investigation on the influence of Tax awareness on tax compliance.

- Sritharan, N., & Salawati, S. (2019). Economic factors influence individual taxpayers' tax compliance behaviour in Malaysia. *Int. J. Acad. Res. Account. Finance. Manag. Sci*, 9, 172-182.
- Tse, W. T., & Yip, C. H. (2019). Taxpayers' perceptions of fairness and their tax compliance behavior: The case of residential rental income tax in Hong Kong. *International Journal of Accounting & Information Management*, 25(2), 149-166
- Tusubira, F. N., & Nkote, I. N. (2021). Income Tax Compliance among SMEs in Uganda: TaxPayers' Proficiencies Perspective. *Intl Journal of Business & Social Science*, 4(11).
- Usang E.and Etim U(2021). Effect of tax administration and taxpayer education on tax compliances behaviour. *Journal of taxation and economic development*, 20(2),1-10
- Vanistendael, F. (2020). Taxpayer perceptions of fairness and equity in taxation. *International Tax and Public Finance*, 17(3), 340–358.
- Webley, P., Adams, C., & Elffers, H. (2020). Value added tax compliance, In E. J. McCaffery & J. Slemrod (Eds.), *Behavioral public finance: Toward a new agenda* (pp. 175-205). New York, NY: Russell Sage
- Williams, J. (2021). Residential Rental Income Tax Performance in Kenya. Retrieved from <http://www.kenyataxresearch.org/kenya-tax-performance/residential-rental-income-tax-performance-in-kenya.>, [Accessed on 04.05.2023].

APPENDICES

Appendix I: Cover Letter

James Macharia,
MOI University,
P.O BOX,.

April, 2023

Dear Sir/Madam,

RE: DATA COLLECTION

I am a postgraduate student at Moi university undertaking a Master Degree in Tax and Customs Administration. One of my academic outputs before graduating is a project and for this, I have chosen the research topic “**SOCIO-ECONOMIC DETERMINANTS OF PAY AS YOU EARN TAX COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES IN RUIRU MUNICIPALITY, KENYA.**” You have been selected to form part of the study. This is to kindly request you to assist me collect the data by responding to the research questions. The information you provide will be used strictly for academic purposes and will be treated with utmost confidence.

Your assistance will be highly appreciated.

Yours sincerely,

James Macharia

Appendix II: Questionnaire

This research aims at examining SOCIO-ECONOMIC DETERMINANTS OF PAY AS YOU EARN TAX COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES IN RUIRU MUNICIPALITY, KENYA. Feel free to share your insights, experience and opinion. Tick where appropriate. Welcome.

Section A: Respondent Background Information

Kindly tick and fill in the gaps where appropriate.

Q1. For how long has your business been in existence?

- a) Less than a year
- b) 1-3 years
- c) 4-6 years
- d) 7-10 years
- e) Over 10 years

Q2. What is your annual turnover on average?

- a) Less than 500,000
- b) Ksh. 500,001-1,000,000
- c) Ksh. 1,000,001-5,000,000
- d) Ksh. 5,000,001 and over

Q3. The number of enterprises

- a) Micro 1-9
- b) Small 10-49
- c) Medium 50-99

Q4. Compliance Cost.

- a) What is your level of agreement with the following statements regarding your opinion on how compliance cost affects PAYE Compliance among SMEs in Ruiru Municipality a scale of 1 – 5: where 5=Strongly Agree 4 =Agree, 3= Neutral 2= Disagree 1=Strongly Disagree

Statement	1	2	3	4	5
The cost of filling Returns is reasonable					
I find cost of hiring accountant is expensive.					
The agency costs are convenient					
I-tax has helped in reducing compliance cost					
The costs of full compliance as compared to the costs of non-compliance is high					

Section B:**Q3. Tax Payer Education**

a) What is your level of agreement with the following statements regarding your opinion on how tax payer education affects PAYE Compliance among SMEs in Ruiru Municipality a scale of 1 – 5: where 5=Strongly Agree 4 =Agree, 3= Neutral 2= Disagree 1=Strongly Disagree

Statement	1	2	3	4	5
Through broadcast I'm aware of PAYE compliance					
I learn a lot from KRA website on changes in law with regard to PAYE taxes					
Where there are changes in the law, timely dissemination of such information improves my tax compliance					
Sensitization forums such adverts on television have improved my PAYE tax compliance					
The KRA customer care department sufficiently educates make me aware of tax law stipulations with regard to PAYE tax hence enabling be fully compliance					

Q5. PEER INFLUENCE

a) What is your level of agreement with the following statements regarding your opinion on how peer pressure affects PAYE Compliance among SMEs in Ruiru Municipality a scale of 1 – 5: where 5=Strongly Agree 4 =Agree, 3= Neutral 2= Disagree 1=Strongly Disagree

Statement	1	2	3	4	5
My friends give me advice on tax filing					
I and my friends share thoughts and opinions on PAYE tax compliance					
We always help each other with PAYE tax information					
My friends discourages me not to pay my taxes					
I always help my friends on filling taxes					

Q6. PAYE Compliance among SMEs

Please indicate your level of agreement with the following statements regarding your opinion on PAYE Compliance among SMEs in Ruiru Municipality a scale of 1 – 5: where 5=Strongly Agree 4 =Agree, 3= Neutral 2= Disagree 1=Strongly Disagree

Statement	1	2	3	4	5
I have always declared actual income received from all sources to the tax authority honestly without being forced to.					
I do not follow the stipulated tax rules and regulations because of the fear of the risks of being checked.					
I have registered as taxpayer for all the taxes it qualifies for without being forced to					
My business pays all taxes on time					
SMEs like mine files taxes accurately					

THANK YOU

Appendix III: Research Letter



**KENYA REVENUE
AUTHORITY**

ISO 9001:2015 CERTIFIED

PUBLIC

KENYA SCHOOL OF REVENUE ADMINISTRATION

REF: KESRA/NBI/036

26th July 2023

TO: WHOM IT MAY CONCERN

Dear Sir/Madam,

**RE: REQUEST FOR ASSISTANCE TO JAMES MBURU MACHARIA OF
REGISTRATION NO.: KESRA105/0032/2021 UNDERTAKING MASTERS AT
KESRA**

This is to confirm that the above named is a student at Kenya School of Revenue Administration (KESRA) Nairobi Campus pursuing Masters in Tax and Customs Administration.

The named student is undertaking Research on TOPIC: *"Socio-Economic determinants of Pay as you earn compliance among small and medium enterprises in Ruiru municipality."*

The purpose of this letter is to request for your kind facilitation in enabling the student progress in his research project by allowing access to any relevant information and/or conduct interviews, which are relevant to the project.

Your support to the student in this regard will be highly appreciated.

Thank you.


for **Damacrine Masira**
Manager Academic Research,
KESRA

Appendix IV: NACOSTI Research Licence



 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION
 

Ref No: 740612
Date of Issue: 26/July/2023

RESEARCH LICENSE



This is to Certify that Mr. James Mburu Macharia of Moi University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: SOCIO-ECONOMIC DETERMINANTS OF PAY AS YOU EARN TAX COMPLIANCE AMONG SMALL AND MEDIUM ENTERPRISES IN RUIRU MUNICIPALITY, KENYA, for the period ending : 26/July/2024.

License No: NACOSTI/P/23/28026

740612
Walter Mburu

Applicant Identification Number

Director General

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

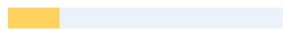
Appendix VI: Plagiarism Report



Plagiarism Checker X - Report

Originality Assessment

18%



Overall Similarity

Date: Oct 3, 2023

Matches: 3818 / 20918 words

Sources: 107

Remarks: Low similarity detected, check with your supervisor if changes are required.

Verify Report:

V r t f c t n l n