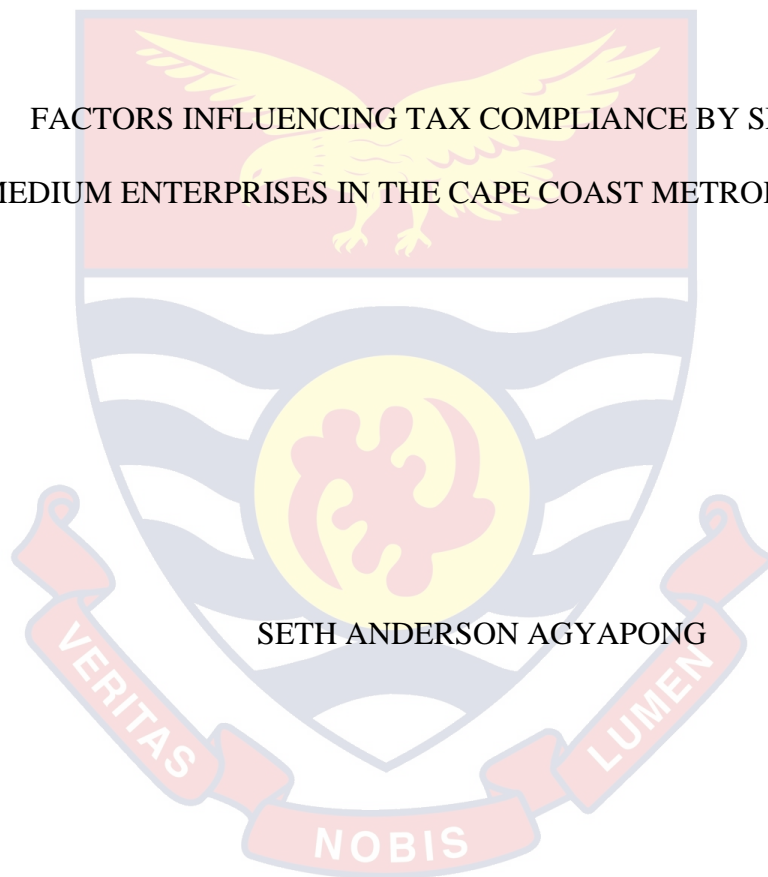


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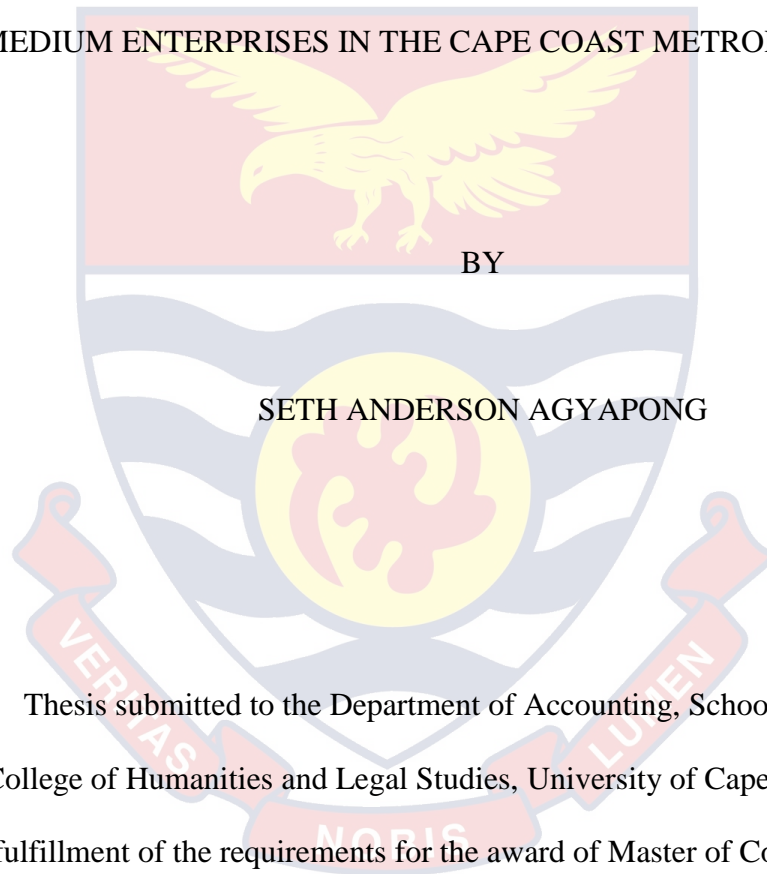


SETH ANDERSON AGYAPONG

2019

UNIVERSITY OF CAPE COAST

FACTORS INFLUENCING TAX COMPLIANCE BY SMALL AND
MEDIUM ENTERPRISES IN THE CAPE COAST METROPOLIS, GHANA



Thesis submitted to the Department of Accounting, School of Business,
College of Humanities and Legal Studies, University of Cape Coast, in partial
fulfillment of the requirements for the award of Master of Commerce degree
in Accounting

JULY, 2019

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:..... Date:.....

Name: Seth Anderson Agyapong

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:..... Date:.....

Name: Prof. Edward Marfo-Yiadom

Co-Supervisor's Signature: Date:.....

Name: Mr. Isaac Kwadwo Anim

ABSTRACT

Tax evasion is a core challenge for governments and tax authorities among many African countries including Ghana. As small and medium enterprises (SMEs) are key to national economic growth, their contribution to tax revenue is very significant. Thus, the need to examine factors that influence tax compliance by small and medium enterprises is essential. The study adopted the explanatory research design and a cross-sectional survey for data collection. Stratified random sampling technique was used to sample the respondents for the study. Primary data were collected through structured questionnaires. Partial Least Square Structural Equation Modelling (PLS-SEM) was used to examine the factors which influence tax compliance. The study results from the survey conducted in Cape Coast Metropolis using 301 respondents revealed that tax knowledge, perception of government spending and the probability of being audited have a significant impact on tax compliance. In particular, tax knowledge had the most significant influence on tax compliance by SMEs taxpayers. In view of this, the study recommends that the government should use tax revenue judiciously and be transparent in their expenditure activities so as to gain the trust of the SMEs taxpayers. Also, the study recommends that the Ghana Revenue Authority (GRA) should ensure fair and frequent audits to encourage SMEs to comply with tax laws. GRA should also organise seminars and conferences regularly to educate SMEs taxpayers.

KEY WORDS

PLS-SEM

Provisional Assessment

Self-Assessment

Small and Medium Enterprises

Tax Compliance

Tax Evasion



ACKNOWLEDGEMENTS

I would like to express my heartfelt gratitude to my supervisors, Prof. Edward Marfo-Yiadom and Mr. Isaac Kwadwo Anim both of Department of Accounting, for their professional guidance, advice and the goodwill with which they guided this work. I am very grateful.

This research was supported by Samuel and Emelia Brew-Butler-SGS/GRASAG, UCC research grant for which I am very grateful.

My gratitude goes to the management and staff of the Ghana Revenue Authority (GRA) for the immense support given me throughout this study.

To my parents; Mr. George Anderson Agyapong and Mrs. Comfort Agyapong, to my siblings and to Mr. Joseph Frimpong and Mrs. Eugenia Frimpong, I appreciate your support and encouragement throughout the years. I owe you a debt of gratitude for your kindness and support for my academic advancement.

I appreciate the contributions and support from my colleagues especially Mr. Isaac Bawuah, Mr. Samuel Ogyana, Mr. James Essilfie and Ms. Suzie Dede Mensah.

DEDICATION

To my parents, Mr. George Anderson Agyapong and Mrs. Comfort Agyapong



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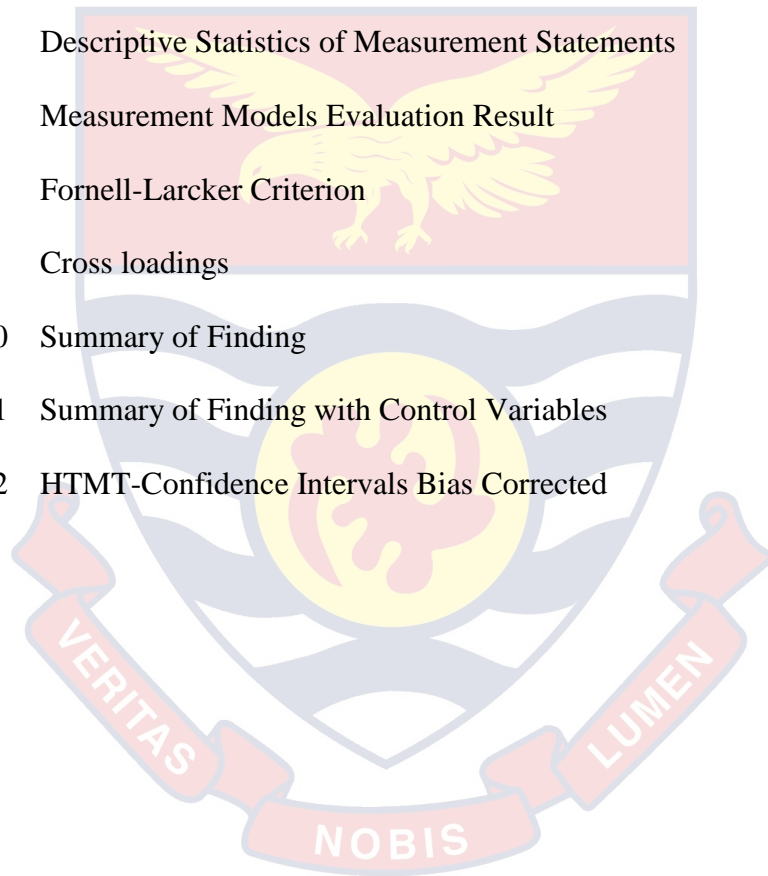
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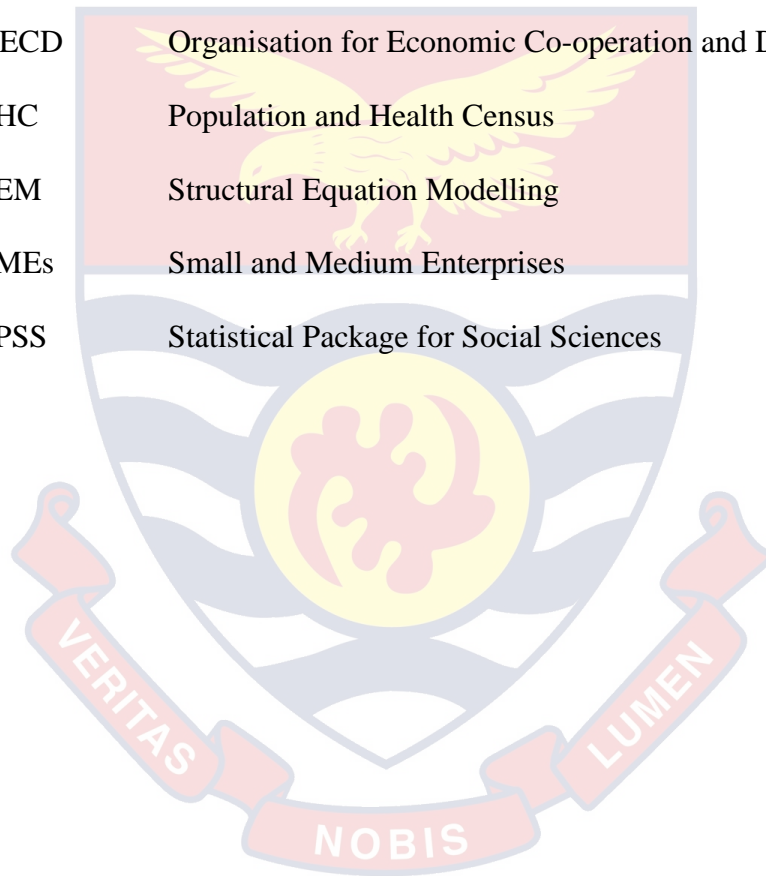
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LIST OF ACRONYMS

GDP	Gross Domestic Product
GLSS	Ghana Living Standard Survey
GRA	Ghana Revenue Authority
GSS	Ghana Statistical Service
ILO	International Labour Organisation
LI	Legislative Instrument
OECD	Organisation for Economic Co-operation and Development
PHC	Population and Health Census
SEM	Structural Equation Modelling
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences



CHAPTER ONE

INTRODUCTION

Background to the Study

World over, taxation has been very useful to various countries including Ghana. Undoubtedly, taxes play a major role in the budget of any economy and one of the major reasons why the government imposes taxes is to generate income to manage the economy and redistribute resources (Abdallah, 2014; Andreoni, Erard & Feinstein, 1998). Ibrahim, Musah, and Abdul-Hanan (2015) indicate that tax revenue promotes economic growth and finances both infrastructure investment and social programmes. Put differently, Cui (2018) asserts that revenue collection is the defining mark of government capacity, particularly in developing countries.

Taxes remain an essential source of government revenue obtained from all economic agents. One of such economic agents is small and medium enterprises (SMEs). Small and medium enterprises are found in a wide range of business activities since they are a heterogeneous group (Organisation for Economic Co-operation and Development [OECD], 2017). The significance of the SME sector is well known due to its important contribution to satisfying several socio-economic objectives, such as the promotion of exports, higher growth of employment and fostering entrepreneurship (OECD, 2018).

SMEs are essential for the economic growth of countries due to their important contribution to gross domestic product (GDP) and constituting a large share of employment in the private sector in developing countries (Ansong, Agyei, & Marfo-Yiadom, 2017). According to OECD (2017), SMEs contribute to over 65% of total employment and over 55% of GDP in high-

income countries. SMEs and informal enterprises account for over 70% of total employment and over 60% of GDP in low-income countries, while they contribute about 70% of GDP and 95% of total employment in middle-income countries. International Labour Organisation [ILO] (2017) postulates that between 2003 and 2016, across 132 countries, the number of total full-time employees in SMEs has nearly doubled, from 79 million to 156 million.

In Ghana, the Registrar General (as cited by Wahabu, 2017) highlights that SMEs constitute the largest business units. These statistics show that SMEs are a major driving force of income, employment and economic growth. However, Terkper (2003) posits that SMEs do not comply with tax laws despite the many different tax reforms established by governments and tax authorities in the majority of countries. SMEs are well known for their continuous payment of less tax relative to their fair share and their less traceability by tax authorities (Ahmed & Braithwaite, 2005). According to Ghana's Ministry of Finance (2017), tax to GDP ratio is about 16% which is less than average for developed countries (25% - 35%) and developing countries (18% - 25%) and this poses a challenge. Thus, the need to examine tax compliance by the SMEs is essential.

Tax non-compliance is an important issue that transcends cultural and political boundaries that must be addressed. Bird (2003, p.147), states that “no one likes taxes; people do not like to pay them and governments do not like to impose them”. Asante and Seidu (2011) espouse that the problem of tax compliance is as old as taxes themselves. Governments and tax authorities around the world are faced with finding ways to describe the perceived forms of non-compliance and finally find ways to decrease it. Regardless of time and

place, it has never been easy to influence all taxpayers to comply with tax laws. This trammels the capacity of governments to raise revenue for developmental projects (Inasius, 2018).

In order for tax collection to be efficient, governments and tax authorities need to secure taxpayers' voluntary compliance with the regulations of the tax system (Alm, Koirschler, & Muehlbacher, 2012). Palil (2010) highlights that most tax authorities in many countries have introduced the self-assessment system so that taxpayers could estimate their own tax obligation and to pay willingly whatever is due both regularly and at the year-end. In Ghana, the Ghana Revenue Authority (as cited by Wahabu, 2017) introduced the self-assessment system in 2013. Wahabu posits that the objectives of this system were to increase tax collection efficiency, reduce tax authorities' burden of assessing tax returns and increase voluntary compliance. However, Kuug (2016) argues that one cost of relying on the self-assessment system is that not all tax is voluntarily paid.

For many years, the benchmark economic model of tax non-compliance was the neoclassical approach developed by Allingham and Sandmo (1972). A large body of studies posits that increasing tax compliance is not just a matter of increasing the probability of detection and/or applying higher penalties (Androeni et al., 1998; Inasius, 2018; Kirchler, 2007; Palil, 2010). Most studies in developed countries now attempt to describe the behaviour of tax compliance in a more realistic situation. They focus on tax compliance determinants in the light of economic and non-economic factors based on an interdisciplinary perspective, suggesting a wider view of determinants of tax compliance (Nicoleta, 2011) and later supported by

Inasius (2018). However, Kirchler (2007) has intimated that the factors which influence tax compliance and/or non-compliance behaviour differ from one individual to another and also from one country to another.

Statement of the Problem

Tax compliance has been widely researched, yet the question of why people pay taxes remains only partially answered (Slemrod, 1992). Tax evasion is a core challenge for governments and tax authorities all over the world because of their relentless search for revenue to meet public needs. Undoubtedly, many developing countries including Ghana are now re-focusing on taxation to reduce over-dependence on aid or one source of revenue for development. It is therefore imperative that every revenue collection agency put measures in place to promote voluntary tax compliance, thereby increasing revenue collection and reducing tax collection costs.

Small and medium enterprises are well known for their less traceability by tax administrations and their continuous payment of less tax relative to their fair share (Ahmed & Braithwaite, 2005). There is, however, no doubt that some of these small and medium enterprises do pay their quota. Hence, dealing with the problem of tax non-compliance requires at least some understanding of the factors underlying the individual taxpayer's decision whether to comply or not to comply with tax laws. Compliance with tax regulations implies taxpayer's conformity to tax laws.

Due to these reasons, tax compliance has been given a big emphasis by researches because of increasing non-compliance for the reason of which most researches attempt to identify and explain factors which influence non-compliance (Nicoleta, 2011). Nevertheless, most of these researches have been

done in developed countries. However, there is limited literature on the reasons why few enterprises comply with tax regulations voluntarily among African societies (Deyganto, 2018; Engida & Baisa, 2014; Maseko, 2014; Oladipupo & Obazee, 2016; Palil, 2010; Tilahun, 2018). In addition, while reviewing the above-related literature, they found inconclusive results on tax compliance determinants.

There are few studies done on tax compliance in Ghana. For example, Atuguba (2006) profiled the tax culture of Ghanaians. Ayee (2007) discussed strategies for achieving compliance through building and improving reciprocity with the government. Annan, Bekoe and Nketiah-Amposah (2013) found that age, per capita income, gender, inflation and tax rate have a significant relationship with tax evasion. Antwi, Inusah and Hamza (2015) concluded that gender, age and educational level of taxpayers are important determinants of compliance in Tamale. Bedi (2016) concluded that cash flow and tax audit have no significant effect on tax compliance in Ghana. Yin, Welmah and Abugre (2016) found that tax stamp strategies improved income tax revenue received from micro and small taxpayers in the informal sector in Ghana.

Kuug (2016) suggested that tax compliance is significantly influenced by tax rates, capital structure, tax audits, compliance cost and morals of taxpayers in Ghana. Wahabu (2017) also found that tax knowledge has a significant influence on the compliance of SMEs in Tamale. In Cape Coast, Trawule (2017) concluded that tax education has a significant effect on tax compliance among the self-employed in the metropolis. Some factors like age, gender, level of education, compliance cost, tax rates, tax audits and tax

knowledge have been examined to influence tax compliance, but however little research is directed to study awareness of penalty, personal financial constraints, influence of referral group, perception of government spending, perception of equity and fairness predicting voluntary compliance.

Furthermore, most of the studies in Ghana did not focus on a wider view of determinants of tax compliance but used a single lens theory in explaining the various aspect of tax compliance behaviour (Atuguba, 2006; Ayee, 2007; Antwi et al., 2015; Bedi, 2016; Yin et al., 2016; Trawule, 2017; Wahabu, 2017). Therefore, for tax compliance policy, the formulators may be tempted to rely solely on literature from other parts of the world which may not be relevant to SMEs in Ghana and Cape Coast Metropolis in particular. Thus, there is a need for further studies to be directed in this area to test earlier findings. Moreover, unlike the previous studies, this study also employs PLS-SEM to fill the gap of methodology. In the light of the gaps that exist in the literature, a broader examination of factors influencing voluntary tax compliance of SMEs is required by taking evidence from the Cape Coast Metropolis, Ghana.

Research Objectives

The main objective of the study is to determine the factors that influence tax compliance by small and medium enterprises in Cape Coast Metropolis, Ghana. Specifically, the study seeks to:

- i. Determine the effect of economic factors on tax compliance by small and medium enterprises in Cape Coast Metropolis.
- ii. Examine the influence of institutional factors on tax compliance by small and medium enterprises in Cape Coast Metropolis.

- iii. Determine the influence of social factors on tax compliance by small and medium enterprises in Cape Coast Metropolis.
- iv. Examine the effect of individual factors on tax compliance by small and medium enterprises in Cape Coast Metropolis.

Research Hypothesis

In order to achieve the objectives of the study; the determinants of tax compliance and how these determinants relate to tax compliance, the following literature driven hypotheses will be tested. Hypotheses 1, 2 and 3 relate to objective (i). Hypotheses 4 and 5 relate to objective (ii). Hypotheses 6 and 7 relate to objective (iii) while hypothesis 8, 9 and 10 relate to objective (iv).

- H₁: Perception of tax rates negatively affects tax compliance.
- H₂: Probability of being audited affects tax compliance positively.
- H₃: Perception of government spending affects tax compliance positively.
- H₄: Simplicity of tax system positively influences tax compliance.
- H₅: There is a positive influence of the role of tax authority on tax compliance.
- H₆: Perception of equity and fairness affects tax compliance positively.
- H₇: The influence of referral group negatively affects tax compliance.
- H₈: Personal financial constraint negatively affects tax compliance.
- H₉: Tax knowledge positively affects tax compliance.
- H₁₀: Awareness of penalty affects tax compliance positively.

Significance of the Study

The implication of the study is viewed along three strands: research, practice and policy. In the first place, it would contribute to a body of knowledge by investigating the factors that enhance voluntary compliance by SMEs in Ghana and in Cape Coast Metropolis in particular. Furthermore, small and medium enterprises would also find this study beneficial in that it would help them appreciate the moral obligations behind tax payment benefits that are derived when one complies. Lastly, policy decision would be made by the government and tax agencies on how to increase voluntary tax compliance among SMEs in Ghana and Cape Coast Metropolis in particular. It offers tax agencies the opportunity to identify some major factors contributing to tax compliance.

Limitations and Delimitations of the Study

First, this thesis is restricted to the Cape Coast Metropolis. It may thus be wrong to generalize the results of this study to other districts, metropolises or municipalities in the country. Furthermore, the use of a self-report survey might be less reliable, particularly when the information required on tax is sensitive. Real behaviour of the participants may differ from the answers given. Lastly, since it is a cross-sectional study, changes over time cannot be measured, and evaluations of how quickly study measures might respond to any changes cannot be delivered. This is possible because organisations change and in addition to systems and conditions surrounding them.

Organisation of the Study

This study is organized into five chapters as follows: Chapter one comprises the background of the study, statement of the problem, research

objectives, research hypothesis and significance of the study. Chapter two contains the literature review on theoretical conceptual issues and empirical evidence on tax compliance. Chapter three consists of the research methods covering research design, the population, sample and sampling procedure, instruments, data sources, and measurement of variables. Chapter four focuses on results and discussion, and finally, chapter five comprises summary, conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviews existing literature relevant to the present study. It reviews theories that establish relationships between the independent and dependent variables of the study as well as relevant empirical literature on those relationships. The various hypotheses to be tested are examined as well. This section also provides the conceptual framework developed from the literature review as well as the lessons learnt.

Definition of Small and Medium Enterprises (SMEs)

World over, there are numerous definitions of the term small and medium enterprises by policymakers and researchers in a quest to understand the concepts of small and medium enterprises (Kayanula & Quartey, 2000). According to Storey (1994), there is no generally accepted definition of a small and medium enterprise. Based on the country and industry, business assets, size, and products, the definitions will continue to differ. For example, the United States and Canadians refer to businesses with less than 500 workers as SMEs while small enterprises are those with less than 100 workers. In Germany, SMEs are enterprises with a maximum of 250 workers while for Belgians, SMEs are enterprises with less than 100 workers (Katua, 2014). A small and medium enterprise is defined in the European Union as a firm which has an annual turnover not exceeding 50 million Euros and at most 250 workers (European Union, 2003).

In Ghana, the most frequently used definition of small and medium enterprises is the number of employees of the enterprise. According to Ghana

Statistical Service (as cited by Kayanula & Quartey, 2000), small enterprises are businesses that employ less than 10 persons while those that employ more than 10 people are classified as medium enterprises. Similarly, the National Board for Small Scale Industries (NBSSI) (as cited in Nkuah, Tanyeh & Gaeten, 2013) in Ghana used both the ‘fixed asset and number of employees’ criteria to define SMEs. According to the NBSSI, enterprises with less than 9 employees, have plant and machinery (excluding land, buildings and vehicles) and not more than 10 million Cedis (US\$ 9506, based on 1994 exchange rate) are considered as small enterprises.

Venture Capital Trust Fund Act, 2004 (Act 680) (as cited by Kuug, 2016) defines a small and medium enterprise as a project undertaking, economic activity or industry whose total asset base (excluding land and building) does not go beyond the cedi equivalent of \$1 million in value. According to GRA, Small enterprises are businesses with an annual income of GH¢ 90,000 and below while medium enterprises are the businesses with annual income higher than GH¢ 90,000 but less than GH¢ 5,000,000 (GRA, 2018). This study adopts the definition by GRA. The choice of this definition is the reflection of the classification of SMEs by GRA for tax purposes.

Characteristics of Small and Medium Enterprises

Small and medium enterprises vary in their characteristics. They are a dynamic and growing population, which is heterogeneous in terms of size, age, performance and the profile and ambitions of entrepreneurs. According to OECD (2018), their composition differs widely across countries and regions, with particular attention on their contributions to quality job creation, productivity, innovation and growth. OECD (2017) posits that SMEs provide a

platform for Africa-take off to development and are also the link between simple industries to complex and highly advanced large industries. Hanefah, Ariff and Kasipillai (2002) (as cited in Antwi et al., 2015) state that the industries play a pivotal role as facilitative development through supply of inputs and services for industries notwithstanding providing direct goods and services to consumers. This makes small and medium enterprises continue to propel the engine for sustainable growth and economic development among developing countries (Muriithi, 2017).

In Ghana, Abor and Quartey (2010) posit that SMEs can be grouped into rural and urban enterprises. Urban enterprises can be subdivided into organised enterprises and unorganized enterprises. According to Kayanula and Quartey (2000), organised enterprises usually have a registered office with salaried workers while the unorganised category usually consists of craft persons who work in temporary wooden structures, open spaces or at home and employ little or in some cases no paid workers. Rural enterprises consist of individual craft persons, family groups or women engaged in food production from local crops.

The main activities within this sector include: timber and mining, fabrics, soap and detergents, ceramics, clothing and tailoring, village blacksmiths, textile and leather, tin-smithing, bricks and cement, beverages, bakeries, food processing, wood furniture, agro-processing, mechanic, chemical-based product and electronic assembly (Kayanula & Quartey, 2000). Small and medium enterprises are usually sole proprietorships, partnerships or privately-owned corporations (Nkuah et al., 2013).

Taxation of Small and Medium Enterprises

All things being equal, a tax system in a country should be unbiased with respect to its influence on a business decision, as well as the formation, system and growth of SMEs (OECD, 2018). However, some features of the tax system may inadvertently disadvantage SMEs relative to larger enterprises. Examples include a bias towards debt over equity, the asymmetric treatment of profits and losses and higher fixed cost associated with tax regulatory compliance regimes. One of the major issues affecting SMEs is the cost of tax compliance (Fowkes, Sousa & Duncan, 2015) and the disproportionately high impact that regulatory requirements have on them.

Another key issue affecting SMEs has to do with their limited access to finance to promote growth and expansion (Kayanula & Quartey, 2000). SMEs face considerable constraints with regards to debt financing in addition to limited access to equity financing. Availability of debt finance and the conditions upon which it is granted to SMEs means that they are more finance-constrained and usually face higher costs in accessing finance than large enterprises (Muriithi, 2017). According to OECD (2018), many countries have lower tax rates for SMEs to foster their competitiveness. Some governments provide support to SMEs through non-tax programmes, such as credit programmes, special tax rules, as well as both simplification measures and preference for SMEs (Fowkes et al, 2015).

Provisional Assessment and Self-Assessment

Kimura and Ando (2005) (as cited by Kuug, 2016) posit that self-assessment for both individual taxpayers and companies was first introduced in Japan in 1947. This was to help reduce the conflict between tax authority

and taxpayers which happened as a result of inefficiency of the tax system as well as perceptions of fairness and equity. In 2002, the self-assessment system was introduced in Ghana as a pilot project for large taxpayers (Kuug, 2016). In general, there are two main acceptable tax assessment systems for entities in Ghana (GRA, 2018). They are administrative (provisional) assessment and self-assessment.

With regards to self-assessment as a form of tax assessment, a taxpayer is responsible for accurately calculating and disclosing their tax liabilities (own estimates of revenue and expenses). This implies that taxpayers must disclose their taxable income and claim only the reliefs and deductions to which they are qualified for. Based on such estimates, the taxpayer determines the tax payable and submits same to GRA in the form prescribed for such purposes for consideration before 31st March. Unallowable expenses and deductions are added back while tax reliefs and capital allowances are granted. Tax liabilities are expected to be paid on equal installment on or before the final day of every quarter of the basis period. GRA would also reassess these businesses based on accounts filed (Pricewaterhouse Cooper, 2018; GRA, 2018).

Under the provisional assessment scheme, GRA makes a temporary assessment of a taxpayer's chargeable income. Payments are made on a quarterly basis based on an interim assessment by GRA using estimated revenue and expenses usually based on their previous performance. The final assessment would then be made on these businesses by the GRA at the end of the year not later than 31st March. Upon final assessment, businesses would then either pay their outstanding liability net of taxes already paid in the year

or claim a tax credit for overpayments within the year. The final assessment would be based on the actual performance of the business at the year-end. A taxpayer may disapprove the assessment; thus, provisional assessment occasionally results in conflicts between the GRA and taxpayers, thereby enhancing taxpayers' uncertainty (Pricewaterhouse Cooper, 2018; GRA, 2018). This is the main reason for the introduction of self-assessment system to reduce the uncertainty.

The Concept and Definitions of Tax Compliance

Tax compliance is an important issue for nations globally and it is difficult to influence taxpayers to comply with tax systems even though tax laws and regulations are not always specific (James & Alley, 2004). Tax compliance has been defined in many ways. For example, Andreoni et al. (1998) intimate that tax compliance should be defined as taxpayers' willingness to obey tax laws in order to obtain the economic equilibrium of a country. Kirchler (2007) defines tax compliance as taxpayers' willingness to pay their taxes. Song and Yarbrough (1978) defines tax compliance as taxpayers' ability and willingness to comply with tax laws and regulations which are determined by legal environment, ethics and other situational factors at a specific time and place.

Theoretically, tax compliance can be defined by considering three separate types of compliance such as filing compliance, payment compliance and reporting compliance (Brown & Mazur, 2003). Tax compliance refers to the fulfilment of all tax requirements as specified by the law completely and freely or the extent to which a taxpayer complies with the tax laws of their country (Braithwaite, 2009). Alm (1991) defines tax compliance as the

reporting of all incomes and payment of all taxes by fulfilling the provisions of regulations, laws and court judgments. Similarly, the Ghana Revenue Authority defines tax compliance as the ability and willingness of taxpayers to comply with tax requirements, pay the correct amount of taxes on time and report the exact income in each year.

Also, Abdallah (2014) defines tax compliance as all activities necessary to be carried out by the tax-paying public in order to meet the statutory requirements of the tax law. Since there have been many empirical studies, attempts have been made to define tax compliance. For the purpose of this study, tax compliance may be defined as taxpayers' ability and willingness to comply with tax laws including filing appropriate returns, paying all taxes due on time, claiming appropriate relief and rebates and stating the actual income earned (Palil, 2010).

On the contrary, tax non-compliance is defined as taxpayer's inability to pay the right amount of tax, perhaps on account of tax administration procedure, contradictions or even the complexity in the tax legislation (Kasipillai & Jabbar, 2003). Kirchler (2007) intimates that tax non-compliance is failure or inability of a taxpayer to disclose the actual income, pay the actual amount of tax to the tax authority on time and claim deductions and rebates. Tax non-compliance happens when taxpayers intentionally or unintentionally fail to fulfil their tax obligations (Andreoni et al., 1998; Palil, 2010).

In conclusion, based on Andreoni et al. (1998), Kasipillai and Jabbar (2003), Kirchler (2007) and Palil (2010) definitions, tax non-compliance may be defined for the purpose of this study as failure to fulfill with obligations including filing inappropriate returns, claiming inappropriate relief and

rebates, declaring incorrect income and paying the correct amount of tax liability at a wrong time.

Tax Evasion and Avoidance

Andreoni et al. (1998) espouse that tax non-compliance involves both intentional and unintentional actions. The intentional actions are the tax evasions and tax avoidance whilst the unintentional has to do with inadequate tax knowledge and calculation errors. Tax avoidance means taking undue advantage of the drafting mistakes or loopholes for decreasing tax liability and thus avoiding tax payment which is lawful to be paid (James & Alley, 2004). In general, tax avoidance is done by interpreting or twisting the provisions of law and escaping payment of tax. Tax avoidance considers the loopholes of the law. It implies following the requirements of the law in the letter but killing the spirit of the law although it has legal support.

Tax evasion means avoiding tax by illegal means (James & Alley, 2004). In general, tax evasion deals with falsifying records, suppression of facts, collusion or fraud (Kasipillai & Jabbar, 2003). Abdallah (2014) defines tax evasion as using illegal means to reduce taxes. It is an attempt to avoid payment of tax with the aid of unfair means. Tax evasion would result in punishment such as penalty, fines and at times prosecution since it is illegal.

Theoretical Review

Tax compliance theories can be generally classified into two broad categories; the economic (deterrence) theory and the broader behaviour approach which includes both sociological and psychological theories.

The Economic (Deterrence) Theory

In 1972, Allingham and Sandmo developed the economic (deterrence) model, following the economics of crime approach introduced by Becker (1968). The theory intimates that taxpayers are influenced by economic motives like profit and therefore they are amoral utility maximisers (Trivedi, Shehata & Lynn, 2003). Depending on the reward of evasion compared to the anticipated cost of being detected and punished, the model predicts whether a taxpayer will evade tax. Allingham and Sandmo opine that an increase in the probability of being detected would result in a higher income being declared, and an increase in the penalty rate would increase the proportion of actual income declared. If the taxpayer has chosen to declare less than their actual income and they are subjected to an audit, they will face additional penalties on undisclosed income. However, if they are not audited, they are better off.

The deterrence model of tax compliance depends on the following factors which affect tax compliance. They include the structure of the tax system, effectiveness of revenue information service, failure to report accurate information, sanction and responsibilities of taxpayers, audit probability and tax rate (Devos, 2005). There is no uniform agreement in any of these variables, thus, showing a positive relationship with tax compliance. Researchers are of the view that the deterrence model of tax compliance is misleading as it neglects taxpayers' behaviour and views their decision-making in isolation (Andreoni et al., 1998; Inasius, 2018; Kirchler, 2007; Palil, 2010). It is true that the deterrence model, to some extent, discourages evasion and explains tax compliance.

However, the model is very simplistic, in that it excludes other factors or variables that might influence the decision of whether to comply or not to comply with tax laws (Torgler, 2006; Inasuis, 2018). Again, the model overemphasizes the effect of enforcement on taxpayer behaviour (Alm et al., 2012). Voluntary compliance is more sustainable and has lasting effects. Enforced compliance, unlike voluntary compliance, is not sustainable in that; it costs the nation a fortune to enforce tax laws. Slemrod (2007) emphasises that despite some people evading, others will still comply even in the absence of enforcement.

Sociological and Psychological Theory

The socio-psychological theory is based on the premise that a taxpayer's decision to comply or not to comply with tax laws is influenced not only by external forces of deterrence but also by internal factors inherent to the taxpayer. In these models taxpayers are no longer seen as self-seeking utility maximisers but as people encouraged to pay taxes on the basis of different attitudes, perceptions, beliefs, personality traits, feelings, social characteristics, cultural background like age, gender, religion and race (Fishbein & Ajzen, 1975; Jackson & Milliron, 1986; Kirchler et. al., 2008).

Further studies on the socio-psychology theory of tax compliance predict people's behaviour using the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) and the Theory of Planned Behaviour (TPB) by Ajzen (1991). These theories attempt to predict people's behaviour based on their intentions that are a function of their attitude towards behaviour, perceived behavioural control and perception of subjective norm. According to Kirchler et al. (2008), ethics motivates individuals to act in a certain manner

and therefore, a taxpayer with a negative attitude towards tax compliance is likely to be less compliant. Perceived behavioural control is concerned with an individual's perception with respect to the extent of control he or she has over a particular behaviour. Subjective norms deal with individual beliefs of referents' approval of their particular behaviour.

In addition, socio-psychology theory is also related to social sanctions (Kirchler, 2007). Social relationships also help discourage people from evading tax for fear of the social sanctions imposed once detected and publicly revealed. The austerity of social sanctions against tax evaders and attitudes towards them may influence willingness to comply (Engida & Baisa, 2014). Tilahun and Yindersal (2014) posit that the behaviour of an individual's reference groups may affect his or her compliance behaviour and attitudes towards the tax system. A taxpayer will be discouraged to comply if he or she knows many people in groups important to him or her who evade taxes.

Tax Compliance Determinants

According to available works such as Loo (2006), Kirchler (2007), Palil (2010), factors that affect taxpayers compliance were separated into five major categories, they are i) economic factors (tax audits, perceptions of government spending and tax rates); ii) institutional factors (probability of detection, the role of the tax authority and simplicity of the tax returns and administration); iii) social factors (reference groups, perceptions of equity and fairness, ethics and attitude, changes on current government policy and political affiliation); iv) individual factors (awareness of penalty, tax knowledge and personal financial constraints) and v) and other factors

(income, culture, education, gender, age). The factors that are considered in this study are discussed in detail as follows:

Economic factors

Loo (2006) opined that economic factors regarding tax compliance concerns with actions which are related to the costs and benefits of carrying out the actions. Song and Yarbrough (1978) believed that taxpayers are rational economic evaders who would probably consider the benefit and/or cost of evasion. The determinants of tax compliance related to economic factors include tax audits, tax rates and perceptions of government spending (Palil, 2010).

Tax rates

The tax rate is seen as a key determinant of tax compliance, although the precise effect is still uncertain and debatable (Kirchler, 2007). Clotfelter (1983) suggests that decreasing tax rates is not the only strategy that has the tendency to reduce tax evasion, but the tax rate is a major factor affecting taxpayers' compliance. Using the audited tax returns for individual taxpayers in Jamaica, Alm, Jackson and Mckee (1992) also disclose that the level of under-reporting and the probability of underreporting are positively associated with the marginal tax rate. Torgler (2007) claims that increasing marginal tax rates will lead to an increase in tax evasion.

On the other hand, reducing tax rates do not definitely increase tax compliance (Trivedi et al., 2003; Kirchler, 2007). In agreement with Trivedi et al. (2003) and Kirchler (2007), Inasius (2018) also posits that the perception of the tax rate has no significant influence on tax compliance. Allingham and Sandmo (1972) conclude that taxpayers may consider fully disclosing their

income or reporting less, irrespective of the level of tax rate after using statistical modelling. Deyganto (2018) posits that increasing the marginal tax rate will influence taxpayers to comply with the tax system. Evidence suggests tax rates have a mixed impact on tax compliance.

Kirchler et al. (2008) postulate that the influence of the tax rate on tax compliance would be determined by the degree of trust. When trust is high, the same level of the tax rate would be understood as support to the society, which ultimately benefits each individual. The tax rate is interpreted as a mutual agreement within society. According to Kirchler et al., when trust is low, a high tax rate could be interpreted as unequal treatment of taxpayers, as an effort to seize from the taxpayers what is truly theirs. The tax rate would be interpreted as the wielding of power by tax authorities.

Tax audits

According to Palil (2010), a tax audit is an important stimulant to increase taxpayers' compliance. This means that tax audit has an impact on tax compliance. Audits rates and the diligence of the audits could influence taxpayers to be more prudent in disclosing all income, complete their tax returns and claim the exact deductions to determine their tax liability. Some prior studies espouse that tax audits have a positive effect on tax compliance (Deyganto, 2018; Inasius, 2018; Kuug, 2016). Tax audit is one of the effective detective strategies used by tax authorities, and increasing the probability of detection will influence tax compliance positively (Alm, 1991). These findings suggest that in self-assessment systems, tax audits can play an indispensable role and their essential role is to increase voluntary compliance. Tax audit

influences tax compliance positively because of the deterrent effect of tax audit on taxpayers who do not comply with tax laws.

From a different viewpoint, Kirchler et al. (2008) claim that subjective perception of probability and its connotation is more important than objective audit probability. Andreoni et al. (1998) posit that the subjective perception of probabilities may be mediated through psychological factors rather than objective audit probabilities, which have little influence on compliance. Adimassu and Jerene (2015) posit that a high probability of being audited leads to a decrease in compliance behaviour of taxpayers. Tilahun and Yidersal (2014) postulate that the probability of being audited is not an essential factor in determining taxpayers' compliance which is also confirmed by Inasius (2015).

Perception of government spending

Few researchers were able to carry out studies in order to find out the influence of perception of government spending on tax compliance decision. In their study, Engida and Baisa (2014) state that taxpayers, particularly those who pay huge amounts of tax, will be concerned with how the government uses its tax revenue. The public, therefore, expects the government to make accurate and detail account of how tax revenue is being utilized. It is also believed that failure on the part of the government to follow this rule of the thumb will seriously affect the taxpayers' dedication to the tax laws.

Kirchler et al. (2008) claim that attitudes refer to a person's positive and negative evaluations. In addition, Kirchler et al. conclude that generally, tax attitudes also rely on the perceived use of tax revenue. If the state or government spends the national revenue wisely, for instance, for basic

facilities like health and safety, education and public transportation, it will enhance voluntary compliance (Palil, 2010) and later supported by Tilahun and Yidersal (2014). On the other hand, taxpayers will feel betrayed and try to evade tax if they perceive that the government is not using tax revenue judiciously (Nicolata, 2011). Inasius (2018) postulates that the perception of government spending has no significant influence on the compliance behaviour of taxpayers in Indonesia.

Institutional Factors

Institutional factors including the role of tax authority and simplicity of the tax system also play a major role in taxpayers' compliance decisions.

Role of Tax Authority

The role or efficiency of the tax authority in influencing voluntary compliance and minimising the tax gap is very essential. For many aspects of tax compliance, there is no unanimous agreement as to how the effective operation of the tax system by the tax authorities impacts on taxpayer's compliance behaviour. According to Hasseldine and Li (1999), tax compliance is placing the tax authority and the government as the main party that needs to be constantly efficient in overseeing the tax system as a means to decrease tax evasion. Richardson (2008) also suggests that the role of tax authority has a significant positive influence on tax compliance behaviour and later confirmed by Tilahun (2018).

Moreover, Roth, Scholz and Witt (1989) (as cited in Palil, 2010) suggest that for government to maximize tax revenue, the government must first put in place a cost-effective tax system which is feasible. The government must also limit the possibility of unwisely mopping up the limited tax revenue

or sealing the sources of tax revenue (Atuguba, 2006). Palil (2010) espouses that the role of tax authority has no significant effect on compliance behaviour of taxpayers and later supported by Engida and Baisa (2014). In conclusion, previous studies could not offer conclusive results on the influence of the role of tax authority on tax compliance, yet researchers from different nations have deliberated on this issue and therefore, it needs to be further investigated.

Simplicity of Tax System

Simplifying tax administration is seen as a key determinant of tax compliance. The simplicity of the tax system is important because it can decrease costs and enhance efficient administration (Mohani, 2001). Taxpayers should be able to understand the tax regulations for calculations by which they are to be taxed. These tax regulations should be clear, simple and understandable to enhance tax compliance (Jackson & Milliron, 1986; Saad, 2010). According to Mohani, there are a number of countries for instance; Canada, Denmark and New Zealand who have introduced simplified tax returns to promote voluntary compliance of taxpayers.

Silvani and Baer (1997) (as cited in Tilahun, 2018) state that by simplifying the tax return, taxpayers will be encouraged to fill the tax return by themselves rather than seek help from a third party. Deyganto (2018) claims that a simple tax return and simpler tax rules and proclamations will enhance voluntary tax compliance. Adimassu and Jerene (2015) postulate that complexity in the tax law may lead to decreased voluntary compliance. For example, the complexity that causes taxpayer misunderstanding may influence levels of voluntary compliance through either intentional evasion or inadvertent errors by taxpayers (Andreoni et al., 1998). Engida and Baisa

(2014) espouse that the simplicity of the tax system has no significant impact on the compliance behaviour of taxpayers.

Social Factors

Factors influencing tax compliance from a social viewpoint refers to taxpayers' willingness to comply with tax laws relating to other people's behaviour and their social setting (Kirchler 2007; Torgler, 2007). The specific factors to be discussed in this section are the perception of equity and fairness and referral groups.

Perception of Equity and Fairness

In 1776, Smith as cited in Wahabu (2017) postulates that one of the core principles of the tax system is equity or fairness. Equity of fairness can be observed from three-dimensional views: horizontal equity (individuals with the same wealth or income brackets should pay the same amount of taxes), vertical equity (taxes paid increase with the amount of the tax base) and exchange equity (Richardson, 2006). The perception of fairness of the tax system also has an impact on the disposition towards tax evasion (Richardson, 2008). Allingham and Sandmo (1972) state that at the wide community level, tax compliance decreases if the taxpayers believe that the tax system is unfair leading to massive tax evasion.

In 2003, Wenzel also proposed three areas of fairness from taxpayers' perspective: distributive justice (viewed as the exchange of resources, that is, cost and benefit); retributive justice (viewed as the appropriateness of sanctions when norm-breaking occurs and procedural justice (viewed as the process of resource distribution). With regards to distributive justice, a person wants to be treated with respect to his or her efforts and needs and is

concerned about the fairness of his or her actions (Kirchler et al., 2008). According to Palil and Mustafa (2011), if the individual perceives that the tax burden is higher than other individuals within the same income bracket, the compliance level perhaps reduces drastically at group levels. This is because taxpayers want equal or fair treatment of their group in relation to other income groups.

In retributive justice, baseless and intrusive audits and unfair penalties result in frustrating and dissatisfied taxpayers (Spicer & Lundsted, 1976 as cited in Inasius, 2018). Unfavourable retributive justice perception could lead to non-compliance. With regards to procedural justice, Tyler and Lind (1992) posit that the major elements for the perception of fairness are the credibility of the tax authorities, the objectivity of measures used, polite and noble in addition to the reverential treatment of taxpayers. In view of this, taxpayers believe that tax authorities will make available adequate information about the tax laws and regulations to enable them accurately complete their tax returns on time. Wartick (1994) (as cited in Wahabu, 2017) postulates that better information about tax laws and regulations can increase perceived fairness and compliance.

Reference Groups

A referent group has its own influence on taxpayers' compliance decisions. Ajzen and Fishbein (1975) postulate that referent groups play an important role in determining individuals' intentions and behaviour in relation to tax compliance. Clotfelter (1983) opined that referent groups play an essential role in tax evasion, although the study does not argue which is stronger: friends or family members. Allingham and Sandmo (1972) state that

family members and friends occasionally influence decisions to comply or not comply with tax laws, although their study does not make clear the extent of the impact.

Moreover, the significance of reference groups has been discovered in previous studies (Inasius, 2018; Adimassu & Jerene, 2015). Therefore, the influence of referent groups is essential in making a decision, especially involving monetary aspects and tax compliance. However, Hasseldine, Kaplan and Fuller (1994) postulate that the number of tax evaders known to individuals contributes to the model of under-reporting income. This means that the more individuals know the tax evaders, the more underreporting of income may occur. Also, Palil (2010) postulates that individuals with peers who indulge in tax non-compliance are prone to engage in non-compliance. Engida and Baisa (2014) espouse that the influence of the reference group has no significant influence on compliance behaviour of taxpayers and later supported by Deyganto (2018).

Individual Factors

Decisions with respect to either to comply or not to comply with tax laws are heavily dependent on the taxpayer's personal judgment (Mohani, 2001). Personal conditional factors such as tax knowledge, personal financial constraints and awareness of penalties are therefore likely to have a significant influence on tax compliance level.

Tax Knowledge

The impact of tax knowledge on compliance behaviour has been ascertained in various researches. Palil and Mustapha (2011) posit that the level of tax knowledge is essential to the way individuals understand the

reality underlying taxation and the attitude to taxation that is expressed. Many people do not understand the tax laws and why the tax system is structured and administered as it is. High awareness by the community would influence individuals to fulfil their tax obligations to register as a taxpayer, and that disclosing and paying taxes correctly are forms of national and civic responsibility.

Harris (1989) (as cited by Trawule, 2017) categorized the level of tax knowledge into two parts, that is; knowledge through formal education received and informal knowledge through tax education such as seminars, dialogue sessions, media education and experiences. According to Richardson (2006), access to formal education is a major tax compliance determinant. It generally deals with a taxpayer's ability to understand and not evade or evade tax (Jackson & Milliron, 1986). Taxpayer's knowledge in relation to informal education has a very close affiliation with ability to understand the taxation laws and regulations, hence complying positively with the tax laws (Singh, 2003 as cited in Wahabu, 2017).

The aspect of knowledge that deals with compliance is the general understanding of taxation regulations and information regarding the decision to comply or not to comply (Eriksen & Fallan, 1996). It is further believed that attitude towards tax compliance can be encouraged through improvement in taxation knowledge. According to Eriksen and Fallan, when a taxpayer has a positive attitude towards tax, it will decrease his or her inclination to avoid payment of tax. Previous researches have provided evidence that that tax knowledge has a significant relationship with taxpayers' compliance decision (Kirchler et al., 2008; Palil, 2010). Adimassu and Jerene (2015) argued that

tax knowledge has a significant influence on tax compliance behaviour of taxpayers.

Personal Financial Constraint

Personal financial constraints are presumed to have an influence on tax non-compliance as financial distress faced by an individual and may influence him or her to prioritize what has to be paid first as basic survival needs, for instance, housing, foods and clothing(Engida & Baisa, 2014). Individuals with personal financial distress are disposed to evade tax frequently as compared to people with less financial problems (Mohani, 2001).

In contrast, Vogel (1974) and Warneryd and Walerud (1982) (as cited in Palil, 2010) explain that people with no financial constraints also engage in tax evasion and amazingly, the level of evasion they exhibit can be greater than people in financial difficulties. Vogel believed that this condition is associated with economic status rather than personal situations. Adimassu and Jerene (2015) claim that tax personal financial constraint has no significant influence on tax compliance attitude of the taxpayers.

Awareness of penalties

Tax penalty refers to a punitive measure that the tax law imposes for the failure to perform a required act like filling wrong or undervalued returns or failure to timely file return (Oladipupo & Obazee, 2016). With regards to awareness of penalties, a theoretical economic model introduced by Allingham and Sandmo (1972) has clearly shown that audit probability and penalties have an influence on tax compliance behaviour. The higher the potential audit probability and the penalty, the more likely taxpayers will comply with tax laws (Nicolata, 2011). Taxpayers would be encouraged to comply with laws if

they are aware of the offences they are committing and penalties of being non-compliant.

Empirical evidence from prior studies suggested that penalty rates have a negative relationship with evasion (Allingham & Sandmo, 1972; Chebusit et al., 2014; Deyganto, 2018). However, Virmani (1989) (as cited in Deyganto, 2018) states that penalty rates have a positive relationship with tax evasion that is, higher penalty rates encourage people to be non-compliant. In conclusion, it is observed from previous studies that the penalty rate has an impact on tax compliance. However, studies by Tilahun and Yidersal (2014), Adimassu and Jerene (2015) and Oladipupo and Obazee (2016) postulate that awareness of penalty has no significant influence on tax compliance.

Empirical Review

Some of the key empirical studies examining tax compliance determinants by Small and Medium Enterprises are Palil (2010), Chebusit et al. (2014), Engida and Baisa (2014), Maseko (2014), Tilahun and Yadersal (2014), Oladipupo and Obazee (2016), Kuug (2016), Wahabu (2017), Inasuis (2018) and Deyganto (2018). A summary of their studies follows after which lessons learnt and issues emerging from the entire review are discussed.

Palil (2010) conducted a study on “Tax Knowledge and Tax Compliance Determinants in Self-Assessment System in Malaysia”. Data was obtained through a large scale national postal survey using 1,073 respondents. Questionnaires were used to collect primary data from the respondents. Data were analysed using multiple regression and stepwise regression. The results indicated that tax compliance was significantly influenced by perceptions of

government spending, probability of being audited, penalties, the influence of reference groups, and personal financial constraints.

In their study, Chebusit et al. (2014) examined factors influencing tax compliance by Small and Medium Enterprises in Kitale Town Trans-Nzoia County, Kenya. Descriptive research design involving both quantitative and qualitative research methods was adopted for the study. A sample size of 132 respondents was drawn from a target population of 200, using stratified and simple random sampling. Primary data were gathered from the respondents with the aid of questionnaires. The results revealed that fines and penalties, compliance cost and attitude had a significant influence on tax compliance.

Engida and Baisa (2014) examined the determinants of taxpayers' compliance with the tax system in Mekelle city, Ethiopia. The study adopted a cross-sectional survey method of research design. Factors influencing tax compliance were examined using an Ordered Probit Model. The study findings, from the survey conducted in Mekelle using 102 respondents, show that tax compliance was influenced by financial constraints, changes in government policy and the probability of being audited.

Maseko (2014) investigated the determinants of tax compliance by Small and Medium Enterprises in Zimbabwe for the tax period 2009 to 2011. The study used a qualitative research design. Methodological triangulation was employed, using a questionnaire survey and the interview method to collect primary data from SMEs in Harare, Chitungwiza and Bindura. Questionnaire responses were analysed using correlation. Interview responses were analysed through summative content analysis.

The findings revealed that small and medium enterprises are exposed to different business conditions from large companies which lead to greater tax compliance cost. The findings from the study also showed that tax service quality, the perceptions of SME operators about tax fairness, and government spending priorities greatly affect taxpayers' compliance behaviour. Compliance costs were found to have negative correlations with tax compliance. Tax knowledge was found to have weak negative correlations with filing compliance but no correlation with tax registration compliance.

In addition to that, another study made by Tilahun and Yadersal (2014) on "Determinants of Tax Compliance Behavior in Ethiopia: The Case of Bahir Dar City Taxpayers" can be summarized as follows. The study used an Ordered Probit Model and focused on category 'C' taxpayers. The results revealed that tax compliance is influenced by financial constraints, the probability of being audited and changes in government policy. On the other hand, tax knowledge, perception of government spending, penalties, perception of equity and fairness and role of the tax authority were not significantly correlated with tax compliance.

Oladipupo and Obazee (2016) examined the influence of taxpayers' knowledge and penalties on tax compliance among small and medium enterprises in Nigeria. The study adopted a survey research design and primary data were obtained with the aid of questionnaires. Factors influencing tax compliance were analysed using the Ordinary Least Square regression method. The findings revealed that the tax penalty had an insignificant positive effect on tax compliance while tax knowledge had a positive significant influence on tax compliance.

The study made by Adimassu and Jerene (2015) on “Determinants of Voluntary Tax Compliance Behaviour in Self-Assessment System: Evidence from SNNPRS, Ethiopia” can be summarized as follows. The study adopted a cross-sectional survey method of research design. The target population of the study was the category ‘A’ taxpayers. Data were analysed using the Pearson correlation matrix and the logistic regression model. The result of the study showed that simplicity of tax returns and administration, perception on fairness and equity, perception on government spending, probability of audit, tax knowledge and the influence of referral group were significant factors that influence voluntary compliance behaviour of taxpayers in Self-Assessment System.

Kuug (2016) examined factors influencing tax compliance of small and medium enterprises in Ghana. The study used a cross-sectional survey method of research design. Questionnaires were used to gather data from 500 small taxpaying units and medium taxpaying units selected from 3 regions in the country. The interview guide was also used to gather data from the management and staff of GRA. The results revealed that compliance cost, capital structure, tax audits, tax rates and morals of taxpayers had a significant influence on taxpayers’ compliance decisions.

Another study by Wahabu (2017) examined compliance with tax laws by small and medium enterprises in Tamale Metropolis, Ghana. The study adopted a descriptive survey and cross-sectional study design. Stratified sampling and simple random sampling techniques were used to select a sample size of 265 from a total population of 851 small and medium enterprises. A close-ended questionnaire was employed in gathering primary

data for the study. Data were analysed using descriptive statistics and multiple regression method. The study concludes that tax knowledge has a significant influence on tax compliance.

Inasius (2018) examined the determinants of tax compliance by Small and Medium Enterprises for income-tax reporting requirements in Indonesia. Six tax compliance factors were examined using multiple regressions. Data were collected through a survey conducted in Jakarta using 328 respondents who are small business taxpayers. A researcher-administered questionnaire survey method was used for data collection. The findings revealed that the probability of being audited, referral groups, the perception of equity and fairness tax knowledge have a significant influence on tax compliance.

Deyganto (2018) investigated the determinants of tax compliance attitude with taxation in Ethiopia. A sample size of 291 was randomly drawn from a population of 1069 Category “A” taxpayers in the Zone. Using a mixed research approach, both primary and secondary data were collected. The data were analysed using the Pearson correlation matrix and binary logistic regression model. The result of the study revealed that lack of tax knowledge, perception on the tax rate, simplicity of tax system, awareness on penalty, perception on fairness and equity, probability of being audited, age and gender had a significant influence on tax compliance.

Conceptual Framework

The conceptual framework was developed out of a review of existing literature about the variables from the work of Palil (2010); Engida and Baisa (2014); Tilahun and Yadersal (2014) and Deyganto (2018). According to the literature, tax compliance (dependent variable) is influenced by the role of tax authority, probability of being audited, perception of equity and fairness, perception of government spending, simplicity of tax system, reference group, tax rates, tax knowledge, personal financial constraints and awareness of penalty.

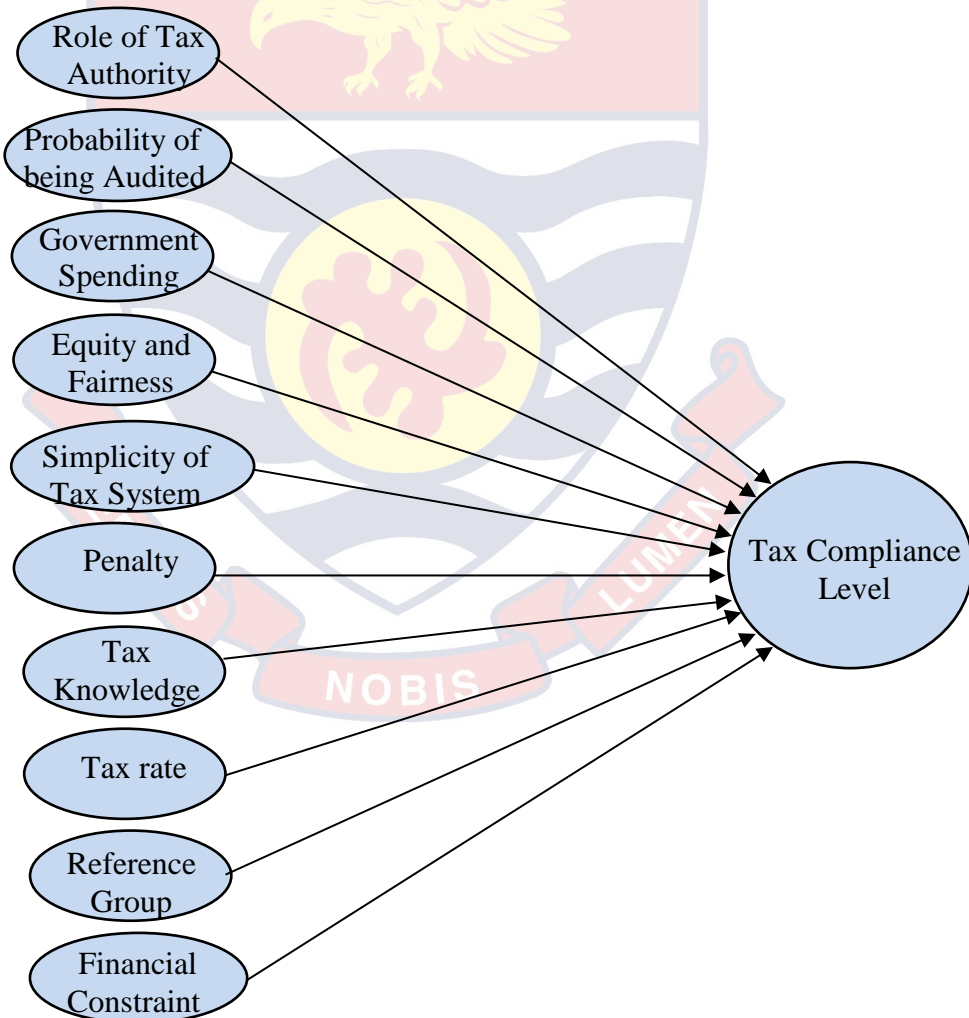


Figure 1: Conceptual Framework of Determinants of Tax Compliance.

Source: Author's construct based on literature.

Lessons Learnt, Critiques from the Empirical Evidence and Gaps

The overall review of the related literature has brought about emergent issues and lessons. First, most of the studies were conducted in developed countries, raising questions regarding the applicability of their findings to developing African economies such as Ghana. Again, most of the studies were purely quantitative and the cross-sectional design was mostly used. However, a study carried out by Maseko (2014) on compliance of SMEs in Zimbabwe adopts purely qualitative method while a study conducted by Chebusit et al. (2014) on “Factors influencing tax compliance by Small and Medium Enterprises in Kitale Town Trans-Nzoia County, Kenya” adopts both quantitative and qualitative research methods.

Furthermore, stratified random sampling and simple random sampling procedures were predominantly used by the studies reviewed as their basis of sampling technique to select the respondents. The basis for the use of this technique is the nature of the heterogeneity of SMEs. Multiple regression and ordered probit model were frequently used for inferential analysis. Moreover, empirical research showed that factors influencing tax compliance have been discovered to vary between countries. There is no unanimous agreement in findings highlighted by researchers regarding genuine determinants of tax compliance among nations sharing similar cultures and tax systems.

Again, the studies showed inclusive results on comparisons of findings from various researchers on a similar area of studies. Hence, there seems to be disagreement in findings in looking at factors influencing tax compliance behaviours. Some variables are significant in one study and also insignificant in another study. In the light of the above, further investigation is required to

examine the factors influencing tax compliance by Small and Medium Enterprises taking evidence from Cape Coast Metropolis, Ghana.

Chapter Summary

This chapter has reviewed the literature on theoretical and conceptual issues relating to factors influencing tax compliance as captured in prior studies. Key issues and lessons from the review informed the conceptual framework of the study. The review will further prove beneficial in the methods, analyses, presentation of findings, discussion, conclusions and recommendations.



CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the research methods adopted for the study. The chapter deals with the research paradigm, research approach, research design, study area, population and sampling procedures. It also discusses the data collection instrument, validity and reliability of the instrument, pilot test, data collection procedures, ethical consideration as well as processing and analysis of the data.

Research Paradigm

Research paradigm defines what constitute knowledge in a field of study and spells out the researcher's assumptions and views about the world or reality (Saunders, Lewis & Thornhill, 2009). Collis and Hussey (2009) define research paradigm as "a philosophical framework that guides how scientific research should be conducted, based on people's philosophies and their assumptions about the world and the nature of knowledge". Particularly, a research paradigm consists of the pattern of theories, approaches, traditions, the frame of reference, models, the body of research and methods; and it could be viewed as a model or framework for observation and understanding (Creswell & Clark, 2017).

There are two broad research paradigms used in business studies. They are positivism and interpretivism (Collins & Hussey, 2009; Mark, Philip & Adrian, 2009). Positivists employ scientific methods and structure the knowledge generation process with the aid of quantification to improve accuracy in the explanation of parameters and the association among them.

Positivism deals with finding reality and disclosing it by empirical means (Henning, Van Rensburg & Smit, 2004). Positivism is associated with deductive approach and quantitative design and methods since this paradigm postulate that the phenomena under study can be evaluated. Positivists also claim that an objective reality exists beyond personal experiences with its own cause and effect relationship (Saunders et al., 2009).

Interpretivism, on the other hand, employs inductive approach and qualitative design and methods to study the phenomena. Interpretivism deals with discovering the complexity of social phenomena with the aim of developing understanding. The main objective of research in interpretivism involves understanding and explaining events or happenings, social structures and experiences in addition to the tenets people associate to these phenomena (Collins & Hussey, 2009). Interpretivists claim that social reality is subjective and precise since it based on the perceptions of the individuals, together with the objectives and values of the researcher.

This study seeks to examine factors that influence tax compliance through the testing of hypotheses developed based on existing theories and findings from previous studies. The research paradigm of this study is positivism because the researcher assumes an independent and objective position and employs quantitative methods of analysis.

Research Approach

Research methods can be quantitative, qualitative or mixed (Saunders et al., 2009). According to Kothari (2004), the choice of research approach should be based on the researcher's discretion, depending on the nature of the study. Drawing from the positivist paradigm, it becomes relevant to use the

quantitative approach by designing open and closed-ended questionnaires to collect the appropriate numerical data. Saunders et al., (2009) opines that the quantitative approach allows the use of statistical techniques in data analysis and the drawing of generalizable conclusions about relationships.

Research Design

Research design is the researcher's overall plan for obtaining answers to research questions. The type of research design to use depends on the research questions that the study sought to answer. The study adopts the explanatory research design and a cross-sectional survey. Explanatory research seeks to study a situation or a problem with the aim of explaining the relationships between variables (Saunders et al. 2009). Therefore, the explanatory design was appropriate for this study as it aims to determine the factors that influence tax compliance by owners or managers of small and medium enterprises.

A cross-sectional survey collects data to make inferences about a population of interest at one point in time (Collis & Hussey, 2009). The data gathered is from a pool of participants with varied characteristics and demographic variables. The use of cross-sectional survey strategy allows for the collection of large amounts of data from the population in a highly economical manner. Also, the respondents have sufficient time to answer questions or statements. Again, each respondent has the same questions or statements and freedom to answer. The cross-sectional survey is the most appropriate way to examine taxpayers' compliance behaviour, as direct questions (face to face) might influence respondents to answer the questions

dishonestly and could be potentially embarrassing for respondents (Palil, 2010).

However, the use of cross-sectional survey might be less reliable, particularly when the information sought on tax is sensitive. Another weakness of cross-sectional survey design is their inability to track change over time. Again, it does not help determine the cause and effect relationship. Moreover, the findings can be flawed or skewed. Despite the few limitations, the design is appropriate for the study as surveys have more advantages compared to other methods.

Study Area

The study area covers the entire Cape Coast Metropolis. The Cape Coast Metropolis is one of the seventeen (17) political and administrative districts in the Central Region of Ghana. It was upgraded to municipality status in 1987 by Legislative Instrument (LI) 1373 and raised to the status of metropolitan in 2007 by LI 1927. According to the 2010 Population and Housing Census conducted by the Ghana Statistical Service (GSS), the Metropolis has a total population of 169,894 with a growth rate of 1.4% per annum. Out of the total population, 87,084 are females and 82,810 are males (PHC, 2010).

The Metropolis shares common boundary to the North by the Twifu - Heman-Lower Denkyira District, to the East by the Abura-Asebu-Kwamankese District, to the West by the Komenda-Edina-Eguafo-Abrem Municipality, and to the South by the Gulf of Guinea. It occupies an area of approximately 122 square kilometres, with the farthest point at Brabedze located about 17 kilometres from Cape Coast, the Central Regional capital.

According to GSS (2010), 32.5% of the employed population is engaged in service and sales work, 25.1% are engaged in wholesale and retail trade (25.1%), 23.6% are engaged in craft and related trade works and 14.3% are engaged in manufacturing and education. The 2010 Population and Health Census shows that more than two-thirds (68.4%) of the employed population work in the private sector whilst only one-fifth (21.4%) are public sector workers. Previous studies conducted in the area did not employ PLS-SEM to examine the factors influencing tax compliance by SMEs, hence, the choice of Cape Coast Metropolis.

Population

The study population is made up of all small and medium enterprises in the Cape Coast Metropolis registered with the Ghana Revenue Authority. Since the population was connected to GRA, the study focused on using the status of a taxpayer. There are 900 active registered small and medium enterprises in the Cape Coast Metropolis with a composition of 710 small enterprises and 190 medium enterprises (lists obtained from both the Small Tax Office and Medium Tax Office of the Ghana Revenue Authority in Cape Coast Metropolis). Therefore, the target population is 900 SMEs.

Sampling Procedure

Sampling is based on the selection of some elements in a population usually due to the fact that population is too substantial for one particular researcher to attempt to study all the individuals (Cooper & Schindler, 2014). The sample should symbolize the larger population both entirety and proportionality (Kothari, 2004). Kothari states that the sample selected should

have a number which symbolizes the entire population to meet the principle of proportionality.

Sample Size and Justification

This study uses the formula by Yamane (1967) to determine the sample size. This is to enhance the confidence in the findings and conclusions from the study as the study follows scientific and empirical means to determine the sample size.

$$n = \frac{N}{1 + Ne^2} = \frac{900}{1 + 900(0.05)^2} = 277 \text{ SMEs}$$

Where:

N = Population size

e = the level of precision (0.05 on the basis of 95% confidence level)

Therefore, using a population of 900 SMEs with an error limit of 5%, a sample size of 277 is considered adequate as computed above. Twenty percent (20%) was included to accommodate for non-response rate.

Sampling Technique

For this study, we have made use of the stratified random sampling technique. Stratification ensures that the sample is well spread out among the relevant subgroups. Saunders et al. (2009) indicate that dividing the population into a series of strata implies that the sample is more likely to be represented as it can ensure that each stratum would be represented proportionally within the sample. After getting the number of respondents needed, we establish strata in the sample based on the share of the two groups in the population, using the formula of Lynch (Rahman, 2017), namely:

$$n_i = \frac{N_i}{N} \times n$$

Where:

n_i = size of the stratified sample

n = size of the total sample

N_i = size of the population based on stratum

N = overall population

Table 1: The Population and Sample Size Determination

Strata	Population	Sample size
Small enterprises	710	219
Medium enterprises	190	58
Total	900	277

Source: Field data (2018).

Data Collection Instruments

The study used mainly primary data. The primary data is collected from respondents through the administration of structured questionnaires to owners of small and medium enterprises in the Cape Coast Metropolis. Saunders et al. (2009) contend that questionnaires are suitable for explanatory or descriptive research. Frazer and Lawley (2000) posit that questionnaires are the best instruments for collecting factual data and enable more economic and timely collection of data from a large population.

Data were collected from respondents toward a set of statements, both positive and negative statements. The negative statements were reversed accordingly as recommended by Pallant (2005). Hughes (2009) (as cited in Salazar, 2015) recommends that if the researcher chooses to reverse items regardless of the implications this may have, the researcher must try to confirm whether, in the pilot test of the instrument, the respondents are able to

identify the reversed items. The questionnaire for the study (see Appendix A) consists of five parts under the following major headings: demographic characteristics, sources of tax information, tax compliance factors, tax compliance and tax obligations. The questions consist of both open and close-ended questions with the majority of items rated on a five-point scale.

Definition and Measurement of Variables

Questions on demographic variables were appropriated from the Ghana Living Standard Survey [GLSS 7] (2017). Specific question measured the sex, age, marital status and educational qualification. In addition, based on literature, data was collected on business type, average annual sales, business sector, business experience and the number of staff as depicted in Section A of the questionnaire.

Furthermore, questions on sources of tax information respondents through which taxpayers get information on tax and how useful respondents see them were adopted from Kuug (2016). A total of twelve sources of tax information were given for respondents to grade their usefulness. The questions were rated on a five-point scale as shown in Section B of the questionnaire.

In addition, questions on independent variables were adopted and developed with some modification from previous studies such as Kirchler et al. (2008), Palil (2010) and Saad (2010). The wording was changed to adapt the questions to the issue of taxpayer's perceptions on factors influencing tax compliance in Cape Coast Metropolis, Ghana. The independent variables consist of ten constructs from previous literature; tax rates, tax audit, government spending, equity and fairness, referral group, the role of tax

authority, simplicity of tax system, tax knowledge, personal financial constraint and awareness of penalty predicting tax compliance. This can be found in Section C of the questionnaire.

Questions on dependent variables were based on literature and can be found at Section D of the questionnaire. Finally, Section E of the questionnaire comprises of tax obligations. This section consists of four questions including how often taxes were paid, the preparer of the business tax return and how respondents estimate their tax liability to be paid in a year. Again, respondents were asked to state in their opinion the factors that would promote tax compliance. A detailed description of study variables is given in Table 2.

Table 2: Definition and Measurement of Variables

Variable	Symbol	Definition	Measurement
Dependent:			
Tax compliance	TC	Taxpayers' ability and willingness to comply with tax laws including filing appropriate returns, stating the actual income earned, claiming appropriate relief and rebates and paying all taxes due on time.	5 questions rated on a scale of 1-5
Independent:			
Role of Tax Authority	RTA	The role of the tax authority in administering the tax system.	3 questions rated on a scale of 1-5
Probability of being Audited	PBA	Probability of a taxpayer being audited or investigated by the tax authority	3 questions rated on a scale of 1-5
Government Spending	GS	This is how taxpayers perceive the government spends its collected taxes.	3 questions rated on a scale of 1-5
Equity and Fairness	EF	This is how taxpayers perceive the equity and fairness of the tax system.	3 questions rated on a scale of 1-5

Table 2, Continued

Simplicity of the Tax System	STS	Taxpayers' perception of the simplicity of the tax system.	3 questions rated on a scale of 1-5
Penalty	PEN	Penalty rates and the enforcement undertaken by the tax authority.	3 questions rated on a scale of 1-5
Tax Knowledge	TK	General understanding of taxation regulations and information.	4 questions rated on a scale of 1-5
Tax rate	TR	Taxpayers' perception of the tax rate.	2 questions rated on a scale of 1-5
Reference group	RG	The role of a referral group, for example, friends, neighbours and relatives in determining taxpayers' decision either to comply or not to comply.	3 questions rated on a scale of 1-5
Financial Constraint	PFC	Personal financial constraint including the inadequacy of taxpayers' income to pay their tax and personal expenditures.	3 questions rated on a scale of 1-5

Source: Palil (2010) as modified

Control Variables

Examining the influence of control variables on the dependent variable is essential in order to rule out other possible effects that are unrelated to the hypothesised relationships (Becker, Breaugh, Carlson, Edwards & Spector, 2016). Demographic variables can be used as control variables when examining factors influencing tax compliance (Palil, 2010; Engida & Baisa, 2014). For this study, age, gender and educational level were used as control variables. The control variables are treated as independent variables with other latent variables in a post-hoc analysis.

Validity and Reliability of Instrument

The questionnaire was tested for both content validity and reliability. The two measures largely ensure that the instrument is accurate and sound to

carry out research. Validity is the extent to which a scale measures what it is supposed to measure (Pallant, 2005) and it established by using a panel of experts and a field test. The instrument was reviewed by two supervisors both from the Department of Accounting and two tax experts from small taxpayer's office and medium taxpayer's office. Based on the review comments, the questionnaire was revised.

Reliability of construct means internal consistency of measurement. Also, internal consistency can be evaluated by Cronbach's Alpha and composite reliability (Hair, Hult, Ringle & Sarstedt, 2017). Using Cronbach's Alpha gives an estimate for the reliability depending on indicator inter-correlations. However, within Partial Least Square Structural Equation Modelling (PLS-SEM), internal consistency is measured using composite reliability (Henseler, Ringle & Sinkovics, 2009).

Although both Cronbach's Alpha and composite reliability measure internal consistency, composite reliability takes into consideration that indicators have different loadings. Henseler et al. (2009) postulate that Cronbach's Alpha can underestimate the internal consistency reliability of latent variables in PLS path models which is why a measure such as composite reliability could be more suitable. According to Henseler et al., a value of 0.7 and above is considered satisfactory while a value under 0.6 shows a lack of reliability. Thus, it can be concluded that all constructs meet the requirements as composite reliability values obtained from the pilot test were above 0.7. The composite reliability for all constructs from the pilot test ranged from 0.789 to 0.947.

Pilot Test

Before collecting full-scale data, a pilot study was conducted for the present study during the month of November 2018. The questionnaire was pilot tested with 40 owners of small and medium enterprises at Elmina and 33 valid responses were collected. The pilot study sought to assess the essential requirements during instrument purification such as testing questions wording, sequence, layout, familiarity with respondents, response rate, questionnaire completion time and analysis process (Ticehurst & Veal, 2000). The pilot test revealed that on average, respondents took about 10 to 15 minutes to complete the survey instrument.

Data Collection Procedure

Structured questionnaires were used as a method for collecting primary data. The survey was done between January and March 2019. The questionnaires were administered to owners or managers of small and medium enterprises with the help of four Field Assistants. Participation in the survey was voluntary and the respondents did not earn any incentive for it.

Data Processing and Analysis

The responses from the questionnaires were edited, coded and entered into Statistical Package for Social Science (SPSS) version 21 for analysis. Keywords in each question of the questionnaire were given exclusive name and number assigned to them as codes. Codes were also assigned to the response categories in the scale before data inputs. The data were screened to ensure that every information was entered accurately. The other questions that were open-ended were analysed by listing all the essential response given by

the respondents. They were then considered based on their significance to the research.

The data was analyzed and interpreted with descriptive statistics such as mean, frequency count and percentages (Pallant, 2005). Structural Equation Modeling (SEM) was used to test the hypotheses/structural path relationship with Smart PLS 3.2.8. SEM was adopted for the study because it analyses complex models and also provides more robust results (Hair et al., 2017).

Structural Equation Modelling

According to Hair et al. (2017), the Structural Equation Modelling (SEM) technique is a multivariate statistical approach which analyses complex relationships. SEM incorporates both factor analysis and multiple regressions and assists the investigation of a series of dependent relationships. This study has many independent variables (determinants of tax compliance) which are not observable and it also has a dependent variable (tax compliance) which will be measured using several indicators.

The complex networks analysis assisted by SEM describes the real-world situation better than correlation-based models (Hair, Hult, Ringle & Sarstedt, 2014). The choice of SEM is supported by a number of reasons which are desirable for this study. Previous studies such as Haenlein and Kaplan (2004) and Henseler et al. (2009) have argued for using regressions based on sum scores, instead of indicator weighting as done by PLS-SEM. Hair et al. (2017) postulate that the use of weighted composites of indicator variables help account for measurement error, therefore making PLS-SEM superior in comparison with multiple regression which is based sum scores.

According to Wong (2013), there are two main approaches to estimate the relationships in a structural equation. They are the Partial Least Squares Structural Equation Modelling (PLS-SEM) and Covariance-based Structural Equation Modelling (CB-SEM). In terms of advantages, compared to CB-SEM, PLS-SEM can handle a large number of latent variables (Wong, 2013). PLS-SEM uses simpler algorithms since the structure is obvious. Therefore, estimations of latent variables are more practical. PLS-SEM also tolerates the creation of a complex conceptual framework from the multi-block analysis, and it facilitates the work of assessing all the formative latent variables (Hair et al., 2014).

PLS-SEM is the best alternative when observed variables are not normally distributed. It should also be a choice when dealing with relatively small samples. CB-SEM, on the other hand, assumes normality of distribution of the observed variables and requires large samples (Chin, 1998; Hair et al, 2017). The kind of constructs used in the model is also important in determining the choice of technique. According to Chin, if all constructs are reflective, CB-SEM may be used, all other things being equal. If the model contains a formative construct, PLS-SEM should be used.

The purpose of this study is to predict tax compliance behaviour, the PLS-SEM approach which is prediction-oriented would be preferred since it offers better prediction capability together with the other benefits listed earlier.

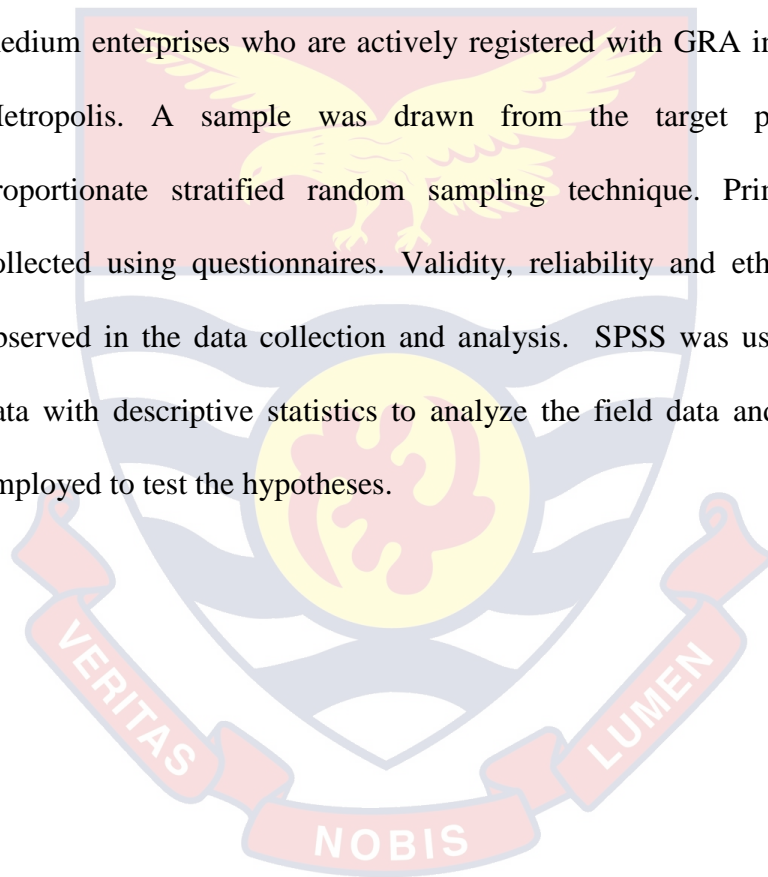
Ethical Consideration

The researcher assured all respondents of the confidentiality of their responses as the information they will provide will be solely used for academic purposes. The aim was to make the respondents feel more

comfortable and confident to provide all the necessary information required. Furthermore, in order to avoid errors and inaccuracies and misrepresentation of the study findings, ample time was given to respondents who participated in the survey to respond to the questions.

Chapter Summary

This study adopted an explanatory survey research design and quantitative approach. The target population comprises of owners of small and medium enterprises who are actively registered with GRA in the Cape Coast Metropolis. A sample was drawn from the target population using proportionate stratified random sampling technique. Primary data were collected using questionnaires. Validity, reliability and ethical issues were observed in the data collection and analysis. SPSS was used in processing data with descriptive statistics to analyze the field data and PLS-SEM was employed to test the hypotheses.



CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents data analysis and the results of the study. Descriptive statistics are first presented to help better appreciate the characteristics of the data. The results are presented in tables and detailed analyses are made before and after each table. Validity and reliability of the measurement model are assessed. After assessing the quality of the measurement model, then the structural model is also evaluated. The results of the hypotheses are presented and compared to previous studies.

Descriptive Statistics

This section presents the data background and descriptive statistics of the data. Based on the stratified random sample of 333 participants, a total of 301 questionnaires were duly filled and returned. This represents a 90% response rate. Table 3 presents the demographic characteristics of the respondents and business information including business type, average sales, business sector, business experience and the number of staff.

Table 3: Demographic Characteristics of Respondents

Variable	Description	Frequency	Percentage
Sex	Male	167	55.5
	Female	134	44.5
Age of Respondents	20 – 24	33	11.0
	25 – 29	42	14.0
	30 – 34	52	17.3
	35 – 39	51	16.9
	40 – 44	44	14.6
	45 – 49	32	10.6
	50 – 54	23	7.6
	55 – 59	18	6.0

Table 3, Continued

	60 +	6	2.0
Marital Status	Married	173	57.5
	Consensual Union	28	9.3
	Separated	23	7.6
	Divorced	10	3.3
	Widowed	8	2.7
	Never married	59	19.6
Educational Qualification	BECE	33	11.0
	SSCE/WASSCE	115	38.2
	Bachelor degree	76	25.2
	Master degree	19	6.3
	PhD	5	1.7
	Others	53	17.6
Business Type	Sole proprietorship	186	61.8
	Partnership	69	22.9
	Limited Liability Company	46	15.3
Average Sales	Less than GH¢ 50,000	161	53.5
	GH¢ 50,000 - GH¢ 90,000	77	25.6
	GH¢ 90,001 - GH¢ 2,000,000	45	15.0
	GH¢ 2,000,001 -GH¢ 5,000,000	18	6.0
Business Sector	Manufacturing	23	7.6
	Transport	13	4.3
	Trade	124	41.2
	Service	55	18.3
	Building and Construction	26	8.6
	Hospitality	35	11.6
	Others	25	8.3
		NOBIS	
Business Experience	1 – 5	84	27.9
	6 – 10	119	39.5
	11 – 15	61	20.3
	16 +	37	12.3
Number of Staff	1 – 10	193	64.1
	11 – 20	80	26.6
	21 – 50	24	8.0
	51 – 100	4	1.3

Source: Field survey (2019) N=301

As shown in Table 3, with regard to gender, males were the dominant category with a total number of 167 (55.5%). There were 134 (44.5%) females. This shows that the majority of owners/managers of the sampled SMEs in Cape Coast Metropolis are males, although, the proportion of female owners/managers is relatively encouraging. Again, the results show that majority of the respondents are married. A total of 173 (57.5%) respondents were married, 28 (9.3%) were in consensual union, 23 (7.6%) were separated, 10 (3.3%) were divorced, 8 (2.7%) were widowed and 59 (19.6%) were never married.

With regards to age distribution, there were nine age groups involved in the study with a 5-year range except for those who are in the category of 60 years and above. Since this study emphasized on individual taxpayers, a minimum age of 20 years was considered. The largest group of the respondents, aged between 30 and 34 years had 52 (17.3%) responses and respondents in the group of 60 years and above was the lowest number with 6 (2%) responses. Cumulatively, the youthful age category (less than 35) accounted for 127 responses (42.2 %) while the middle age category (between 35 and 59) were the dominant category with a total number of 168 (55.8%). In Ghana, the national youth policy document defines youth as someone within the age bracket of 15 and 35 (National Youth Policy of Ghana, 2010).

Furthermore, on the highest educational qualification of respondents, majority of the respondents were holders of SSCE/WASSCE certificates and constituted 38.2%. This was closely followed by Bachelor degree certificate holders (25.2%) and other (MSLC, HND, others) certificate holders (17.6%). BECE, Master degree and PhD holders all summed up to 18%. This means

that all the respondents had formal education, this can lead to an easy understanding of tax laws and procedures in the Cape Coast Metropolis if adequate training is provided for them.

On the question that sought the views of the type of business being operated by the respondents, the results as presented in Table 3 shows that majority of the business had been solely proprietorship and constituted 61.8%. About 22.9 % and 15.3% of the respondents mentioned that they operate partnership and Limited Liability Company respectively.

Results of data collected on average turnover for the last two years as shown in Table 3 indicates that more than half (53.5%) of total SMEs surveyed earned below GH¢50,000. Seventy-seven respondents (25.6%) received sales of between GH¢50,000 and GH¢ 90,000. Forty-five respondents representing 15% also made average sales between GH¢ 90,001 and GH¢ 2,000,000. The remaining 18 respondents (6%) made average sales of between GH¢ 2,000,001 and GH¢ 5,000,000.

Moreover, there are different categories of business sectors registered in Small Tax Office and Medium Tax Office of the Ghana Revenue Authority in Cape Coast Metropolis. Sectors distribution of respondents is summarized in Table 3. As per the outcomes of the survey, 41.2% of the respondents are engaged in trade, 18.3% service sectors, 11.6% hospitality sectors, 8.6%, 8.3%, 7.6%, and the remaining 4.3% are building and construction, other (schools, hospitals, others), manufacturing and transport respectively. This shows that majority of the respondents are engaged in the trade business.

In addition, it was discovered that the largest group of respondents had operated between 6 and 10 years and constituted 39.5%. Also, while 27.9% of

SMEs have been in existence between 1 and 5 years, 20.3% of SMEs have been in existence between 11 and 15 years while 12.3% of total SMEs have been in existence for 16 years and beyond. Cumulatively, respondents operating beyond 6 years made up the largest portion with 217 responses (72.1%) hence they were likely to have adequate experience and awareness in dealing with tax law, procedure, systems and related issues, and also identifying the determinants of tax compliance.

Also, the majority of the businesses (64.1%) employed between 1 to 10 persons. About 26.6 % of the respondents employed between 11-20 staff, 8% of the respondents employed between 21 and 50 people and 1.3% respondents engaging the services of 51-100 people.

Sources of Tax Information

Tables 4 presents the sources through which taxpayers get information on tax and how useful respondents see them.

Table 4: Sources of Tax Information

Sources	Response	Frequency	Percentage
GRA Brochures	Not useful	20	6.6
	A bit useful	75	24.9
	Fairly useful	90	29.9
	Useful	82	27.2
	Extremely useful	34	11.3
GRA Website	Not useful	25	8.3
	A bit useful	79	26.2
	Fairly useful	90	29.9
	Useful	81	26.9
	Extremely useful	26	8.6
GRA Seminars	Not useful	15	5.0
	A bit useful	40	13.3
	Fairly useful	72	23.9
	Useful	110	36.5

Table 4, Continued

	Extremely useful	64	21.3
GRA Billboards	Not useful	19	6.3
	A bit useful	72	23.9
	Fairly useful	115	38.2
	Useful	63	20.9
	Extremely useful	32	10.6
Bulletin Boards	Not useful	18	6.0
	A bit useful	67	22.3
	Fairly useful	114	37.9
	Useful	84	27.9
	Extremely useful	18	6.0
Newspapers	Not useful	11	3.7
	A bit useful	38	12.6
	Fairly useful	102	33.9
	Useful	106	35.2
	Extremely useful	44	14.6
Radio	Not useful	4	1.3
	A bit useful	16	5.3
	Fairly useful	54	17.9
	Useful	111	36.9
	Extremely useful	116	38.5
TV	Not useful	7	2.3
	A bit useful	13	4.3
	Fairly useful	54	17.9
	Useful	111	36.9
	Extremely useful	116	38.5
Email	Not useful	19	6.3
	A bit useful	44	14.6
	Fairly useful	97	32.2
	Useful	95	31.6
	Extremely useful	46	15.3
Telephone	Not useful	16	5.3
	A bit useful	36	12.0
	Fairly useful	111	36.9
	Useful	106	35.2
	Extremely useful	32	10.6

Table 4, Continued

SMS	Not useful	11	3.7
	A bit useful	47	15.6
	Fairly useful	116	38.5
	Useful	97	32.2
	Extremely useful	30	10.0
Family and Friends	Not useful	12	4.0
	A bit useful	51	16.9
	Fairly useful	106	35.2
	Useful	94	31.2
	Extremely useful	38	12.6

Source: Field survey (2019) N=301

As shown in Table 4, out of the 12 tax information sources that were given for respondents to grade the usefulness, radio and television were considered as extremely useful. Again, seminars organized by the GRA, telephone and newspapers were considered useful by respondents as the sources through which taxpayers get information. Respondents considered the billboards, bulletin boards, brochures, website, email and family and friends sources as somehow useful in getting information on tax.

Tax Compliance

This section discusses the level of tax compliance by owners/managers of SMEs in the Cape Coast Metropolis. Table 5 shows the results of tax compliance by owners/managers of the sampled SMEs.

Table 5: Level of Tax Compliance

Measure	Response	Frequency	Percentage
History of filing tax return	Yes	301	100
	No	0	0
Recent year of filing tax return	2018	259	86.0
	2017	42	14.0

Table 5, Continued

Preparer of business tax return	Owner/manager	148	49.2
	Part-time Accounting officer	29	9.6
	Full-time Accounting officer	82	27.2
	Tax officers/agents	42	14.0
Payment times	Monthly	39	13.0
	Quarterly	183	60.8
	Semi-annually	26	8.6
	Annually	53	17.6
Method of Assessment	Provisional assessment	237	78.7
	Self- assessment	64	21.3
Source: Field survey (2019)		N=301	

In terms of filing tax returns, which has been a statutory requirement, results presented in Table 6 shows that all the sampled small and medium enterprises (301 or 100%) fully comply. None of the firms indicated nil compliance. This may be because of the fact that these enterprises are registered with the Ghana Revenue Authority and cannot hide from being thoroughly scrutinized. Again, 86% of the respondents filed their tax return in 2018 while 14% of the respondents filed their tax return in 2017.

Furthermore, results from the study also revealed that 148 (49.2%) of the respondents who have been filing tax returns did so by themselves, 29 (9.6%) had their tax returns filed by part-time accounting officers, 82 (27.2%) of the respondents had their tax returns filed by full-time accounting officers and 42 (14%) had their tax returns filed by tax officers. Again, in terms of payment times, 183 (60.8%) constituting majority of the respondents reported that they pay their tax liability quarterly, 53(17.6%) of the respondents paid their tax liability annually, 39 (13%) paid their tax liability monthly while 26 (8.6%) of the respondents reported that they paid it semi-annually.

With regards to the mode of assessment, 237 (78.7%) of the respondents indicated that their businesses were under the provisional assessments where GRA official estimate their tax liability and they pay quarterly. About twenty-one percent of the remaining respondents used self-assessment to estimate their tax liability. Provisional assessments and the self-assessments are the two methods used in Ghana. Medium taxpayers are allowed to use the self-assessment to ascertain their tax liabilities while the small taxpayers are under the provisional assessments.

Descriptive Statistics of Measurement Instrument

Table 6 shows the descriptive statistics for all indicators. Using SPSS version 21, the mean, standard deviation, skewness and kurtosis value of each indicator were examined.

Table 6: Descriptive Statistics of Measurement Statements

Item Code	N	Mean	Standard Deviation	Skewness	Kurtosis
EF1	301	3.728	.972	-.592	.216
EF2	301	3.787	.977	-.534	-.032
EF3	301	3.558	.913	-.200	-.292
GS1	301	3.409	1.106	-.355	-.438
GS2	301	3.449	1.056	-.599	-.086
GS3	301	3.356	.978	-.267	-.248
PBA1	301	3.861	.945	-.695	.396
PBA2	301	3.910	.939	-.890	.885
PBA3	301	3.884	.885	-.497	-.146
PEN1	301	4.289	.848	-1.185	1.356
PEN2	301	4.246	.795	-.910	.812
PEN3	301	4.080	.825	-.508	-.317
PFC1	301	2.615	1.202	.418	-.607
PFC2	301	2.508	1.205	.499	-.668
PFC3	301	2.648	1.234	.417	-.778
RG1	301	2.518	1.151	.438	-.530
RG2	301	2.538	1.130	.407	-.493
RG3	301	2.425	.989	.417	-.150
RTA1	301	3.827	1.100	-.833	.106
RTA2	301	3.944	1.065	-.971	.473
RTA3	301	3.758	.996	-.580	-.012

Table 6, Continued

STS1	301	3.611	1.058	-.517	-.249
STS2	301	3.598	.980	-.533	.153
STS3	301	3.508	.975	-.404	.022
TC1	301	4.459	.737	-1.368	1.894
TC2	301	3.960	.908	-.566	-.105
TC3	301	3.877	.895	-.429	-.309
TC4	301	3.870	.952	-.765	.461
TC5	301	3.817	.971	-.660	.259
TK1	301	3.794	1.019	-.969	.777
TK2	301	3.927	.932	-.651	.074
TK3	301	3.900	.926	-.588	.127
TK4	301	3.791	.990	-.567	-.066
TR1	301	2.571	1.154	.604	-.367
TR2	301	2.568	1.157	.573	-.416

Source: Field survey (2019)

Data Characteristics

This section deals with the analysis undertaken to verify the data collected. Some statistical analyses were done to verify the data normality and any potential of common method bias.

Data Normality

This study used two statistical analyses to examine the data normality. They are the Kolmogorov-Smirnov test and the skewness and kurtosis test. The results from the Kolmogorov-Smirnov test shows that all variables have significant values of 0.000. This indicates that the data are not normal (non-normal). Skewness and kurtosis values as presented in Table 6 shows that the data is close to normal as skewness and kurtosis values exceeded the recommended threshold, -1 to 1 (Hair et al., 2017). This shows that the data normality distribution assumption was violated, thus, further supporting the use of PLS-SEM.

Common Method Bias

This study adopted Harman's one-factor test and the full collinearity test to investigate the potential of common method bias in the data collected.

Using Harman's one-factor test, all study variables were presented and the first factor accounted for 16.91% which is less than the recommended threshold of 50% (Podsakoff & Organ, 1986) among variables indicating that common method bias is not a likely contaminant of the research results. Again the full collinearity test from the PLS-SEM results showed that all VIFs are less than the recommended threshold of 3.3 (Kock, 2015) indicating that the model is not affected by common method bias.

Partial Least Square Structural Equation Modelling

Path models in PLS-SEM are made up of two elements: the structural model (also known as the inner model), which describes the relationships between the latent variables, and the measurement models (also known as the outer model), which describe the relationships between the latent variables and their measures (Hair et al., 2014). In SEM, a variable is either endogenous or exogenous. An endogenous variable has at least one path leading to it and represents the effects of another variable while an exogenous variable has path arrows pointing outwards and none leading to it (Wong, 2013).

Measurement model can have reflective or formative indicators (Chin, 1998). Reflective indicators can be regarded as a representative sample of the construct, which indicates that indicators should be highly correlated with each other (Hair et al., 2017). All indicator items are caused by the same construct. In a formative measurement model, the construct forms the causal indicators. Formative indicators are not interchangeable. The omitting of an indicator potentially changes the nature of the construct (Hair et al., 2014). For the current study, the conceptual model consists of the reflective measurement model which has the relationships from construct to the indicators.

In assessing the model, we adopt the two-step SEM process as recommended by Hair et al. (2017). This involves initially assessing the measurement model for validity and reliability before proceeding to validate the structural model. The structural model is assessed after the measurement model has satisfied all conditions for validity and reliability.

Assessing the Measurement (Outer) Model

The measurement model or outer model is evaluated by looking at the internal consistency, convergent validity, indicator reliability and discriminant validity.

Internal Consistency

Internal consistency measures the degree to which a set of indicators measure the same construct by testing the correlations among the indicators of a construct (Hair et al., 2017). For this study, internal consistency is judged by the composite reliability (CR). A measurement model has satisfactory internal consistency reliability when the CR of each construct exceeds the threshold value of 0.7 (Hair et al., 2014; Henseler et al., 2009). The score of CR in this research ranges from 0.751 to 0.931 as shown in Table 7 and this is above the recommended threshold value of 0.7. Thus, the results indicate that the items used to represent the constructs have satisfactory internal consistency.

Table 7: Measurement Models Evaluation Result

Construct	Indicator	Loading	CR	AVE	HTMT confidence interval does not include 1
Equity and Fairness(EF)	EF1	0.820	0.815	0.596	Yes
	EF2	0.708			
	EF3	0.785			
Financial Constraint (PFC)	PFC1	0.897	0.931	0.819	Yes
	PFC2	0.874			
	PFC3	0.943			
Government Spending(GS)	GS1	0.878	0.795	0.575	Yes
	GS2	0.825			
	GS3	0.522			
Penalty(PEN)	PEN1	0.878	0.773	0.538	Yes
	PEN2	0.694			
	PEN3	0.602			
Probability of being Audited(PBA)	PBA1	0.708	0.751	0.503	Yes
	PBA2	0.781			
	PBA3	0.631			
Reference Group(RG)	RG1	0.694	0.839	0.642	Yes
	RG2	0.687			
	RG3	0.986			

Table 7, Continued

Role of Tax Authority(RTA)	RTA1	0.836	0.863	0.684	Yes
	RTA2	0.971			
	RTA3	0.640			
Simplicity of Tax System(STS)	STS1	0.915	0.898	0.746	Yes
	STS2	0.843			
	STS3	0.832			
Tax compliance(TC)	TC2	0.774	0.835	0.558	Yes
	TC3	0.774			
	TC4	0.732			
	TC5	0.707			
Tax knowledge(TK)	TK1	0.742	0.824	0.539	Yes
	TK2	0.731			
	TK3	0.735			
	TK4	0.729			
Tax rate(TR)	TR1	0.984	0.863	0.763	Yes
	TR2	0.746			

Source: Field survey (2019)

Convergent Validity

Convergent validity is the extent to which a measure has a positive correlation with alternative measures of the same construct (Hair et al., 2017). It is measured by the Average Variance Extracted (AVE). Convergent validity is adequate when constructs have an AVE value of at least 0.5 or more (Wong, 2013). Table 7 shows that all constructs have AVE ranging from 0.503 to 0.819, which exceeded the recommended threshold value of 0.5.

Indicator Reliability

A measurement model is said to have satisfactory indicator reliability when each item's loading is at least 0.70 and is significant at least at the level of 0.05. According to Hair et al. (2017), indicators with outer loadings between 0.40 and 0.70 should be considered for removal only if the deletion leads to an increase in CR and AVE above the suggested threshold value. Indicators with very low outer loadings (below 0.40) should, however, always be eliminated from the construct (Bagozzi, Yi, & Philipps, 1991; Hair et al., 2017). Based on this, TC1 is dropped because the outer loading is below 0.40. All item loadings are significant at the level of 0.01 and 0.05.

Discriminant Validity

Discriminant validity is evaluated by the Heterotrait Monotrait (HTMT) values (Hair et al. 2017), cross loadings (Chin, 1998) and Fornell-Larcker (Fornell & Larcker, 1981 as cited in Wong, 2013). The recent method of discriminant validity is the Heterotrait Monotrait (HTMT) values. The bootstrap (5000 samples) confidence intervals values should be significantly different from one (1). The columns labelled 2.5% and 97.5% represent the lower and upper boundary of the 95% bias-corrected confidence interval as

shown in Appendix C. Both the lower and upper boundary confidence intervals do not include the value of 1 (Hair et al., 2017; Henseler, Ringle & Sarstedt, 2015).

With Fornell-Larcker, the AVE of two constructs must be higher than the squared correlation between those constructs (Fornell & Larcker, 1981 as cited in Wong, 2013). Moreover, discriminant validity is established if the diagonal elements are significantly higher than the off-diagonal values in the corresponding rows and columns. The diagonal elements are the square root of the AVE score for each construct. These values are presented in Table 8. From Table 8, all figures on the diagonals are greater than the off-diagonal figures in the corresponding rows and columns, which is an indication that discriminant validity is confirmed.

According to Chin (1998), with the cross loadings, an indicator should load better on its construct than any other construct in the model. Table 9 shows the output of cross loading between constructs and indicators. The results show that all the indicators have stronger loadings on their constructs compared to any other construct in the model. This provides evidence that the test for discriminant validity has been satisfied.

Table 8: Fornell-Larcker Criterion

	EF	PFC	GS	PEN	PBA	RG	RTA	STS	TC	TK	TR
EF	0.772										
PFC	-0.077	0.905									
GS	0.290	0.029	0.758								
PEN	0.182	0.057	0.005	0.737							
PBA	0.211	-0.191	0.153	0.156	0.709						
RG	0.111	0.377	-0.112	0.005	-0.119	0.803					
RTA	0.091	-0.079	0.121	-0.012	0.440	0.004	0.827				
STS	0.242	-0.113	0.247	0.080	0.277	-0.239	0.283	0.864			
TC	0.238	-0.103	0.289	0.250	0.299	-0.106	0.134	0.236	0.747		
TK	0.289	-0.183	0.135	0.165	0.433	-0.084	0.333	0.317	0.394	0.734	
TR	-0.038	0.519	-0.061	0.023	-0.151	0.455	-0.066	-0.158	-0.100	-0.149	0.874

Source: Field survey (2019)

Table 9: Cross loadings

	EF	PFC	GS	PEN	PBA	RG	RTA	STS	TC	TK	TR
EF1	0.819	-0.015	0.267	0.152	0.180	0.099	0.052	0.221	0.192	0.273	-0.002
EF2	0.709	-0.072	0.155	0.226	0.125	0.038	0.009	0.135	0.153	0.199	-0.069
EF3	0.784	-0.093	0.239	0.067	0.177	0.112	0.135	0.196	0.202	0.196	-0.026
GS1	0.223	0.099	0.878	0.011	0.183	-0.107	0.167	0.255	0.274	0.105	-0.018
GS2	0.208	-0.016	0.824	0.000	0.074	-0.094	0.052	0.130	0.233	0.135	-0.036
GS3	0.292	-0.077	0.523	-0.005	0.071	-0.036	0.015	0.191	0.114	0.057	-0.147
PBA1	0.211	-0.117	0.081	0.139	0.709	0.030	0.394	0.180	0.195	0.297	-0.082
PBA2	0.134	-0.097	0.125	0.117	0.780	-0.103	0.334	0.292	0.253	0.339	-0.046
PBA3	0.108	-0.215	0.119	0.072	0.631	-0.186	0.201	0.084	0.179	0.282	-0.225
PEN1	0.089	0.035	-0.027	0.734	0.116	0.024	-0.002	0.053	0.162	0.115	0.062
PEN2	0.118	0.047	0.037	0.689	0.126	-0.060	0.002	0.048	0.176	0.106	-0.041
PEN3	0.184	0.043	0.000	0.785	0.105	0.040	-0.022	0.074	0.209	0.140	0.030
PFC1	-0.044	0.897	0.026	0.071	-0.207	0.348	-0.096	-0.075	-0.077	-0.148	0.527
PFC2	-0.003	0.874	0.043	0.019	-0.164	0.409	-0.092	-0.145	-0.060	-0.134	0.488
PFC3	-0.121	0.942	0.019	0.056	-0.159	0.310	-0.047	-0.101	-0.121	-0.196	0.432
RG1	0.051	0.365	-0.040	-0.052	-0.080	0.697	-0.075	-0.215	-0.020	-0.073	0.469
RG2	0.079	0.404	-0.029	0.007	-0.061	0.690	-0.095	-0.243	-0.015	-0.093	0.483
RG3	0.114	0.337	-0.123	0.013	-0.121	0.985	0.029	-0.218	-0.121	-0.076	0.402
RTA1	0.135	-0.061	0.042	0.035	0.373	0.073	0.837	0.257	0.064	0.316	-0.043
RTA2	0.065	-0.072	0.143	-0.016	0.416	-0.027	0.970	0.272	0.157	0.304	-0.059
RTA3	0.043	-0.102	0.066	-0.123	0.360	0.023	0.640	0.133	0.018	0.238	-0.127
STS1	0.228	-0.081	0.227	0.074	0.263	-0.185	0.278	0.915	0.229	0.311	-0.120

Table 9, Continued

STS2	0.204	-0.111	0.222	0.097	0.251	-0.204	0.254	0.844	0.182	0.330	-0.141
STS3	0.193	-0.106	0.193	0.039	0.202	-0.235	0.199	0.832	0.197	0.180	-0.154
TC2	0.194	-0.068	0.221	0.229	0.262	-0.129	0.167	0.241	0.778	0.342	-0.103
TC3	0.238	-0.063	0.140	0.233	0.219	-0.065	0.112	0.192	0.779	0.302	-0.119
TC4	0.149	-0.128	0.271	0.103	0.205	-0.084	0.091	0.125	0.722	0.254	-0.058
TC5	0.126	-0.053	0.236	0.170	0.201	-0.031	0.016	0.134	0.706	0.269	-0.011
TK1	0.207	-0.148	0.095	0.108	0.355	-0.006	0.388	0.307	0.311	0.742	-0.104
TK2	0.147	-0.153	0.101	0.162	0.272	-0.175	0.180	0.239	0.264	0.732	-0.232
TK3	0.256	-0.076	0.101	0.186	0.257	0.008	0.131	0.109	0.297	0.735	-0.046
TK4	0.232	-0.163	0.102	0.028	0.384	-0.091	0.265	0.275	0.280	0.729	-0.068
TR1	-0.039	0.457	-0.064	0.012	-0.148	0.410	-0.058	-0.143	-0.110	-0.147	0.984
TR2	-0.023	0.585	-0.031	0.053	-0.116	0.481	-0.073	-0.166	-0.030	-0.112	0.749

Source: Field survey (2019)



Assessing the Structural Model (Inner Model)

After assessing the measurement model, the structural model is further evaluated which includes testing for multicollinearity, the significance of path coefficients and the coefficient of determination. As the first step, collinearity must be assessed. Multicollinearity is evaluated by the variance inflation factor (VIF) which has an upper limit of 5 (Hair et al., 2017). The values of the VIF values presented in Table 10 are less than 5 and can be confirmed there is no issues of multicollinearity problems. The highest VIF from Table 10 is 1.540. Again, this shows that the model is not affected by common method bias as VIF is less than the 3.3 threshold (Kock, 2015).

Another criterion for assessing the structural model in PLS-SEM is the significance of the path coefficients. The path coefficients reveal the direction, size and significance of the statistical relationship between any two constructs (Henseler et al., 2015). The structural model path coefficients were checked against the rule of thumb from 5000 samples of bootstrap t values and the p values. For this study, the bootstrapping generated 5000 samples from 301 cases. According to Hair et al. (2017), the critical t values are 1.65 (10% significance level), 1.96 (5% significance level) and 2.57 (1% significance level). When p values are considered, if the significance level is 5%, the p values must be lower than 0.05 to consider the relationship as significant at 5% level.

Furthermore, the coefficient of determination (R^2) of the endogenous construct was assessed. The R^2 value indicates the amount of variance in the dependent variable that is explained by the independent variables. Thus, a larger R^2 value increases the predictive ability of the structural model.

According to Nitzl and Chin (2017), a value of R^2 around 0.67 is considered substantial, values around 0.333 are average, and values of 0.19 and lower are considered weak. Hair et al. (2017) emphasized that acceptable values of R^2 depend on the particular research discipline.

As presented in Table 10, the R^2 of the dependent variable (Tax compliance) in the model is 0.237 which indicates that the constructs have average predictive power. This means that 23.7% of the variance in tax compliance was explained by the role of tax authority, probability of being audited, perception of government spending, perception of equity and fairness, simplicity of tax system, reference group, tax rates, financial constraints, tax knowledge and penalty.

In addition to the size of R^2 , the predictive sample reuse technique (Q^2) can effectively be used as a criterion for predictive relevance (Stone 1974; Geisser 1975; Fornell & Cha 1994 as cited in Hair et al., 2017). Based on blindfolding procedure, Q^2 evaluates the predictive validity of a large complex model using PLS-SEM. The path model has predictive relevance for a selected reflective endogenous construct if the Q^2 value is above zero (Hair et al., 2017). Using an omission distance of 6, the study obtains a Q^2 of 0.109 as which is indicative of the model's predictive relevance with regards to the endogenous construct.

Table 10: Summary of Finding

	Original Sample	Sample Mean	Standard Deviation	T-Statistics	P-Values	VIF	R ²	f ²	Q ²
EF -> TC	0.061	0.067	0.060	1.003	0.316	1.295	0.237	0.004	0.109
PFC -> TC	-0.017	-0.030	0.070	0.240	0.811	1.483	0.237	0.000	0.109
GS -> TC	0.206	0.195	0.060	3.438	0.001***	1.173	0.237	0.047	0.109
PEN -> TC	0.009	0.032	0.072	0.126	0.899	1.082	0.237	0.000	0.109
PBA -> TC	0.138	0.123	0.071	1.954	0.051*	1.510	0.237	0.017	0.109
RG -> TC	-0.034	-0.017	0.101	0.335	0.738	1.476	0.237	0.001	0.109
RTA -> TC	-0.070	-0.046	0.076	0.920	0.358	1.342	0.237	0.005	0.109
STS -> TC	0.050	0.052	0.062	0.798	0.425	1.319	0.237	0.002	0.109
TK -> TC	0.290	0.288	0.061	4.766	0.000***	1.394	0.237	0.079	0.109
TR -> TC	0.008	0.002	0.084	0.098	0.922	1.540	0.237	0.000	0.109

Source: Field survey (2019)

*** p<0.01, ** p<0.05, * p<0.

Tax Compliance Determinants

Table 10 shows the structural model's analysis results. A graphical representation of the structural model is provided in Figure 2 (See Appendix B). Ten potential tax compliance determinants were examined in this study, namely the perception of tax rates, the role of tax authority, probability of being audited, perception of government spending, perception of equity and fairness, simplicity of tax system, reference group, personal financial constraints, tax knowledge and awareness of penalty.

With regards to the perception of tax rate, the result of this study shows a positive and insignificant relationship between perception of tax rate and tax compliance ($\beta = 0.008, p > 0.05$). Thus, hypothesis H₁ is not supported. This finding is in line with Trivedi et al. (2003), Kirchler (2007) and Inasius (2018). However, it contradicts the results by Torgler (2007) who discovered a negative relationship between tax rate and tax compliance and by Deyganto (2018), who found a positive relationship between perception of tax rate and tax compliance. Kirchler et al. (2008) suggested that the degree of trust has an influence on the tax rate. When trust is high, a high level of the tax rate would be seen as taxpayers' contribution to society, which ultimately benefits each taxpayer. On the other hand, the same level of the tax rate would be considered unfair treatment to taxpayers when trust is low.

Furthermore, the probability of being audited also had a significant positive relationship with tax compliance ($\beta = 0.138, p < 0.10$) and this significant relationship is at a 10% significance level. Hence, hypothesis H₂ is supported. This further validates the findings by Alm (1991), Kuug (2016) and Deyganto (2018) who found that the probability of being audited have a

positive impact on tax compliance. As a high probability of audit would enhance tax compliance, tax authorities can use information gathered from this study when formulating future tax policies with respect to audit sample sizes. However, Adimassu and Jerene (2015) found contradicting results which is a high probability of being audited would decrease compliance. Tilahun and Yidersal (2014) and Inasius (2015) found that the probability of being audited has no significant impact on the compliance behavior of taxpayers.

Similarly, the results of this study also show a positive and significant relationship between perception of government spending and tax compliance. The coefficient of the path between the perception of government spending and tax compliance is significant at 1% significance level ($\beta = 0.206, p < 0.01$). Thus, hypothesis H₃ is supported. This result is also consistent with the findings of Palil (2010), Engida and Baisa (2014) and Tilahun and Yidersal (2014). This result suggested that, if the government spends the national revenue wisely, for instance, for basic facilities, like health, education, safety and public transportation, it is assumed that voluntary compliance will increase. Taxpayers, particularly those who pay high amounts of taxes, are concerned with the direction of government spending (Kirchler et al., 2008). Inasius (2018) found that the perception of government spending has no significant impact on the compliance behavior of taxpayers.

With regards to simplicity of the tax system, the results also confirm that the simplicity of the tax system is not a significant factor in taxpayer compliance ($\beta = 0.050, p > 0.05$). Thus, hypothesis H₄ is not supported. This result is supported by Engida and Baisa (2014) and does not conform to the results of Adimassu and Jerene (2015) and Deyganto (2018) who found a

positive relationship between the simplicity of tax system and tax compliance. Silvani and Baer (1997) (as cited in Tilahun, 2018) concluded that by simplifying the tax return, taxpayers will be encouraged to fill the tax return by themselves rather than seek help from a third party thus reducing compliance costs.

The study finds the role of tax authority to be an insignificant factor in tax compliance of SME taxpayers ($\beta = -0.070, p > 0.05$). Hence, hypothesis H₅ is not supported. The overall conclusion is broadly in line with studies by Palil (2010) and Engida and Baisa (2014). This insignificant finding demonstrates that taxpayers are not taking the role of the tax authority into consideration when making a compliance decision. According to Richardson (2008), the role of tax authority has a significant positive impact on determining attitudes toward tax compliance. This is also supported by Tilahun (2018) who found a positive and significant relationship between the role of tax authority and tax compliance.

As shown in Table 10, there is a positive and insignificant relationship between perception of equity and fairness and tax compliance ($\beta = 0.061, p > 0.05$) and thus, hypothesis H₆ is not supported. This result is consistent with the study by Palil (2010), Engida and Baisa (2014) and Tilahun and Yidersal (2014) who have claimed that perception of equity and fairness has no direct significant effect on taxpayer's compliance behavior. On the other hand, the result is in contradiction with the finding of Maseko (2014), who have indicated that the perception of fairness and equity is a significant factor explaining tax compliance behavior. Similarly, Inasius (2018) found a significant relationship between perception of equity and fairness and tax

compliance. Tax evasion is more likely to occur if taxpayers perceive the tax system as unfair (Allingham & Sandmo, 1972).

With regards to the influence of reference group, this study found a negative and insignificant relationship between the influence of reference group and tax compliance ($\beta = -0.034, p > 0.05$). Thus, hypothesis H₇ is not supported. This finding is similar to studies by Engida and Baisa (2014) and Deyganto (2018). However, Adimassu and Jerene (2015) and Inasius (2018) found contradicting result which is a positive and significant relationship between the influence of reference group and tax compliance. Also, Clotfelter (1983) claimed that reference groups play a significant role in evasion. Palil (2010) indicated that respondents with peers who indulge in tax non-compliance are more likely to engage in non-compliance. This means that the more respondents know the tax evaders, the more underreporting of income may happen.

Additionally, the results of this study also show a negative and insignificant relationship between personal financial constraint and tax compliance ($\beta = -0.017, p > 0.05$). Thus, hypothesis H₈ is not supported. This result is in line with Adimassu and Jerene (2015) and Deyganto (2018). However, the result contradicts that of Palil (2010) and Engida and Baisa (2014) who found a negative and significant relationship between personal financial constraint and tax compliance. On the other hand, Vogel (1974) and Warneryd and Walerud (1982) (as cited in Palil, 2010) found that people with no financial constraints also engage in tax evasion and the level of evasion they reported was greater than people in financial difficulties.

With regards to tax knowledge, the result of this study shows a positive and significant relationship between tax knowledge and tax compliance and is significant at 1% significance level ($\beta = 0.290, p < 0.01$). Thus, hypothesis H₉ is supported. This result provides evidence that high tax knowledge would increase voluntary tax compliance. This result is also consistent with the findings of Richardson (2006), Kirchler et al. (2008), Adimassu and Jerene (2015), Oladipopu and Obazee (2016) and Inasius (2018). Similarly, Eriksen and Fallan (1986) discovered that tax attitudes can be improved through better tax knowledge and thus this will in turn increase compliance and reduce the inclination to evade taxes. Hence, higher knowledge regarding taxes leads to higher compliance, while poor knowledge leads to higher noncompliance. Contrary to this finding, some studies have found that tax knowledge has no significant relationship with tax compliance (Engida & Baisa; 2014; Maseko, 2014).

In this study, awareness of penalty is found to have a positive and insignificant relationship with tax compliance ($\beta = 0.009, p > 0.05$). This is an indication that hypothesis H₁₀ is not supported. This finding is similar to the findings of Tilahun and Yidersal (2014), Niway and Wondwossen (2015) and Oladipupo and Obazee (2016) who disclosed that awareness of penalties has no significant relationship with tax compliance. However, Allingham and Sandmo (1972) found that awareness of penalty has a positive impact on tax compliance. This is also supported by Chebusit et al. (2014) and Deyganto (2018) who found a positive and significant relationship between awareness of penalty and tax compliance.

Effect Sizes (f^2) of Determinants of Tax Compliance

The findings of this study suggest that the significant factors affecting tax compliance by small and medium enterprises in the Cape Coast Metropolis include the perceptions of government spending (positive), probability of being audited (positive) and tax knowledge (positive). Tax knowledge was found to be the main explanatory factor in determining tax compliance behaviour with a path coefficient of 0.290, followed by the perception of government spending and the probability of being audited with a path coefficient of 0.206 and 0.138 respectively.

According to Hair et al. (2017), effect size (f^2) enables you to analyze the relevance of exogenous constructs in explaining selected endogenous constructs. Results of 0.02, 0.15, and 0.35 are interpreted as a small, medium, and large effect sizes, respectively (Cohen, 1998 as cited in Hair et al., 2017). The effect size measure presented in Table 10 shows that tax knowledge ($f^2 = 0.08$), perception of government spending ($f^2 = 0.05$) and probability of being audited ($f^2 = 0.02$) have small effect on tax compliance. According to Adam (2015), there could still be practical significance even for small effect sizes, particularly in situations where cost and ease make it easy to be applied on a large scale.

Tax Compliance Determinants with Control Variables

Table 11 shows the summary of finding with control variables. A graphical representation of the supplementary structural model is provided in Figure 3 (See Appendix B). Although not hypothesized, the study controlled for the effect of age, gender and educational level of owners or managers of small and medium enterprise on their tax compliance behaviour. Results show

that R^2 increased from 0.237 to 0.249, Q^2 increased from 0.109 to 0.114 and values of VIF were also less than 5. The results indicate that tax knowledge, perception of government spending and the probability of being audited and age are the determinants of tax compliance incorporated with control variables.

The results as presented in Table 11 further suggest that tax knowledge ($\beta = 0.283, p < 0.01$) remains the most important determinant of tax compliance followed by perception of government spending ($\beta = 0.216, p < 0.01$) and probability of being audited ($\beta = 0.146, p < 0.05$). Age of taxpayers is found to have a negative and significant relationship with tax compliance ($\beta = -0.116, p < 0.05$). Other control variables like gender ($\beta = -0.006, p > 0.05$) and educational level ($\beta = 0.004, p > 0.05$) of tax payers have no significant relationship with tax compliance.

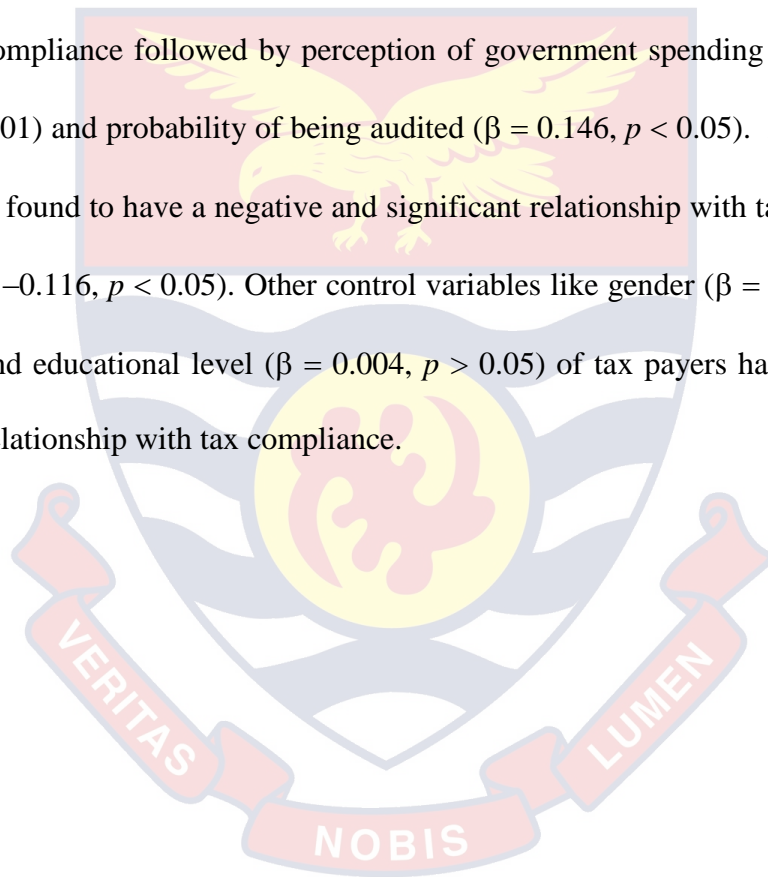


Table 11: Summary of Finding with Control Variables

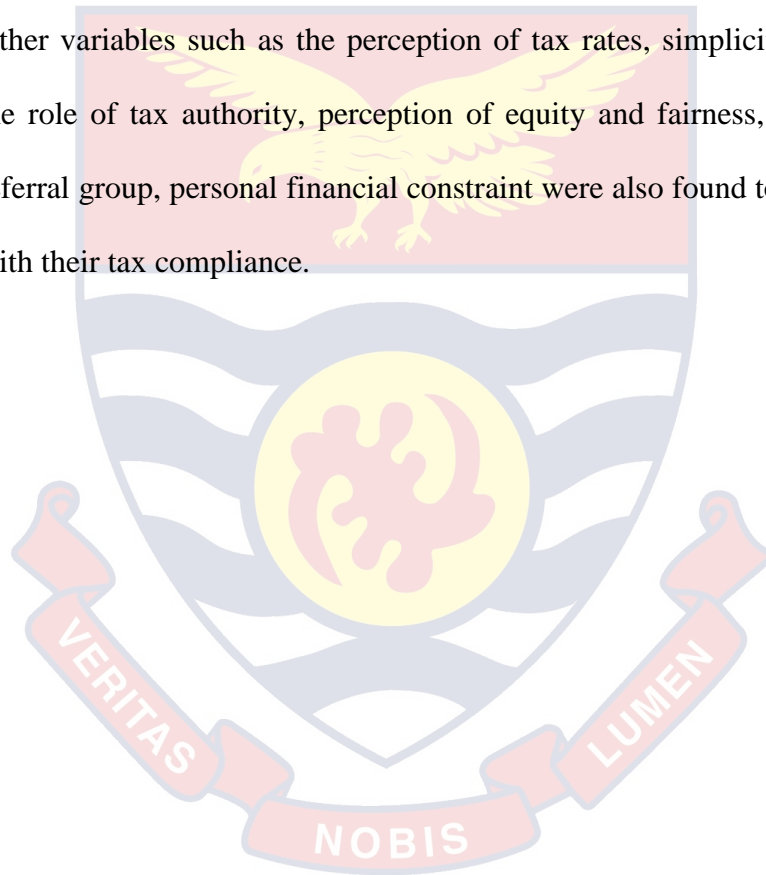
	Original Sample	Sample Mean	Standard Deviation	T-Statistics	P-Values	VIF	R ²	f ²	Q ²
EF -> TC	0.060	0.065	0.061	0.983	0.326	1.320	0.249	0.004	0.114
FC -> TC	-0.019	-0.033	0.071	0.264	0.792	1.512	0.249	0.000	0.114
GS-> TC	0.216	0.205	0.060	3.634	0.000***	1.223	0.249	0.051	0.114
PEN->TC	-0.004	0.024	0.072	0.058	0.953	1.107	0.249	0.000	0.114
PBA-> TC	0.146	0.131	0.072	2.046	0.041**	1.527	0.249	0.019	0.114
RG->T C	-0.051	-0.026	0.101	0.503	0.615	1.502	0.249	0.002	0.114
RTA -> TC	-0.063	-0.043	0.078	0.805	0.421	1.352	0.249	0.004	0.114
STS->TC	0.051	0.056	0.061	0.840	0.401	1.322	0.249	0.003	0.114
TK -> TC	0.283	0.279	0.062	4.535	0.000***	1.445	0.249	0.074	0.114
TR-> TC	0.005	-0.004	0.086	0.058	0.954	1.584	0.249	0.000	0.114
Age -> TC	-0.116	-0.11	0.054	2.160	0.031**	1.090	0.249	0.016	0.114
Education-> TC	0.004	0.006	0.052	0.070	0.945	1.095	0.249	0.000	0.114
Gender -> TC	-0.006	-0.012	0.052	0.110	0.913	1.080	0.249	0.000	0.114

Source: Field survey (2019)

*** p<0.01, ** p<0.05, * p<0.1

Chapter Summary

This chapter has presented, analysed and discussed the descriptive statistics of the data used in this study and subsequently the explanatory analysis of the study variables. Finding from the study reveals that tax knowledge, perception of government spending and the probability of being audited have a significant relationship with tax compliance by owners or managers of small and medium enterprises in the Cape Coast Metropolis. Other variables such as the perception of tax rates, simplicity of tax system, the role of tax authority, perception of equity and fairness, the influence of referral group, personal financial constraint were also found to be insignificant with their tax compliance.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This final chapter begins with a summary of the objectives of the study, its methods and data analyses techniques. The chapter proceeds with a summary of the key findings pertaining to each objective and the conclusions drawn from them. Specific recommendations from the findings and conclusions are made to stakeholders for decision making. The chapter ends with some suggestions for further research.

Summary

The purpose of this study was to examine the factors that influence tax compliance by small and medium enterprises in Cape Coast Metropolis. The study sought to achieve four specific objectives. The first objective determined the effect of economic factors on tax compliance by small and medium enterprises in Cape Coast Metropolis. The second objective examined the influence of institutional factors on tax compliance by small and medium enterprises in Cape Coast Metropolis. The study further determined the influence of social factors on tax compliance by small and medium enterprises in Cape Coast Metropolis. Finally, the study sought to examine the effect of individual factors on tax compliance by small and medium enterprises in Cape Coast Metropolis. To address these study objectives, research hypotheses were formulated in this study.

A sample size of 277 was drawn from a population of 900 based on the formula by Yamane (1967). Twenty percent (20%) was included to accommodate for non-response rate. Stratified random sampling technique

was used to select owners or managers of small and medium enterprises for inclusion in the study. The self-administered questionnaires developed from a thorough review of the existing literature and tested for reliability and validity were distributed to respondents.

The first objective determined the effect of economic factors on tax compliance. It was found that the probability of being audited and the perception of government spending have a positive relationship with tax compliance whereas the perception of tax rates has no significant relationship with tax compliance.

With regards to the second objective, the study examined the influence of institutional factors on tax compliance. It was revealed that the simplicity of tax system and the role of tax authority has no significant relationship with tax compliance.

The third objective determined the influence of social factors on tax compliance. It was found that the perception of equity and fairness and the influence of referral group has no significant relationship with tax compliance.

The fourth objective examined the effect of individual factors on tax compliance. It was revealed that tax knowledge has a positive relationship with tax compliance. Personal financial constraint and awareness of penalty had no significant relationship with tax compliance.

However, the study found that the age of the respondents has a negative and significant relationship with tax compliance. On the other hand, other demographic characteristics such as gender and educational level had no significant relationship with tax compliance by owners or managers of small and medium enterprises in the Cape Coast Metropolis.

Conclusions

With regards to the first objective, the study concludes that economic factors such as the probability of being audited and perception of government spending positively influenced tax compliance by owners or managers of small and medium enterprises in the Cape Coast Metropolis. Specifically, a high probability of being audited will increase tax compliance by SMEs taxpayers in the metropolis. Again, if the government is wisely spending the national revenue, for example, for basic facilities like education, health and safety and public transportation, it is likely that voluntary compliance will increase. However, their perception of the tax rate did not significantly influence their tax compliance.

For the second objective, institutional factors, particularly the simplicity of tax system and role of tax authority had no significant influence on tax compliance by owners or managers of small and medium enterprises in the Cape Coast Metropolis.

With respect to the third objective, social factors, particularly, perception of equity and fairness and influence of referral groups do not significantly influence owners or managers of small and medium enterprises in the metropolis to comply with tax obligations.

With regards to the last objective, individual factors, particularly tax knowledge positively influenced tax compliance by owners or managers of small and medium enterprises in the Cape Coast Metropolis. Tax knowledge was found to be the main explanatory factor in determining tax compliance behaviour. This means that an increase in tax knowledge, through tax education, will lead to an increase in tax compliance by SMEs taxpayers in the

metropolis. On the other hand, personal financial constraint and awareness of penalty did not significantly influence their tax compliance.

The results of the study further revealed that external forces of deterrence are not sufficient to increase taxpayers' compliance behaviour in Cape Coast Metropolis. Owners or managers of small and medium enterprises in the metropolis are also motivated to pay taxes on the basis of perceptions and beliefs such as their perception of government spending. This study contributes to existing literature by employing PLS-SEM to examine factors influencing tax compliance by SMEs in Ghana. The study also provides a clearer picture and a holistic view of tax compliance by small and medium enterprises in the Cape Coast Metropolis.

Recommendations

In light of the key findings and conclusions, the following recommendations are suggested. Firstly, the study provides evidence that tax knowledge positively affects tax compliance. It is therefore recommended that basic tax education should be introduced by Ghana Education Service as an educational curriculum for schools, especially for primary and high school levels. Taxation should be taught with an emphasis on promoting voluntary tax compliance. It would create a citizenry with a better understanding of the importance of taxation. Results on characteristics of the respondents reveal that about half of the owners or managers of the SMEs have basic and secondary school education. This means they may not be availed of tax education until such time when they are in business.

The GRA should also organise seminars and conferences regularly to educate SMEs taxpayers. The GRA can also boost tax knowledge by

circulating updates on tax more frequently to SMEs taxpayers so as to improve voluntary compliance. In designing the best mechanism of delivering the latest information on tax regulations in Cape Coast Metropolis, GRA can consider advertisement in media since the majority of SMEs taxpayers consider TV and Radio as an extremely useful source of obtaining information.

The study finds that the perception of government spending has a positive impact on tax compliance. The way in which tax is imposed, collected and used by the state mirrors the governance of a state. It is therefore recommended that the government ensure judicious use of tax revenue. The government should also be transparent in its expenditure activities so as to gain the trust of the SMEs taxpayers. When trust is high, the same level of the tax rate would be interpreted as a contribution to the community.

Furthermore, the study recommends that staff and management of GRA should ensure fair audit and avoid intrusive audits whereas infrequent and slack tax audits may create doubts regarding the effectiveness of their work. Audits rates and the diligence of the audits will encourage SMEs to be more prudent in completing their tax returns, report all income and claim the correct deductions in order to avoid fines and penalties. This recommendation is based on the findings that a high probability of being audited influence tax compliance positively. The Audit Unit of Ghana Revenue Authority should adequately be resourced in terms of training and short refresher courses to enable it to function effectively.

Besides, the study recommends that SMEs taxpayers should regularly attend workshops and seminars organized by the GRA in order to improve and enhance their knowledge on tax-related issues.

Suggestions for Future Research

Future research should consider including other tax compliance determinant variables that were not included in this study. This study is restricted to Cape Coast Metropolis, thus future studies may consider expanding the scope into other districts, metropolis or regions in Ghana. Again, a study can be carried out using a qualitative approach to determine the factors that influence tax compliance by small and medium enterprises in Ghana.



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APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF HUMANITIES AND LEGAL STUDIES

SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING

QUESTIONNAIRE ON TAX COMPLIANCE BY SMALL AND MEDIUM ENTERPRISES IN THE CAPE COAST METROPOLIS

Dear Respondent,

The questionnaire is designed to solicit information on tax compliance by Small and Medium Enterprises in the Cape Coast Metropolis. This is a study in partial fulfillment of the requirements for the Master of Commerce (Accounting) degree in University of Cape Coast. The information provided by you will be purely for academic purpose and will be treated with utmost confidentiality. Your opinion is of much importance to the study. In order to accomplish this study, you are kindly requested to complete this questionnaire.

Thank you.

SECTION A: DEMOGRAPHIC CHARACTERISTICS

1. Sex:

Male

Female

2. Age of respondents in years

20 – 24

25 – 29

30 – 34

35 – 39

- 40 – 44 []
- 45 – 49 []
- 50 – 54 []
- 55 – 59 []
- 60 and above []

3. Marital status

- Married []
- Consensual Union []
- Separated []
- Divorced []
- Widowed []
- Never married []

4. What is the highest educational qualification attained?

- BECE []
- SSCE/WASSCE []
- Bachelor degree []
- Master degree []
- PhD []
- Other, please specify

5. Which of the following best describes the legal form of your business?

- Sole proprietorship []
- Partnership []
- Limited Liability Company []

6. Over the last two (2) years, what is the average revenue or sales of your business?

Less than GH¢50, 000 []

GH¢ 50, 000 – GH¢ 90, 000 []

GH¢ 90,001 – GH¢ 2,000,000 []

GH¢ 2,000,001 – GH¢ 5,000,000 []

Above GH¢ 5, 000, 000 []

7. Which sector of the economy does your business belong?

Manufacturing []

Transport []

Trade []

Service []

Building and construction []

Hospitality []

Other, please specify

8. For how long has this business been in existence?

1 – 5 years []

6 – 10 years []

11 – 15 years []

16 years and above []

9. How many staff are employed in your company?

1 – 10 []

11– 20 []

21 – 50 []

51 – 100 []

More than 100

[]

SECTION B: SOURCES OF TAX INFORMATION

10. To what extent do you find the following sources useful in obtaining information on tax? (5 means “Extremely Useful”, 4 is “Useful”, 3 is “Fairly Useful”, 2 is “A Bit Useful” and 1 is “Not Useful”)

	Source of Information	1	2	3	4	5
a.	GRA brochures/newsletters/ booklets					
b.	GRA website					
c.	GRA seminars					
d.	GRA billboards					
e.	Bulletin boards at GRA offices					
f.	Newspapers					
g.	Radio					
h.	TV					
i.	Email					
j.	Telephone					
k.	SMS (Text message)					
l.	Family and Friends					

SECTION C: TAX COMPLIANCE FACTORS

11. Please indicate the extent to which you disagree or agree with each of the following statement on a scale of 1 to 5 with **1 indicating strongly disagree** and **5 being strongly agree**.

I wish **TO COMPLY** with tax laws for the following reasons:

No.	Statement	1	2	3	4	5
A	Role of Tax Authority					
RTA1	GRA officials are efficient in dealing with taxpayer correspondence(e.g. makes refunds in short time)					
RTA2	GRA officials give sufficient awareness creation training (tax education) to taxpayers.					
RTA3	The treatment of the tax office is equally and independent for all taxpayers.					
B	Probability of being Audited					
PBA1	There is a high degree of being detected for non-payment of tax.					
PBA2	I pay my taxes because I will be audited by GRA.					
PBA3	GRA has the capability to investigated all income reported.					
C	Government spending					
GS1	There are a number of infrastructure, facilities and services being provided by the government.					
GS2	The government spends a reasonable amount on welfare.					
GS3	The government does not waste too much money.					
D	Equity and Fairness					
EF1	My business pays about the same amount of tax as other similar business					

EF2	Higher income earners should pay more taxes than lower income earners.					
EF3	Higher income earners should pay more taxes than middle-income earners.					
E	Simplicity of Tax system					
STS1	Tax laws are easy and simple to understand.					
STS2	Filing of tax return is easy and simple to complete.					
STS3	I find it easy to maintain all my relevant records for the whole year for tax purposes.					
F	Penalty					
PEN1	Serious enforcement by the GRA may result if I do not comply with tax laws					
PEN2	The penalty rates are very high if I do not comply.					
PEN3	The penalty due to not paying tax is higher than my tax saving.					
G	Tax Knowledge					
TK1	The income tax system is a legitimate way for the government to collect revenue to manage the economy.					
TK2	I understand the income tax laws and regulations in Ghana.					
TK3	I am certain about the period and where to pay my tax liability.					
TK4	I can easily get the necessary tax information and updates.					

I wish **NOT TO COMPLY** with tax laws for the following reasons:

No.	Statement	1	2	3	4	5
H	Tax rate					
TR1	If the income tax rates remain high.					
TR2	Tax rates matter to comply with the tax law.					
I	Reference group					
RG1	My friends do not comply and they have never been penalized.					
RG2	My relatives do not comply and they have never been penalized.					
RG3	My neighbours do not comply and they have never been penalized.					
G	Personal Financial Constraint					
PFC1	Paying off debts and basic needs is more important to me than paying of income tax.					
PFC2	The price of basic needs keeps on increasing.					
PFC3	My expenditure always exceeds my income.					

SECTION D: TAX COMPLIANCE

12. Please indicate your level of agreement for each given statements using the following scales 1 to 5 with **1 indicating the lowest level and 5 being the highest level of agreement.**

To what extent do you agree with your compliance?

	Statement	1	2	3	4	5
TC1	I have registered voluntarily the tax identification number to the tax office.					
TC2	I feel good while obeying for tax law and procedure to declaring and paying honestly.					
TC3	I submit tax return on time.					
TC4	I report accurately on all income earned and related expenses incurred.					
TC5	I pay my tax liability on time.					

SECTION E: TAX OBLIGATIONS

13.a. Have you ever filed business’s tax return with the Ghana Revenue Authority?

Yes

No

13.b. If yes, when was the last time you filed?

2018

2017

14. Who prepares the business's tax return?

Owner/ Manager []

Part-time Accounting Officer []

Full-time Accounting Officer []

Others (Specify)

15. How often do you pay your taxes?

Monthly []

Quarterly []

Semi Annually []

Annually []

16. How do you estimate the tax liability to be paid in a year?

Provisional Assessment []

Self – Assessment []

17. In your opinion, write down three factors that would promote voluntary tax compliance.

a.

b.

c.

END OF QUESTIONNAIRE

APPENDIX B

GRAPHICAL REPRESENTATION OF MODELS

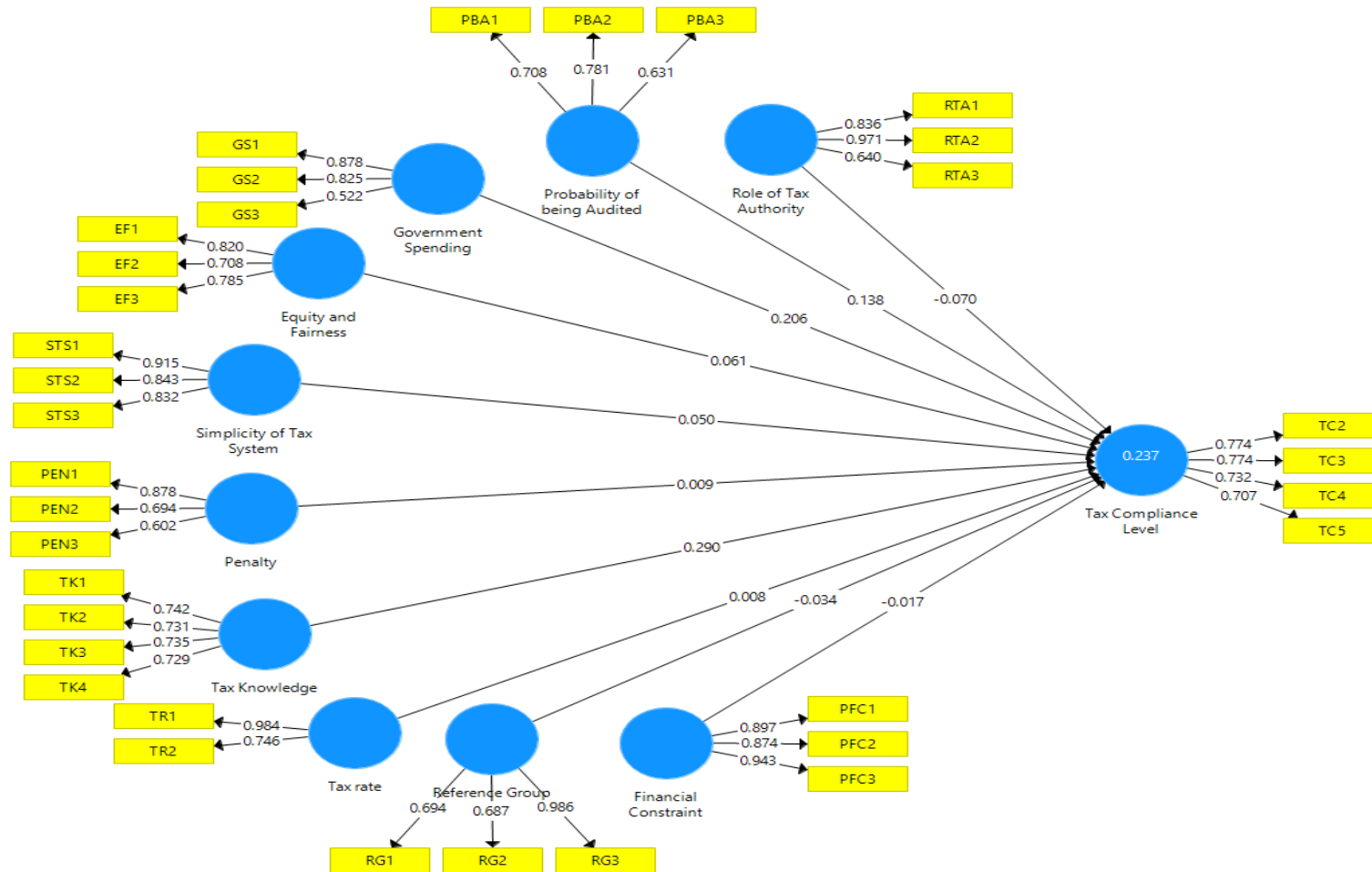


Figure2: Partial Least Square Structural Equation Model

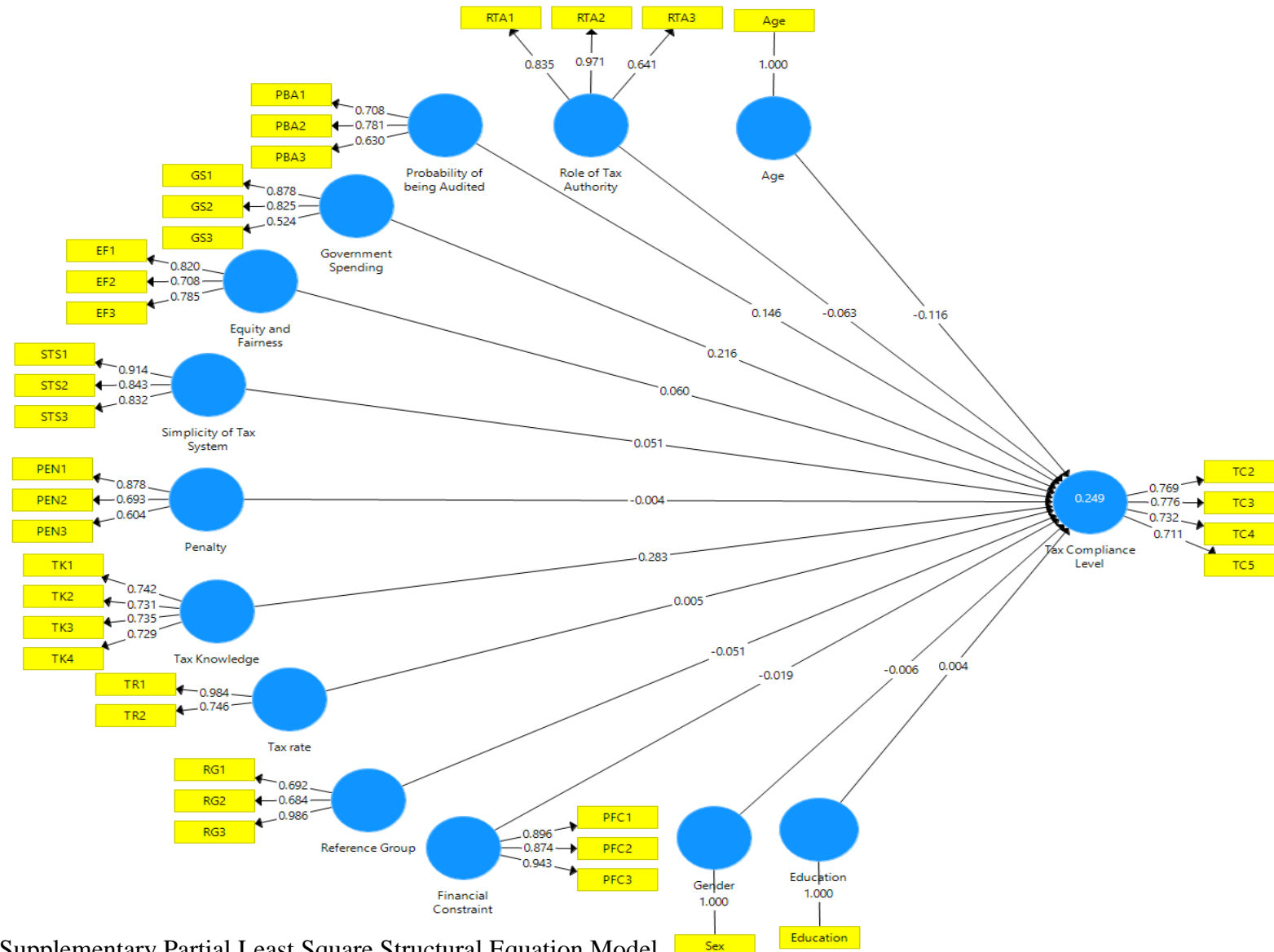


Figure 3: Supplementary Partial Least Square Structural Equation Model

APPENDIX C

HETEROTRAIT MONOTRAIT (HTMT) VALUES

Table 12: HTMT - Confidence Intervals Bias Corrected

	Original Sample	Sample Mean	Bias	2.5%	97.5%
PFC -> EF	0.104	0.138	0.034	0.045	0.161
GS -> EF	0.483	0.490	0.007	0.284	0.661
GS -> PFC	0.109	0.143	0.034	0.035	0.162
PEN -> EF	0.264	0.300	0.036	0.123	0.400
PEN-> FC	0.132	0.160	0.028	0.056	0.232
PEN-> GS	0.133	0.196	0.063	0.051	0.162
PBA-> EF	0.361	0.391	0.030	0.188	0.532
PBA -> PFC	0.303	0.313	0.010	0.150	0.470
PBA-> GS	0.254	0.295	0.041	0.107	0.393
PBA -> PEN	0.427	0.442	0.015	0.198	0.684
RG-> EF	0.142	0.176	0.034	0.055	0.220
RG -> PFC	0.515	0.514	-0.001	0.373	0.641
RG -> GS	0.140	0.178	0.037	0.063	0.201
RG -> PEN	0.197	0.210	0.013	0.077	0.367
RG -> PBA	0.215	0.250	0.035	0.087	0.319
RTA -> EF	0.153	0.181	0.028	0.062	0.251
RTA -> PFC	0.115	0.130	0.015	0.038	0.264
RTA -> GS	0.134	0.173	0.039	0.055	0.224
RTA -> PEN	0.171	0.193	0.022	0.084	0.292
RTA -> PBA	0.689	0.694	0.004	0.499	0.865
RTA-> RG	0.089	0.123	0.035	0.025	0.129
STS-> EF	0.320	0.324	0.004	0.158	0.483
STS-> PFC	0.139	0.147	0.008	0.051	0.279
STS -> GS	0.351	0.354	0.003	0.175	0.528
STS -> PEN	0.097	0.131	0.035	0.038	0.145
STS -> PBA	0.400	0.407	0.007	0.215	0.561
STS-> RG	0.319	0.321	0.001	0.165	0.461
STS -> RTA	0.315	0.315	0.001	0.171	0.463
TC -> EF	0.336	0.344	0.009	0.188	0.502
TC -> PFC	0.133	0.155	0.023	0.063	0.252
TC -> GS	0.403	0.411	0.007	0.247	0.553
TC -> PEN	0.137	0.201	0.064	0.070	0.163
TC -> PBA	0.476	0.478	0.002	0.308	0.653
TC -> RG	0.091	0.141	0.050	0.035	0.113
TC -> RTA	0.116	0.170	0.054	0.050	0.149
TC-> STS	0.294	0.296	0.002	0.148	0.460
TK-> EF	0.416	0.424	0.008	0.247	0.574
TK -> PFC	0.220	0.228	0.007	0.098	0.366

Table 12, Continued

TK -> GS	0.201	0.233	0.032	0.089	0.336
TK -> PEN	0.156	0.195	0.040	0.071	0.243
TK -> PBA	0.710	0.718	0.007	0.551	0.871
TK -> RG	0.141	0.182	0.041	0.057	0.195
TK -> RTA	0.433	0.437	0.004	0.270	0.584
TK -> STS	0.411	0.415	0.004	0.258	0.536
TK -> TC	0.536	0.536	0.000	0.396	0.653
TR-> EF	0.087	0.132	0.045	0.020	0.127
TR-> FC	0.717	0.716	-0.001	0.601	0.816
TR-> GS	0.142	0.182	0.040	0.050	0.212
TR> PEN	0.173	0.186	0.013	0.063	0.319
TR-> PBA	0.258	0.286	0.029	0.114	0.403
TR -> RG	0.717	0.718	0.001	0.580	0.824
TR> RTA	0.117	0.137	0.020	0.040	0.256
TR-> STS	0.218	0.222	0.003	0.069	0.387
TR> TC	0.113	0.157	0.043	0.031	0.176
TR -> TK	0.200	0.223	0.023	0.093	0.324

Source: Field Survey (2019)

