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**INCOME TAX COMPLIANCE BEHAVIOUR OF LARGE AND  
MEDIUM SIZED BUSINESS TAXPAYERS IN KENYA**

**Farida Abdul**

**Doctor of Philosophy**

**2019**

**INCOME TAX COMPLIANCE BEHAVIOUR OF LARGE AND  
MEDIUM SIZED BUSINESS TAXPAYERS IN KENYA**

**Farida Abdul**

**Submitted in total fulfilment of the requirement for the degree of  
Doctor of Philosophy in Accounting at Strathmore University**

**Strathmore University Business School  
Nairobi, Kenya**

**June, 2019**

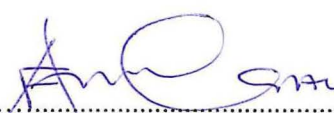
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Date ..... 15-02-2019

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## **ABSTRACT**

The main objective of this study was to establish the drivers explaining tax compliance behaviour among medium and large business taxpayers in Kenya. In so doing the researcher tested the validity and adequacy of the Theory of Planned Behaviour (TPB) and Procedural Justice Theory (PJT) in explaining tax compliance behaviour. A Structural Equation Model was built using survey data on 142 respondents and covering 19 key sectors of the economy. The study specifically sought to examine the influence of measures of perceived behavioural control, subjective norms, procedural justice measures, tax system attributes (fairness, complexity, compliance costs as well as international compatibility) on tax compliance behaviour, while controlling for hypothesized influence of firm size, age, sector and legal structure. The results indicate that tax compliance behaviour in Kenya significantly increases with increased perceived behavioural control, but declines significantly with increase in tax compliance costs. In addition, the only firm characteristic that significantly increases with tax compliance is firm size. The model constructs account for about 39 percent of variations in tax compliance behaviour in Kenya, which is above the empirically accepted minimum for exploratory studies. From the results, the study recommends a focus by the tax authority and policymakers on measures to reduce tax compliance costs. The authority should concentrate on those costs that relate to understanding the existing complex tax laws, changes in tax rules, as well as general costs of meeting compliance and regulatory requirements. In addition, greater emphasis should be put on investing in opportunities that reduce financial pressure on firms and on reducing incidences of firms that operate outside the tax system. Further, the authority should reduce incidences of financial distress on firms through prudent macroeconomic management and general surveillance to ensure that firms face minimal opportunities that would encourage them to under report income- such as incomes not reported by third parties. The significance of the perceived behavioural control measure indicates the relevance and applicability of the theory of planned behaviour to tax compliance behaviour in Kenya.

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## LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CB-SEM	Covariance-Based SEM
CET	Common External Tariff
DJT	Distributive Justice Theory
EDM	Economic Deterrence Model
GDP	Gross Domestic Product
GoF	Goodness of fit
IBFD	International Bureau of Fiscal Documentation
ICAEW	Institute of Chartered Accountants in England and Wales
IRS	Internal Revenue Service
ITA	Income Tax Act
KRA	Kenya Revenue Authority
LMBTs	Large and Medium sized Business Tax payers
MDG	Millennium Development Goals
OECD	Organization for Economic Cooperation and Development
PBC	Perceptions of Behavioural Control
PJT	Procedural Justice Theory
PLS-SEM	Partial Least Squares SEM
SEM	Structural Equation Model
SQ	Specific Question
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
VAT	Value Added Tax

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Despite the views of various experts in the different industries, I take full responsibility for the views expressed in this thesis together with any errors that may be found in it.

# CHAPTER 1

## INTRODUCTION TO THE STUDY

### 1.1 Introduction

Taxation is fundamental to sustainable development as it supports the basic functions of effective states and sets the context for economic growth (Organization for Economic Development, 2010). Tax revenues can be relied upon for development as they are more certain than aid and have no conditions attached to them (International Development Committee, 2012). Taxation can also improve responsiveness and accountability by providing incentives for citizens and the government to enter into a “tax bargain” or “fiscal contract”: through this process, citizens accept and comply with taxes in exchange for government providing effective services, the rule of law and accountability (OECD, 2010). Therefore, unless citizens pay taxes, there is inadequate motivation for them to hold the government accountable.

Although taxes are central to the development agenda of Kenya, noncompliance remains a threat to the achievement of the country’s tax revenue targets (KRA, 2014). The problem of noncompliance is a concern internationally and poses a challenging problem for policy makers, tax authorities and ultimately for society (McKerchar, 2001). KRA (2014) estimates noncompliance at around 50% of collectible taxes. To reduce noncompliance, deterrence has been the most widely utilized policy instrument of choice used by most tax authorities (Schneider, 2011). However a number of studies have acknowledged that enforcement is costly, and that most tax authorities have limited resources to address the scale of noncompliance in their respective tax jurisdictions (Frey, 2003; McKerchar, 2001).

There is an increasing need for tax researchers to focus on behavioural determinants of tax compliance, rather than rely on the traditional models (Economic Deterrence Models), in order to better understand and address noncompliance in the current tax environment. The Kenya Revenue Authority (KRA) faces a challenging position in its effort to reduce noncompliance. Kenya has a small tax base with the large tax payers contributing 75% of the domestic revenues collected (KRA, 2015). KRA defines large tax payers as tax payers with a turnover of shs.750 million and above per annum whereas medium tax payers are described as those with a turnover of between shs.300million and shs.750million per annum. Business taxpayers are attractive to the revenue authority because they are easily accessible and usually have proper accounting systems. The revenue authority has to achieve a balance in aggressively collecting taxes from

these large tax payers and facing a situation where these companies feel unfairly treated and may even decide to close their businesses.

Several studies (Bird, 2004; Fjelstad & Rakner, 2003; Keen & Simone, 2004a) observe that in most developing countries, tax systems are still too complex. In some countries, tax laws are unclear and consulting manuals non-existent, leaving too much discretionary power to tax enforcers. Tax officials may, for instance, have discretion over important decisions, such as those related to the provision of tax exemptions, determination of tax liabilities, selection of audits, and litigation. In such a situation, noncompliance becomes very difficult to deal with because some of the reasons for noncompliance are brought about by weaknesses in the tax system and not purely by tax payer behaviour.

### **1.1.1 Meaning of Tax Compliance**

Although there is extensive literature on the drivers of tax compliance, there is no agreement among tax researchers on a universal definition of tax compliance. A number of studies clearly describe the concept of tax compliance and how it is applied but a surprisingly large number of studies fail to do so, as pointed out in Richardson & Sawyer (2001). Some studies (Gilligan & Richardson, 2005; Ho, Daniel & Wong, 2008; Kastlunger, Dressler, Kirchler, Mittone, L., & Voracek, M, 2010; Kirchler, Hoetzl & Wahl, 2008; Wenzel, 2004) use various theories from psychology or econometric domains to explore the concept of tax compliance and what should be taken into consideration, but they do not define explicitly the concept of tax compliance.

The most commonly adopted definition in tax literature is that of Roth, Scholz and Witte (1989), who assume that tax compliance takes place when “...*taxpayers file all the required tax returns at the proper time and the returns accurately report tax liability in accordance with the rules, regulations and court decisions applicable at the time at which the returns are filed.*” This definition is similar to the one adopted by Inland Revenue Service (IRS) in the United States of America. This definition is quite comprehensive as it takes into account the four basic tax compliance obligations as defined by OECD (2008). These obligations include (i) registering for tax purposes; (ii) submitting a tax return when legally obliged to do so; (iii) disclosing all taxable income and making a proper claim for deductions on the tax return; and (iv) settling the assessed tax by due dates.

Preliminary interviews in 2015 with two tax partners of two large audit firms in Kenya indicate that over compliance is a growing problem among business tax payers in Kenya yet it has received very little attention in the literature. A few studies (Burton, 2007; Erard, 1997; James & Alley, 2002; Sung, 2009) have implicitly acknowledged that there are circumstances where taxpayers may have over-paid their tax liabilities indicating the existence of over-compliance. Nevertheless, this sub-category of non-compliance has commonly been over-looked by researchers and tax authorities, possibly because of its riskless nature to the government. Unlike other forms of non-compliance, where it is the government that suffers from uncollected tax revenues, over-compliance means that it is taxpayers that suffer, either because of a lack of tax knowledge, or the belief that the tax refund process is too daunting (Forbes, 2009).

This study adopted the definition of tax compliance by Roth, Scholz and Witte (1989) which considers the timely filing of returns, accurate determination and timely payment of tax liability. The study also included over compliance as an aspect of non-compliance.

## **1.2 Motivation of this research**

### **1.2.1 Determinants of tax compliance behaviour**

Over three decades of extensive research into tax compliance behaviour have incorporated varied disciplines, but without a consensus on the general factors affecting compliance behaviour (McKerchar & Evans, 2009). The tax compliance literature has over the years indicated that many factors, including economic, socio-psychological and demographic, usually come into play in determining individual compliance decisions (Devos, 2012). As far back as 1978, the Internal Revenue Service in the United States of America, listed as many as 64 factors that are believed to affect taxpayers reporting decisions (Alm, 1999) and they have continued to increase. Obviously, there are few, if any, models that can accommodate as many factors along with their respective drivers at the same time. As such, the common practice is to concentrate on the factors that appear to have the most impact on compliance levels and that are considered important to the specific context or situation at hand (Devos, 2012).

It is important to note that empirical literature on tax compliance has been concerned mainly with individual taxpayers. Rice (1992) notes that a possible explanation for the lack of research on corporate tax payers could be the difficulty in capturing analytically the non-compliance decisions of this group of taxpayers. In Kenya data on actual tax returns for tax payers is not available to the public, making research in this area quite difficult. However, tax compliance

studies on individual taxpayers have provided a formal framework to analyse the compliance decisions of corporate taxpayers (Kamdar, 1997).

Models that explain tax compliance behaviour can be divided into two groups: economic and non-economic models. The economic models identify several factors that affect tax compliance behaviour, including opportunity to evade, deterrence, and detection rates (Alm & McKee, 2006; Joulfaian & Rider, 1998; Porcano, 1988; Slemrod, 2007). The implication of these models is that when there are low audit probabilities and low penalties, the tendency for evasion will be higher, while if there is a high tendency for detection and penalties are severe, fewer people will evade taxes. However, the economic models have been criticized for predicting general substantial noncompliance beyond what is obtainable in reality (Slemrod, 2007). Rethi (2012) observed that despite the existence and use of audits and penalties, tax evasion has remained, and continuously poses significant threats to countries' economies, through loss of potential and budgeted revenue for governments. This reality has led a number of authors to observe that the actual question regarding tax compliance should be why people pay taxes, and not why people evade them (Alm, 1999). Apart from the limitations noted above, the deterrence models have also faced criticism for failing to consider behavioural factors such as attitudes, perceptions, and moral judgments (Lewis, 1982). In addition, economic models have neglected the presence of codes of conduct, such as moral and ethical constraints that have the potential to prevent people from cheating in their taxes (Sour, 2004) and for neglecting the fact that tax compliance takes place in a social context (Rethi, 2012).

Several non-economic factors have been identified as having an effect on tax compliance. Fairness, complexity, subjective norms and attitudes have been identified as important determinants of tax compliance behaviour (Ajzen, 1991; Beck & Ajzen, 1991; Orviska & Hudson, 2002; Porcano, 1988). Literature also provided evidence on the relationship between specific tax knowledge and tax compliance behaviour; respondents with high fiscal knowledge had a more positive tax ethic score than those with less fiscal knowledge (Song & Yarbrough, 1978). Other authors also lend support to the argument that public governance quality has an influence on taxpayer compliance behaviour (Akpo, 2009; Alm & Gomez, 2008; Mann & Smith, 1988; Torgler, 2003). Studies reveal a statistically significant link between attitudes and self-reported behaviour (Chan, Troutman & O'Bryan, 2000; Trivedi, Shehata & Lynn, 2003). For example, favourable attitude towards compliance will develop trust in the revenue authorities which encourage compliance (Kirchler, Hoelzl & Wahl, 2008). The behavioural

perspective also incorporates sociological factors, such as age, gender, ethnicity, education and religion, as factors that may affect taxpayer compliance behaviour (Fischer, Wartick & Mark, 1992).

There is still very little literature on tax compliance behaviour in Africa. It has been observed by certain researchers e.g. (Bird & Zolt, 2008) that the reason for the lack of studies in this area could be due to the differences between tax systems in developed and less developed countries. Some of the factors identified in prior tax compliance studies are relevant for African and emerging economies but there is a need to identify specific variables using data in African countries to help tax authorities to tailor make policies to suit their own countries. Due to the limited research on corporate tax compliance behaviour world-wide, the aim of this research is to use a model to identify the factors that affect compliance behaviour of large and medium tax payers in Kenya. The variables identified can then be tested in other countries which will contribute towards developing a universal model.

### **1.2.2 Effect of demographic factors on tax compliance behaviour**

Very few studies have examined the influence of demographic variables on business tax compliance behaviour. Most of the studies (Saad, 2010; Smart, 2012) have been on individual tax payers and have identified variables such as age, education level, culture etc., as affecting tax compliance behaviour. However most of these variables do not apply to business tax payers. The findings from the few studies on business tax payers have had mixed results. Certain studies such as (Hanlon, Mills & Slemrod, 2005; Sapiei, Kasipillai & Eze, 2014) found certain demographic factors such as business size and business age to be significant in determining compliance behaviour while others such as Jabbar and Pope (2008) and Rice (1992), found factors such as business age and the industry in which the business operates to be inconclusive. This could be due to differences in the economic/regulatory environment in which the businesses operate (Torgler, 2003), estimation and methodology used (Sapiei et al., 2014) and other unidentified factors.

Despite the inconsistency of these findings, researchers still continue to include demographic variables in their tax compliance models in the quest of identifying the moderating effect of these variables on compliance behaviour under different tax regimes. The present research seeks to add to literature by identifying the demographic factors that affect Kenyan business tax payers and by developing a model that can explain the compliance behaviour of business

taxpayers. Such a model will enable tax authorities to develop tax policies that enhance compliance and thereby improve revenue collection in the country.

### **1.2.3 Theories explaining tax compliance**

The traditional models of tax compliance support the view that tax noncompliance can be reduced and managed by either increasing the penalties imposed for any shortfalls, or by increasing the probability of detection through regular audits. However, over the years, the Economic Deterrence Models have received increasing criticism from researchers, whose main contention is that the models predict too much tax evasion and too little compliance behaviour, and therefore do not entirely explain tax compliance behaviour (Alm, McClelland & Schulze, 1992; Kirchler, 2007; Slemrod, 2007). As a result, other hybrid models were introduced which include a range of economic as well as social variables. Very few studies have been conducted on the Kenyan tax payer and thus a model that combines non-economic and economic variables could explain tax compliance behaviour better. A large number of studies elsewhere have demonstrated the power of the Theory of Planned Behaviour (TPB) in predicting a wide range of behaviours (Armitage & Conner, 2001). Although the TPB has not been well validated in tax compliance research, there is no reason to assume that the same success of application in other behavioural domains will not apply to the tax domain, as demonstrated by the few studies that have applied the TPB successfully to tax compliance behaviour, for example, Efebera, Hayes, Hunton and O'Neil (2004), Trivedi, Shehata and Mestelman, (2005) and Saad, (2011).

Tax compliance research based on Procedural Justice Theory (PJT) is limited in extent (Franzoni, 2000). The few tax studies based on PJT have identified procedural justice as an important factor in the tax authority's relationship with taxpayers. Tyler (2010), observes that fair procedures and processes will secure legitimacy for the tax authority, which will lead to taxpayers being willing to accept the tax authority's rules and decisions. These findings have been supported by several researchers who agree that procedural fairness is an important element in influencing an individual's attitude towards tax compliance and also plays an important role in an individual's tax compliance behaviour (Murphy, 2003a; Kirchler, Niemirowski & Wearing, 2006; Smart, 2012). However several researchers have found PJT to be insignificant in explaining tax compliance behaviour. Porcano's (1988) research did not find any significant relationship between procedural justice and intentions to comply. Van Dijke and Verboon (2010) examined the effect of procedural fairness of the tax office on voluntary tax compliance. The results of their study did not reveal any direct relationship

between procedural fairness of the tax office and tax compliance behaviour. However, they found that procedural fairness improves tax compliance by strengthening the tax authority's legitimacy. These inconsistencies may be due to the experience and maturity of the different tax authorities. Tax authorities in the western countries are relatively more mature than in Asia and Africa and thus it is expected that the PJT will manifest itself more through the behaviour of authorities in such countries. The views of the Kenyan business taxpayers would help in understanding the drivers of feelings of injustice/justice and how they affect compliance.

### **1.3 Effects of Tax Non Compliance on the Kenyan economy**

The level of tax compliance influences the amount of tax collected by the government from society and further determines the quantity and quality of public goods provided by the government to society (Wenzel, 2003). Taxes are central to the development agenda of Kenya to enable the planned economic growth envisaged in the Vision 2030 medium term plan (GOK, 2007). According to the Vision 2030 plan, the Kenya Revenue Authority (KRA), the body mandated with the responsibility of tax collection in Kenya, would sustain the revenue-to-GDP ratio at around 22 percent throughout the medium-term (GoK, 2007). Although the revenue to GDP ratio of 22 percent is higher than the other countries in the African region outside South Africa (Uganda 16.38%, Ghana 19.56 % and South Africa 29 %) it is still lower than that of OECD countries which was, on average, 34.1% in the same period (OECD, 2012). Non-compliance is a threat to the attainment of the revenue targets set in Vision 2030. Kenya is also experiencing a huge increase in government expenditure caused by the expenses of devolution as well as expenditure on infrastructural projects envisioned in the Vision 2030 plan. Thus increasing compliance levels is a priority for KRA, and any studies which aid in policy formulation to achieve this end will assist the government.

Kenya has a small tax base with business tax payers paying more than 50% of the domestic income taxes collected (KRA, 2012). To widen the tax base, KRA has to understand the factors that drive noncompliance so as to address the issue more effectively using empirical data. Tax compliance is a key issue for the fiscal policy of this country as taxes are the single most important source of revenue. Maximizing revenue from this source is critical. Understanding tax compliance behaviour would help KRA to reduce noncompliance by addressing those factors that drive businesses into noncompliance.

## **1.4 Statement of the Problem**

Tax compliance has always been an important issue to the government, the tax authority and taxpayers in general. This is due to the fact that the level of tax compliance influences the amount of tax collected by the government from society and further determines the quantity and quality of public goods provided by the government to society (Wenzel, 2003).

A higher-level of tax compliance is more sought after in developing countries, as the need for efficient government and for publicly provided goods and services is greater in these countries compared to developed countries. Nonetheless, the level of tax compliance in developing countries is generally lower than that of developed countries (Blackwell, 2000).

Due to the low compliance levels in Kenya, estimated at 50% of potential collectible tax (KRA, 2015), studies to help improve compliance are necessary. Previous studies on tax compliance (Bobek, Robin & John, 2007; Saad, 2009; Palil, 2010; Smart, 2012) have focused more on the individual rather than the business taxpayer. Rice (1992) suggested that the difficulty in capturing analytically the non-compliance decisions of corporate taxpayers was a possible explanation for the lack of research. However several tax researchers (Joulfaian, 2000; Rice, 1992; Slemrod, 2007) have acknowledged that prior tax compliance studies on individuals provide a formal framework for the analysis of corporate tax compliance decisions. Chan et.al., (2000) cautions that as corporate non-compliance requires multiple parties to behave strategically, evidence on individual tax noncompliance behaviour cannot be directly extrapolated to corporate tax behaviour. More appropriately, non-human factors applicable to the corporate taxpayer, such as business profile, industry and economic elements, which have not been examined in individual tax studies should be considered (OECD, 2004).

The problem of non-compliance on the part of large and medium sized business tax payers in Kenya is addressed by this thesis. 50% of the total income tax in Kenya is collected from this group of tax payers. Due to the importance of large and medium sized business tax payers for purposes of revenue collection, this study investigates their compliance behaviour and the non-human factors that affect them.

This research will thus utilize the Theory of Planned Behaviour in conjunction with other variables identified in literature to investigate the determinants of compliance behaviour among large and medium sized tax payers in Kenya. The findings of the study will help KRA to design tax policies that can enhance compliance among this group of tax payers.

## **1.5 Research Objective and Research Questions**

The main objective of this research is to establish the determinants of income tax compliance behaviour of Large and Medium sized Business Tax payers (LMBTs) in Kenya. This study will also explain the effect of the identified variables on income tax compliance behaviour. In order to fulfil the main research objective, the study explores relevant approaches and theories to develop a compliance model for income tax compliance by large and medium sized tax payers in Kenya. Drawing upon tax compliance and other inter-disciplinary literature, the Theory of Planned Behaviour (TPB) has been identified as the most robust theory to understand compliance among business tax payers in Kenya. Based on the TPB, three variables were examined: the influence of attitudes; the influence of referent groups (subjective norms); and perceptions of behavioural control (PBC). Further, the TPB based research model was extended with the inclusion of a further four variables: fairness; complexity; compliance costs and international compatibility. The main research objective stated is addressed by the following specific questions (SQs):

- SQ1:** How do perceptions of the tax system i.e. (fairness, complexity, compliance costs and international compatibility) influence intentions and tax compliance behaviour of large and medium sized business tax payers in Kenya?
- SQ2:** What are the effects of firm characteristics (size, sector, legal structure and age) on income tax compliance behaviour among large and medium sized business tax payers' in Kenya?
- SQ3:** To what extent can the TPB be used to predict income tax compliance behaviour among large and medium sized business tax payers in Kenya?
- SQ4:** What is the applicability of the procedural justice and distributive justice theories in explaining tax compliance behaviour among large and medium sized business tax payers in Kenya?

## 1.6 Significance of the Study

One of the key resolutions of the United Nations Summit on the Millennium Development Goals United Nations (2010) was a call by rich countries, not just to increase their share of overseas development to Africa, but also to reinforce their support in matters of economic governance, notably in the essential matter of taxation, so that African countries could build up domestic resources and become less dependent on external aid. Taxation is an important component in achieving Kenya's MDGs and studies in this area are very important. This study will contribute to knowledge in the following ways:

- i. **Tax Authorities:** Radian (1980) observed that in most developing countries, tax administration was in a poor state in the 1970s. Tax bases were grossly under-assessed, collection rates were low and penalties existed more in the law than in fact. In recent years, tax administration in most developing countries has improved dramatically but is still behind their counterparts in developed countries. This study is significant in that it applies economic and noneconomic variables in a single causal model to illustrate how taxpayers' behaviour affects a tax system. The tax authorities can use current policy tools in conjunction with behavioural responses to improve voluntary compliance in Kenya. The results of this study, which are grounded in widely accepted theories, can equally apply to taxpayer behaviour in other similar tax jurisdictions such as the neighbouring countries of Uganda, Tanzania and Rwanda.
- ii. **Government:** Tax revenues account for the single largest source of revenue for the government of Kenya. Therefore, enhancing and improving this source is a priority for the state. The findings of this study can be used to guide in formulating effective tax policies that can be used by KRA to improve government revenues from income taxes.
- iii. **Academia:** Most of the compliance studies have originated from the United States, Australia and Europe. Very few studies have been based on tax payers in developing countries. Therefore, any behavioural studies on compliance will add to the existing literature and form a basis for further research for other upcoming researchers. This is one of the first studies in Kenya to test the TPB on tax compliance behaviour and thus sets the base for further research in this area. In addition, most tax research has adopted a positivist view. This research utilizes a mixed method research design and therefore provide an alternative design for other researchers to use in the future.
- iv. **Business community:** Empirical literature on tax compliance has mainly been concerned with individual taxpayers; while the analysis of large and medium sized

business tax payer compliance has, on the contrary, been rather neglected. Business tax payers play an important role in terms of revenue generation for the government, as they pay corporate taxes, generate employment which enhance employment income taxes and pay nearly all other forms of income taxes. The aim of this research is to examine the compliance behaviour of this group of tax payers. The business community can use the findings to lobby the tax authority for a more efficient tax system which will reduce the compliance costs and the cost of doing business in Kenya. In addition, the business community can use the findings to lobby the government to implement fair tax practices which reduce conflicts with revenue authorities, thereby creating a more conducive operating environment for businesses to thrive.

## **1.7 Organisation of the Research**

As outlined in Figure 1.1, this thesis consists of seven chapters discussed as follows:

Chapter 1 begins with a brief background of this research area, followed by the reasons that motivated the choice of this topic. Following this, the main research objective and research questions are stated. The importance of this study to the various stakeholders is then presented. This chapter concludes with an outline of the thesis structure.

Chapter 2 contains a review of the theoretical and empirical literature on compliance behaviour. From this literature, common themes which emerged from the experiences of both advanced and emerging economies were identified. Relying on these experiences, the estimation framework of tax compliance behaviour and the research model for this study were identified.

Chapter 3: from the literature review, the conceptual framework is developed and the hypotheses used in this study are identified.

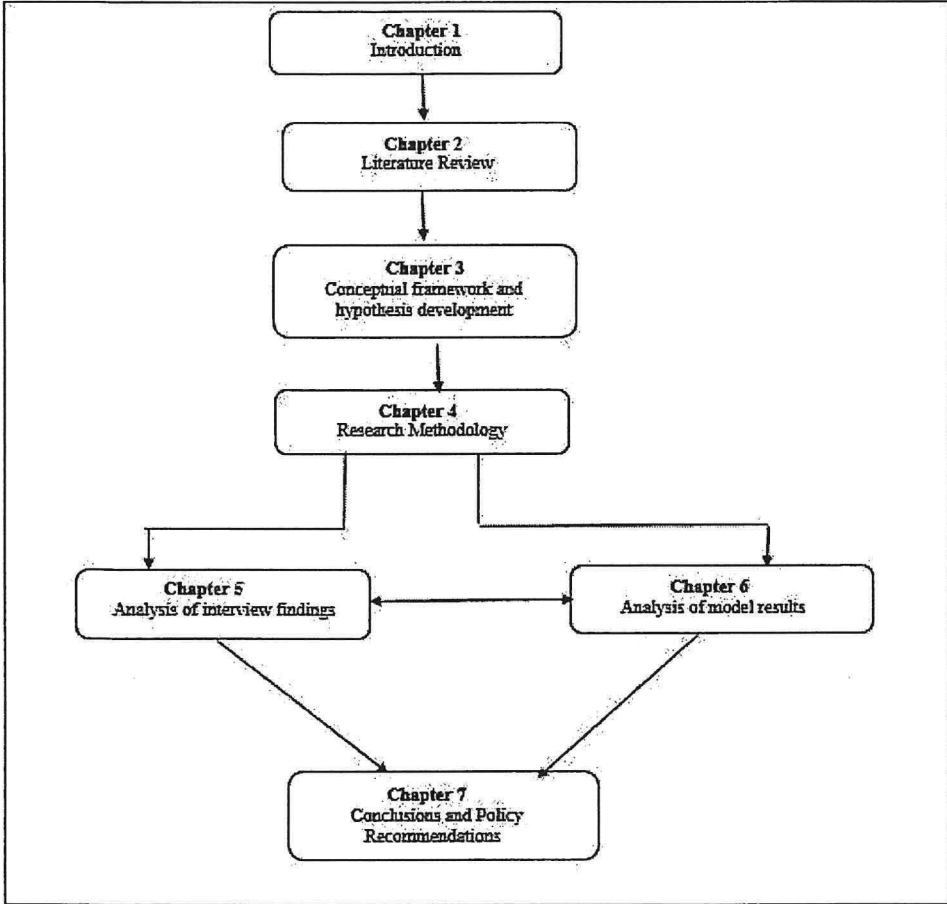
Chapter 4: the research method employed in this study is outlined. Justification for the study's research paradigm and overview of the research methods in tax research together with the justification for choosing the survey research method are provided. The sample population studied and the instrumentation used in measuring variables of this study are identified. Finally, a discussion on the data analysis method and development of the model used is provided.

Chapter 5 presents the findings from the interviews with the sample of tax professionals. These results were then compared with results of similar questions from the survey questionnaire. The proposed suggestions for improving the Kenyan tax system by tax professionals is also discussed.

Chapter 6 presents the results from evaluation of the measurement and structural models. The best model for explaining the business tax payer's compliance behaviour is then selected.

Chapter 7 summarizes and discusses the major findings in relation to the objectives and hypotheses of this study. Apart from summarizing the results, this chapter highlights the contributions made to extant literature and provides the policy implications of the findings. This is followed by a discussion of the limitations of study, suggestions for future research directions and the conclusion of the thesis.

**Figure 1.1: Outline of Thesis Structure**



Source: Author (2016)

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter introduces the theoretical framework that was used in this study. Three theories were used as a basis for the development of the various hypotheses. Sections 2.2.1 and 2.2.2 explains the procedural justice theory and the distributive justice theory which will be used to explain the reasoning behind the tax payer's perception of the tax system and the effect on compliance. The theory of planned behaviour is discussed in section 2.2.3 and is used to explain the tax payer's compliance behaviour. These three theories form the theoretical background used to develop the hypothesis that will be tested in this study as discussed in section 2.4.

#### **2.2 Theoretical Framework**

While many theories and models have been developed over the years, tax compliance research has generally been based on two theoretical models: the Economic Deterrence and Social Psychology Models. In the Economic Deterrence Models, enforcement is considered to be the key factor that motivates compliance, where the level of reported income increases with an increase in the level of enforcement activities, and the resulting punishment if noncompliance is detected (Allingham & Sandmo, 1972). In this approach, taxpayers comply with tax laws mostly because of the economic consequences of detection and punishment (Alm, 2012). Supporters of Social Psychology Models argue that decisions made by individuals are not always based solely on maximising economic utility; rather sociological and psychological factors are also relevant in tax compliance decisions (McKerchar, 2003a). A number of Social Psychology Models have been developed over the years; however, the Equity Theory and Compositional Modelling methods are the most commonly applied to tax research. Equity Theory proposes that people are more likely to comply with rules if they believe the system that determines the rules to be equitable (Thibaut, Friedland & Walker, 1974). In a tax context, Equity Theory is concerned with the fairness of exchange between the taxpayer and the government (Wallschutzky, 1984). Compositional Modelling methods are based on the Theory of Reasoned Action (TRA) which is based on the assumption that people generally make decisions to engage or not to engage in a particular behaviour, after considering their beliefs with regard to the behaviour, and the outcomes from engaging or not engaging in the behaviour (Ajzen & Fishbein, 1980). The TRA was later extended into the Theory of Planned Behaviour

to include perceived behavioural control, which has a direct influence on behaviour, and an indirect effect on behaviour through intentions (Ajzen & Driver, 1991).

The main criticism of the Economic Deterrence Model relates to the assumption that individuals make tax paying decisions in a social vacuum; the model overlooks the human elements or traits involved in the decision-making process (Cullis & Lewis, 1997). Further, the effects of tax morale, which includes values, norms, morals, beliefs and attitudes towards tax compliance behaviour, may be equally important in tax reporting decisions (Cullis, Jones, & Savoia, 2012; Kirchler, 2007; Kornhauser, 2007). Therefore, the Economic Deterrence Model explains only part of the tax compliance problem. Noneconomic factors may be responsible for the other part of the compliance problem. This study is therefore premised on the fact that tax compliance behaviour involves the interaction of multiple elements of compliance behaviour, economic and behavioural, which are not captured by the Deterrence Model. This study utilizes three theories, that is, the Procedural Justice Theory, Distributive Justice Theory and the Theory of Planned Behaviour to examine the objectives of the study. Below is a discussion of each of the theories.

### **2.2.1 Procedural Justice Theory (PJT)**

Although the deterrence literature has a long history of explaining tax compliance behaviour, the Procedural Justice Perspective is an alternative to explaining the same. Thibaut and Walker (1975) were the early pioneers of the development of PJT through their work on dispute resolution procedures. The findings from their studies suggest that disputants who are given control of the dispute resolution process, will be more likely to consider the verdict to be fair, even when the outcome is unfavourable. Tyler (1997) advanced this theory to show that people value respectful treatment by authorities and view those authorities that treat them with respect as more entitled to be obeyed. Individuals seek justice in a number of ways when they feel that the groups to which they belong have been treated unfairly. These ways can include pursuing collective change in ways that are socially acceptable, for example, political lobbying, or turning to third parties to intervene on their behalf, for example, taking a class action or referring the decisions to the courts (Tyler & Smith, 1998). In the case of the Kenyan tax system, seeking initial justice would involve filing a case with the income tax tribunal, and if a tax payer is dissatisfied with the tribunal's decision they would then seek legal action in courts of law both domestically and at the international level. Therefore, if tax payers feel that the decisions of the tribunal are neutral they may feel that the tax system has treated them fairly.

There is empirical evidence to support the PJT from several countries. For example a study by Mesko (2014) based in Slovenia showed that procedural justice was the main predictor of police legitimacy, which in turn was linked to self-reported compliance behaviour. In their study, procedural justice was found to be the more important predictor of compliance than deterrence concerns. Similarly, in the USA, Sunshine, Jason and Tyler (2003) found that New Yorkers' perceptions of police legitimacy were shaped predominantly by whether they viewed police as procedurally just. Perceptions about the effectiveness of police to deter and prevent crime were less important. In a study of corporate compliance, Braithwaite & Makkai & Braithwaite (1994) revealed that nursing home managers were more likely to comply with regulatory standards if they felt nursing home inspectors had previously treated them with procedural justice. Those managers who felt that inspectors had used heavy-handed deterrence threats were less compliant in a follow-up inspection.

Procedural justice theory has also been applied successfully to understand tax compliance behaviour. In a study of Australian taxpayers, Wenzel (2002) examined the impact of justice perceptions on self-reported tax compliance and found that taxpayers were more compliant when they thought that they had been treated fairly and respectfully by the Tax Office. Murphy (2005) revealed that those tax payers who viewed the Tax Office as more legitimate were less likely to evade taxes. He further observed that, there was no relationship between offence history and subsequent tax non-compliance, suggesting that prior sanction experience played no deterrent role in subsequent compliance behaviour. A study by Wenzel (2006), observed that tax offenders were significantly more likely to comply with the tax authority's request for compliance, and were less likely to complain about their treatment, if they received correspondence from the Tax Office that emphasized procedural justice messages. Similar findings have recently been observed by Murphy et.al. (2016) who examined 359 tax offenders in Australia, and concluded that procedural justice is important to offenders' decisions to comply with future tax obligations over and above the fear of sanctions. These studies demonstrate that procedural justice seems to be more important than deterrence in predicting compliance behaviour. The literature on PJT in the tax compliance domain is minimal and is still at the early stages of development; however, the majority of studies reviewed provide overwhelming evidence of the important role of procedural justice rules in tax authorities' processes and procedures when administering the tax rules or dealing with disputes. Very few studies have examined the fairness of the Kenyan tax system from this theoretical framework

and thus the use of the PJT in explaining the Kenyan business tax payer will fill this gap and contribute to the evidence on the application of this theory to tax research.

### **2.2.2 Distributive Justice Theory (DJT)**

DJT postulates that individuals not only judge equity in terms of assessing the benefits they receive from their tax dollars (exchange fairness), but also by comparing themselves with others (Lamm & Schwinger, 1980). In other words, individuals compare their benefits-received-to-contributions-ratio with that of others in their reference group, and if individuals find a disparity, they find their dealings inequitable (Walster, Walster, & Berscheid, 1978). Based on this premise, DJT assumes that distribution outcomes should be equal among those with similar contributions.

Leventhal (1976) contends that distributive fairness can be achieved by applying allocation rules; namely the equity rule, equality rule or needs rule, depending on the situation. In achieving fairness, the equity rule suggests that there must be relative equality between an individual's contribution and the benefits he derives from that contribution. Simply stated, the equity rule requires individuals to be compensated with the same ratio to their effort, as stated in exchange fairness. In contrast, the equality rule calls for equal distribution of rewards regardless of individual contribution. The equality rule suggests that everyone deserves to be treated equally irrespective of his or her contribution. With the needs rule, Leventhal (1976) proposes that the allocation decision should be made after taking into account the recipient's needs. Based on this rule, individuals with a low or a zero contribution may be allocated more benefits (to fulfil their needs), as compared to those with a higher contribution.

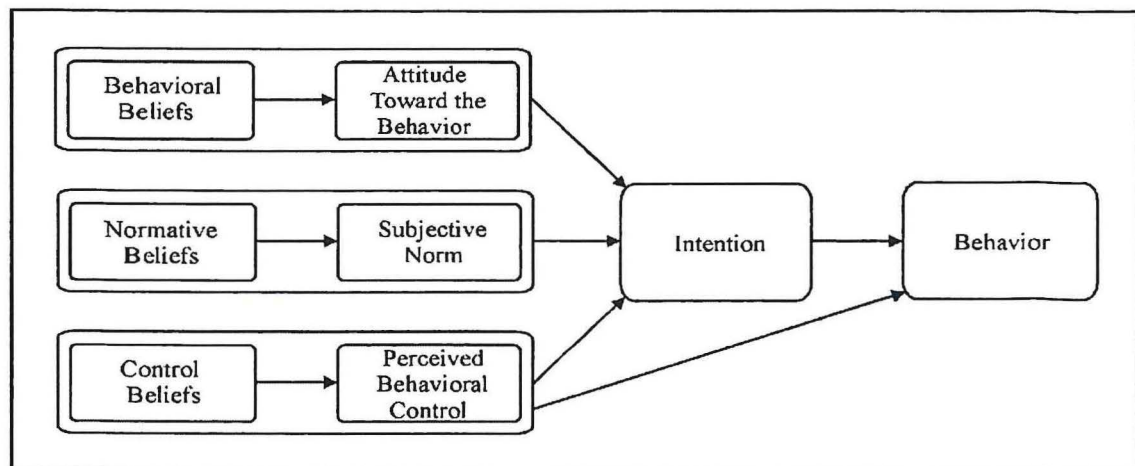
Eckhoff (1974), on the other hand, incorporates five principles that form DJT. The principles are relative equality (the equity rule), objective equality (the equality rule) and subjective equality (the needs rule). The two additional dimensions are rank order equality and equal opportunity. The rank order equality criterion postulates that, if investments of the members of one group are higher than those of another, their rewards should be higher too (Homans 1958). This principle suggests that, even though the effort/reward is not necessarily equivalent, yet those with higher contributions should be allocated more benefits than other groups. The remaining principle is equal opportunity, which is normally discussed in relation to racial integration policies (Cook & Hegtvædt, 1983).

DJT is also concerned with the fairness of allocation of punishments, known as retributive fairness (Cook & Hegtvedt, 1983). Under retributive fairness, the social system is considered fair if the penalty imposed matches the committed crime. Similarly, the social system will also be perceived as fair if the compensation received is equivalent to any loss incurred in the social system (Cook & Hegtvedt 1983). In taxation, various punishments are available to serve as penalties for non-compliance behaviour. In order to be perceived as fair, the tax system should match the penalty with the non-compliance behaviour appropriately. These conceptual distinctions help us in describing the tax system from a distributive fairness perspective. For instance, the Kenyan tax system demands income tax using an equity norm. Thus, the more you earn the higher the amount of taxes paid. However, the corporation tax is generally a flat rate of 30% irrespective of the amount of profit a company generates. The Kenyan tax system has also been criticized for having too many exemptions especially for businesses in the export processing zones and it would be beneficial to the tax authorities to understand whether these inequities have an impact on compliance behaviour. This study will therefore use the DJT framework to examine whether the Kenyan tax system is just and whether the penalties imposed by KRA are fair given the offences.

### **2.2.3 Theory of Planned Behaviour**

The Theory of Planned Behaviour (TPB), which is an extension of the Theory of Reasoned Action (TRA), posits that attitudes, subjective norms and perceived behavioural controls are key elements in determining a person's intentions to engage in a target behaviour, and ultimately influences the performance of the behaviour (Ajzen, 1991). Ajzen (1991) observes that the more a person intends to engage in a target behaviour, the more likely he will actually engage in that behaviour. Underlying behavioural intentions are attitudes towards the behaviour (beliefs about the consequences of the behaviour), subjective norms (beliefs about the normative expectations of other people), and perceived behavioural control (beliefs about the presence of factors which may facilitate or impede performance of the target behaviour), which determine both behavioural intention and behaviour. The TPB maintains that attitudes, together with subjective norms and perceptions of control, lead to the formation of behavioural intention (Ajzen, 1985; 1991). TPB can be depicted as follows:

**Figure 2.1: The Theory of Planned Behaviour**



*Source: (Adopted from Ajzen, 2004, p.1)*

### **2.2.3.1 Attitudes towards the behaviour**

The intention to perform the behaviour is an immediate antecedent of actual behaviour, and represents a person's motivation or decision to exert the necessary effort to perform the behaviour (Ajzen, 2002). The TPB suggests that intentions capture the motivational factors that influence a given behaviour (Beck & Ajzen, 1991). Intentions therefore measure how hard people are willing to try, and how much of an effort they would exert to perform the behaviour (Ajzen, 1991), or the self-instructions individuals give themselves to act. Therefore, the stronger a person's intention to engage in a particular behaviour, or to achieve their behavioural goals, the more successful they will be in performing that particular behaviour or achieving the behavioural goal. The TPB postulates that attitude towards the behaviour is based on a person's underlying behavioural beliefs, and refers to the degree to which the person has a favourable or unfavourable evaluation of the behaviour of interest (Beck & Ajzen, 1991)

### **2.2.3.2 Subjective Norms**

Subjective norms refer to the perceived social pressure to perform or not to perform the behaviour of interest (Ajzen & Fishbein, 1980; Beck & Ajzen, 1991). A subjective norm is defined as an individual's perception of whether important referents would expect the individual to perform or not perform the behaviour of interest, and the extent to which the individual is motivated to conform to the important referents' expectation, in respect of that behaviour (Ajzen & Fishbein, 1980). Normative beliefs refer to the perceived behavioural expectations of important referents. Some commonly identified referents include: spouses or partners; family members; close friends; and for this study, these may include business associates, peers, and tax agents.

TPB assumes that the individual will be willing to engage in the target behaviour, to the extent that the individual believes an important referent thinks they should engage in the target behaviour (Ajzen & Fishbein, 1980). Subjective norms capture the perceived opinions of important referents. Individuals who are highly concerned that important referents will disapprove of them might be more influenced by subjective norms than those who are less concerned with what others think of them. Subjective norms, for the purposes of this study, will be based on the expectations and behaviour of respondents' most important referent(s).

### **2.2.3.3 Perceived Behavioural Control (PBC)**

PBC was added to explain behaviours that are not under full volitional control, and refers to the perceived ease or difficulty involved in performing the behaviour of interest (Ajzen, 1991). PBC is considered to influence behaviour both directly and through behavioural intentions, and includes all anticipated impediments and obstacles with respect to performing the behaviour of interest. This may include the availability of resources, skills, confidence and the ease or difficulty of performing or refraining from the behaviour and anticipated obstacles. The direct path between PBC and behaviour reflects the actual control a person has over performing the target behaviour (Madden, Ellen, & Ajzen, 1992).

If people perceive that they have limited control over the behaviour of interest, then their intention to perform that behaviour may be low, even if attitude towards the behaviour and subjective norms are favourable. This suggests that if attitudes and normative influences are strong, PBC may be less useful in predicting intentions (Ajzen, 1991). Ajzen (1991) further adds that the magnitude of the relationship between PBC and behavioural intention is dependent upon the type of behaviour and the nature of the situation. Generally, if individuals believe that the target behaviour is achievable, they are more likely to attempt to engage in that behaviour. Individuals who believe that they have the necessary skills and resources, and the necessary opportunities (or lack of obstacles) to perform the behaviour, will perceive a high degree of behavioural control (Ajzen, 1991).

#### **2.2.3.4 Rationale for Applying the Theory of Planned Behaviour (TPB)**

TPB has been influential in understanding attitudes and behaviours in various interdisciplinary studies, such as the compliance of drivers with speed limits (Elliott, Armitage & Baughan, 2003) IT adoption (Huang & Chuang, 2007); health (Armitage & Conner, 1999), and traffic control (Elliott, Armitage & Baughan, 2005), but until recently has had minimal attention from tax researchers. Tax compliance involves complex behaviour and economic models have been found to have limitations in predicting actual compliance behaviour. TPB is recognised as having good predictive power in explaining human intentions and behaviour (Ajzen, 1991; Armitage & Conner, 2001; Godin & Kok, 1996) and since the main objective of this study is to understand factors that influence tax compliance, TPB was selected as the base theory due to its predictive ability. Secondly, although the application of TPB is well-known in understanding individual behaviour, past studies also support the application of TPB to understanding the behaviour of an organisation, for instance, studies by Montalvo (2006), which used selected managers and CEOs to understand organisational behaviour in innovation. Managers and CEOs were selected as the respondents as they are the key decision makers in the company. Furthermore, their decisions and actions determine the company's direction and objectives. Similarly, other studies have selected decision makers in the company such as managers in environmental studies (Collins, Uhlenbruck, & Rodriguez, 2008) or managers and company executives (Cordano & Frieze, 2000). Therefore, the selection of TPB to explain the compliance behaviour of companies through their tax agents is relevant in this study, as the focus of this study is on the organisation, represented by individual key decision makers.

Whereas the main elements of TPB are generally accepted, the model can accept additional variables in order to improve the research model and its explanatory quality (Ajzen, 1991; Sommer, 2011). Prior studies demonstrate that the addition of other constructs enhances the prediction of intention and behaviour (Bobek & Hatfield, 2003; Shih & Fang, 2004; Trivedi et al., 2005), which is another reason for using TPB in the current study, given that other compliance variables identified in prior research can be added successfully into the research model. Therefore, the use of TPB as a framework, with the inclusion of additional tax compliance determinants, in the context of this study is justified.

However, despite the support shown for using the TPB in understanding human behaviour, it has also been criticized for having several weaknesses. First, even though the theory records a link between intention and behaviour, the link is nevertheless weak or moderate and too

'rational', ignoring the bias that the human has in making judgments (Shawver & Sennetti, 2009). Second, the TPB depends on self-reports and thus the data can have biases which reduce the reliability and validity of the theory. In addition, although Ajzen (1991) claims self-efficacy and perceived behavioural control are identical, some studies indicate that self-efficacy and perceived behavioural control are not alike (e.g. Armitage & Conner, 2001). In reply to these criticisms, Ajzen (2010) clarifies that the theory never assumes rationality in predicting reality. He argues that the misunderstanding occurs among researchers because the TPB is concerned with goal-directed behaviour guided by self-regulatory processes, which is misinterpreted as acting with rationality. According to Ajzen (2010), the low correlation between the intention and actual behaviour could differ considerably because other mediating factors could exist between the period the intention is assessed and the time the actual behaviour is examined. These mediating factors may reduce the effect of the predictive validity of intention which is taken before the actual behaviour is examined.

Ajzen (2010) argues that the act of complying with the tax laws could be considered to be a behaviour which is goal-directed (the aim is to comply with the tax laws). For example, due to the nature of their roles in the tax system as advocates for their clients and as intermediaries, there is a possibility that tax agents put themselves in a conflicting position. While tax agents may want to comply with the tax law, there are other factors that may influence them on not being objective in their decision making. With regard to the use of self-reporting, the findings of Armitage and Conner (2001) suggest that TPB could better explain the variance in behaviour when self-reports are used compared to when behaviour is observed. While self-efficacy was found to be more capable in explaining behaviour compared to perceived control in the meta-analysis by Armitage and Conner (2001), they caution that the results are not conclusive since there is a possibility that the different effect of self-efficacy and perceived control of behaviour may vary depending on the type of behaviour. Although TPB has short comings just like any other model, its flexibility which allows for the addition of other predictors to improve or explain the variance in intention and behaviour still makes it more appropriate for this research. However the effect of these limitations for this research will be discussed further in chapter six together with the findings.

### **2.3. A review of relevant past studies in TPB**

The application of the TPB in tax compliance behaviour is still in its infancy, but its application is growing. Efebera et al. (2004) developed and tested a predictive model of tax compliance behaviour based on the TPB. The study investigated the compliance intentions of low-income individual taxpayers, by examining the effects of perceived tax equity (attitudes), normative expectations (subjective norms) and legal sanctions (Perceived Behavioural Control) on tax compliance intentions. Consistent with the TPB, their results indicate a significant positive relationship between compliance intentions and equity perceptions of the tax system, normative expectations and legal sanctions (or magnitude of penalties). Bobek, Robin and John (2007) examined the underlying reasons why taxpayers overpay their taxes which would result in a tax refund. The results suggest that taxpayers overpay because of their attitudes (a desire to avoid underpayment or uncertainty). The results were consistent with prior research, indicating the predictive ability of the TPB in tax compliance studies. It was also reported that the attitudes measure was twice as influential as their subjective norms in predicting withholding decisions. Lu, Tong and Liu (2010) employed the TPB and the Technology Acceptance Model (TAM) to investigate the determinants influencing on-line tax filing behaviour. The results showed that attitude was the key factor affecting on-line tax filing behaviour. Attitude was also found to be affected by perceived usefulness, perceived ease of use, tax equity, the social norm, and the moral norm. The results indicate that on-line tax filing intention is determined by attitudes, subjective norms, and PBC, although attitude was found to have the strongest influence on individual's on-line tax filing decisions. The study therefore supports the use of the TPB (together with TAM) in examining on-line tax filing behaviour.

The suitability of TPB in explaining tax compliance behaviour has also been supported by several other researchers such as Trivedi et al. (2005), Saad (2010), and Mohammed (2016). In summary, there is evidence which clearly demonstrates the applicability of the TPB in predicting a wide range of behaviour. At the conceptual level, the TPB has been used in explaining a range of behaviours in a variety of contexts, without having to develop a separate set of assumptions about the applicability of these paradigms. Although the research evidence on the applicability of the TPB in predicting tax compliance behaviour is currently limited, it nonetheless provides sufficient support for the TPB's application in tax compliance research.

The purpose of this section is to discuss how the TPB will be used to explain tax compliance behaviour and provides evidence in support of the propositions that attitudes (based on both

legal and non-legal sanctions), subjective norms, and perceived behavioural control collectively influence taxpayer's intentions to comply (or not comply) with their tax obligations.

### **2.3.1 Influence of Attitudes in tax compliance**

Attitudes can influence a person's intention by increasing the person's motivation to engage in a particular behaviour. That is, individuals are more likely to engage in behaviours that are perceived to have favourable outcomes for them, and are less likely to engage in activities that are associated with unfavourable outcomes. Attitudes based on non-legal sanctions include measures of guilt feelings, sense of civic duty and moral values. These are collectively referred to as tax morale, and are considered to have significant influence on tax compliance behaviour (Kirchler, 2007; Kornhauser, 2007; Torgler, 2007). Attitudes based on legal sanctions include measures of perceived probability of detection, perceived certainty of punishment and perceived severity of penalties. A majority of the available literature on tax compliance, based on the economic models of tax compliance, report a significant relationship between these elements of legal sanctions and tax compliance behaviour (Jackson & Milliron, 1986; Maciejovsky, Kirchler, & Schwarzenberger, 2001). However, an increasing number of studies also report a lack of significant relationship between tax compliance and legal sanctions (Kirchler, 2007; Torgler, 2005).

Eriksen and Fallan (1996) argue that the definition of attitude in tax compliance is not clear since attitude towards tax compliance is an ambiguous construct. Kirchler (2007) concurs that attitude in tax compliance is a complex construct which represents the social construct of taxes that influences tax compliance behaviour. Since tax compliance is viewed as a sensitive issue, many studies in compliance use attitude towards the behaviour as a proxy rather than examining actual tax compliance behaviour itself (Kirchler, 2007). In many tax compliance studies, Kirchler (2007) found that while the relationships between attitude towards tax compliance and behaviour indicate weak relationships, these are significant. Some of the studies which have supported this conclusion are presented in the next paragraph.

Hanno and Violette (1996) demonstrate a positive relationship between attitude and compliance behaviour. According to the study, taxpayers' compliance behaviour depends on individuals' internal factors such as moral factors that have formed over the course of time. In agreement with this statement, Bobek (1997) suggests that attitude towards the fairness of the tax system influences positive or negative behaviour towards compliance with tax law. If the

attitude is motivated by a belief in the fairness of the tax system and the benefits received from the system, individuals will judge the system as fair for them, or vice versa. The significant role of attitude in tax compliance is also evident in the study by Trivedi et al. (2005), which investigates the relationship between attitude and tax compliance (compliance and non-compliance behaviours) and suggests that attitude is paramount in both compliance and non-compliance situations. Kirchler et al. (2008) suggests that attitude toward taxes is an important factor that motivates taxpayers to comply with the tax law. They argue that a favourable attitude towards compliance will develop trust in the revenue authorities which will encourage voluntary tax compliance. Saad (2011) used individual taxpayers in Malaysia and New Zealand, and her findings suggest that taxpayers in both countries considered attitude as an important factor in complying with the tax law. Similar findings are provided by Smart (2012) in examining the tax compliance behaviour of individual taxpayers and tax agents in New Zealand. This study found that attitudes towards informal sanctions such as tax morale are influential in motivating individual taxpayers and tax agents to comply or not comply with the tax law. Another recent study by Langham, Paulsen & Hartel (2012) among small and medium entrepreneurs in Australia found that attitude towards correctly reporting and maintaining tax records influences the intention to comply with tax obligations.

In summary, based on the above discussion, generally it has been demonstrated that attitude plays an important role in shaping taxpayers' compliance determinants, which supports the theoretical context of attitude within the context of TPB as asserted by Ajzen (1991).

### **2.3.2 Subjective norms and tax compliance**

The concept of norms in tax compliance, according to Kirchler (2007), is difficult to conceptualize since norms could emanate from individual standards (internally from the taxpayer), socially approved standards (from those who close to the taxpayers), or the societal norms which are from the collective or at the national level and translated into the tax law. The TPB predicts that subjective norms, which comprise of normative beliefs and motivation to comply, will influence individual's intentions to engage in target behaviours (Ajzen, 2010). Individuals who believe that important referents think they should engage in the target behaviour, and who are motivated to conform to important referents' expectations, will hold a positive subjective norm (Fishbein & Ajzen, 2010). Conversely, if the individual perceives that important referents think that the individual should not engage in the behaviour, a negative subjective norm will result. Further, an individual who is less motivated to comply with

important referents' expectations will hold a relatively neutral subjective norm. In a tax context, individuals who believe an important referent expects them to comply with their tax obligations will conform, provided they are also motivated to do so.

Empirical evidence provides support that taxpayers who believe their friends and acquaintances are non-compliers are more likely to not comply themselves (Grasmick & Scott, 1982). Kahle and White (2004) examined the influence of subjective norms using an experimental study in the US involving tax agents from various types of accounting firms. The results of the study suggest that tax agents are influenced by their clients in their decision making. Tax agents are more influenced by their client preferences rather than the direction of the evidence when making decisions. The importance of subjective norms in the compliance behaviour of tax agents is further supported by Smart (2012). The study which used members of the New Zealand Institute of Accountants (NZICA), found that subjective norms have a positive and significant influence on tax agents' compliance behaviour to tax law. The findings suggest that subjective norms in the form of important referent's expectations, threat of losing respect from important referents and the tax compliance behaviour of important referents influenced the intention of tax agents to act ethically. Bobek et al. (2007) applied the TPB among students in the US to understand the reasons why taxpayers prefer a refund. Their study indicates that subjective norms influence the withholding tax position of the taxpayers. The more the taxpayers are advised by people around them to lower their withholding tax position, the more likely they will perform the behaviour. Consistent with these findings, taxpayers who believe that important referents are compliant (or not compliant) will themselves comply (or not comply). Previous studies in various fields have shown that subjective norms could influence positively and significantly behavioural intention (Benk, Cakmak & Budak, 2011; Bobek & Hatfield, 2003; Ross et al., 2007; Salman & Sarjono, 2013; Tarkianen & Sundqvist, 2005).

Several studies have identified a relationship between the threat of losing respect from peers and tax compliance (Grasmick & Scott, 1982; Grasmick & Bursik, 1990). Individuals, who believe that they would lose the respect of their peers or referents if they do not comply, and who value the referents respect, are more likely to comply. Although in most cases individuals' tax compliance decisions are not publicly available, the perceived fear of losing their peers' respect will, nevertheless, act as a deterrent against noncompliance.

### **2.3.3 Perceived behavioural control and tax compliance**

Perceived Behavioural Control (PBC) is another element in the TPB which was discussed earlier in chapter two. Ajzen (1991) posits that apart from the attitude towards behaviour and subjective norms, “intention to perform” behaviour is also determined by the Perceived Behavioural Control (PBC) that an individual has. Bobek and Hatfield (2003) suggest that Perceived behavioural control does not refer to the degree of easiness or difficulty to cheat in general, but it is concerned with the level of control a taxpayer believes he or she has in conducting specific action related to complying with the tax laws, such as underreporting income and overstating expenses. PBC is a key variable in TPB. In a tax compliance study conducted in the context of the self-assessment system, taxpayers’ PBC was found to be significant in the behavioural intention to comply with the self-assessment system (Saad, 2009). In this study, two aspects of PBC are applied: (i) control factor (knowledge, skill and resources) and (ii) the perceived ease or difficulty in understating income as an encouragement or obstacle to the taxpayer. Bobek and Hatfield (2003) also show a significant relationship in two scenarios (home office and tip scenarios) and a marginal relationship in the charitable organisation scenario, in relation to the tax noncompliance decision. The study takes into account the role of moral obligation that interacts with PBC in tax non-compliance decision. The study also considers the two control factors of income visibility or opportunity as important factors for noncompliance, and probability of detection or perceived probability of detection as an impediment to non-compliance.

This concept has experienced mixed results with several researchers finding this result to be insignificant in explaining tax compliance behaviour. Studies by Trivedi et al. (2005) and Saad (2011) indicate that perceived behavioural control is not strong enough to influence tax compliance behaviour. Further, Bobek et al. (2007a) reported a similar finding when examining the motivation to be in a tax refund position in the US. The findings do not support perceived behavioural control in explaining the taxpayers’ preference to be in a refund position. Smart (2012), who used individual taxpayers and tax agents as samples in New Zealand, also supports the non-significant effect of perceived behavioural control on the intention to comply with the tax law for samples in the study. Perceived behavioural control was also found to have no effect on the behaviour of tax agents to comply with the tax law. Similar findings of a non-significant effect of perceived behavioural control is also provided by Langham et al. (2012). The study found that based on three tax scenarios provided in the study, perceived behavioural control of

small and medium entrepreneurs in Australia does not influence the intention to comply with tax obligations as the level of tax complexity increases.

## **2.4 Perceptions of the Tax System**

One way of identifying a good tax system is to see how it compares against a 'checklist' of desirable properties. The most famous is that of the four canons of taxation set out by Adam Smith. Smith (1776) outlined four principles of an ideal tax system. These principles are equity, certainty, convenience and economy. Alley and Bentley (2005) maintain that these principles are important to the creation of tax policy, because it is only when these principles are upheld that effective taxes are implemented in a manner which satisfies the stated purposes of a tax system. Over the years several research institutions have proposed additional principles to guide the design of a tax system. These include the Carter Report (1966), the Asprey Report (1975), OECD (1998), ICAEW (1999) and the American Institute of Certified Public Accountants (2001), among others. In summary, tax systems are judged by assessing them on the basis of the following criteria according to: Stiglitz (2000), Cnossen (2001), Musgrave and Musgrave (1989) and Bird and Zolt (2008): (1) Fair; (2) clear; (3) Efficiency (neutrality); (4) Equity; (5) Benefit principle/ability-to-pay; (6) Horizontal equity; 7) Vertical equity; (8) Administrative costs- Costs of the tax administration; (9) Administrative feasibility; (10) Compliance costs- costs that taxpayers have to make; (11) Tax incidence; (12) Contribution to economic growth and development; and (13) Internationally compatibility.

Although thirteen criteria have been identified which can be used to evaluate a tax system, nine criteria will be used to assess the tax system in this study. Some of the principles identified in the various studies are interrelated; for example, the principles of horizontal and vertical equity are studied under the concept of fairness which encompasses the concept of equity. Measuring the incidence of a tax, the ability to pay tax and its contribution to economic growth cannot be examined from the perspective of business tax payers only. These principles require macro data to be collected and the data is usually analysed using macro-economic models which are out of the scope of this study. "Administrative feasibility" refers narrowly to the fact that the collection cost of revenues should not be overly high. This concept is outside the area of this study which examines the perceptions of the business tax payers and not of the revenue authority. The remaining nine criteria will be used in this study to examine the Kenyan tax system from the perspective of business tax payers

### **2.4.1 Fairness**

Fairness or equity is a key issue in designing a tax regime but what is considered equitable or fair by one person may differ from the conceptions held by others. Gerbing (1988) observes that tax fairness is a multidimensional construct, and existing tax fairness literature suggests that there are four tax fairness dimensions: horizontal equity, vertical equity, exchange equity, and procedural fairness. These four dimensions will be used to assess fairness in this study.

A study by Erich, Niemirowski & Wearing (2006) observed that fairness perceptions can take various forms. First, vertical fairness, asserts that taxpayers with different economic situations should be taxed at different rates. This would result in higher income earners paying tax at higher rates than low-income earners. The second component is horizontal fairness, defined as 'the equal treatment of equally circumstanced individuals'. In other words, horizontal fairness recommends that taxpayers of similar economic positions should pay the same amount of tax. These two dimensions of fairness are derived from the Distributive Justice Theory. From the definition, one can assert that vertical fairness is a very subjective concept because the rich would deem it unfair for them to pay higher taxes just because they have higher income; they may even feel that they are being penalized for having a higher income. On the other hand, it may be argued that in a developing country like Kenya, which is still building its infrastructure, it may be necessary to tax the rich more as the poor may not have sufficient taxable income.

In addition to vertical and horizontal fairness, Reithel, Baltes & Buddhavarapu (2007), identified procedural fairness which refers to whether or not the processes accompanying resource allocations are applied in an equitable manner, and in a tax context refers to whether the processes used by a tax authority are applied in an equitable manner. Another significant fairness dimension is exchange fairness discussed by Gilligan and Richardson (2005) and Gerbing (1988), which represents the exchange of contribution and benefit between taxpayers and government. This dimension of fairness holds that taxpayers will have fair perceptions of the tax system if the benefits received from the government are equitable compared to their tax contributions.

Exchange fairness is a difficult dimension to measure as the definition of taxation asserts that tax is compulsory and one should not expect an equivalent amount of benefit from the government. The question then is how much should we expect from government given the tax we have paid. In Kenya the government has multiple obligations, for example the provision of health care, education, security, etc., with limited resources from taxation. So what will be

exchange fairness for an economy like Kenya? I expect business tax payers to be concerned more with whether the government has provided sufficient infrastructure and security to enable them operate efficiently.

Slemrod (2007) notes that tax fairness literature tends to show a positive association between fairness and tax compliance. However, studies from different countries indicate different results for individual fairness dimensions. Thus, a complete understanding regarding which dimensions of fairness are likely to impact compliance in various national contexts remains to be achieved. Saad (2009), Kirchler et al. (2006), Trivedi et al. (2003), and Wenzel (2002b) found a positive association between horizontal equity and tax compliance. Saad (2009) was set in Malaysia, Kirchler et al. (2006) and Wenzel (2002) in Australia, and Trivedi et al. (2003) in Canada. Vogel (1974), Maroney et al. (1998), Maroney et al. (2002), and Kirchler (2006) found a positive association between vertical equity and tax compliance but Saad (2009) found no positive association. Although Saad's (2009) results were different, her study was Malaysian, while the other studies were set in Sweden, the United States and Australia, which suggests that there may be cross-national differences that impact the association between vertical equity and compliance.

Exchange equity is positively associated with tax compliance in Vogel (1974), Spicer and Lundstedt (1976), Scott and Grasmick (1981), Warneryd and Walerud (1982), Wallschutzky (1984), Porcano (1988), Alm et al. (1992), Maroney et al. (2002), Kim (2002), King and Sheffrin (2002), Wenzel (2002b), and Richardson (2006b). There was no significant positive association between exchange equity and tax compliance in Mason and Calvin (1978), Keenan and Dean (1980), and Saad (2009). Again the results could be affected by national differences. The existing literature, which has been examined in various countries other than Kenya, demonstrates that procedural fairness is positively associated with tax compliance in Porcano (1988), Worsham (1996), Wenzel (2002b), Murphy (2004a), and Murphy (2004b).

## **2.4.2. Simplicity**

Tax simplicity is a desirable feature of a tax system because a simplified tax system reduces the burden of administration and compliance. Tax simplicity and its mirror image, tax complexity, are complicated notions that are still eliciting debate among tax academicians. Slemrod (1989) identified four aspects of complexity of the tax system: predictability (certainty of tax law), enforceability (tax administrative costs), difficulty (computational tax compliance costs) and manipulability (tax planning costs). Predictability and enforceability pertain to the tax law while difficulty and manipulability refer to taxpayers' responses to the tax law. Other discussions in the literature below have followed more or less the same vein, with different expressions or more elaboration. For example, McCaffery (1990) stressed the normative feature of simplification and identified three types of tax complexity: technical, structural and compliance complexity. It can be inferred that these layers of complexity correspond to what Slemrod (1989) termed predictability, manipulability and difficulty, respectively. Similarly, Cooper (1993) pointed out that tax complexity contains within it intimations of predictability, proportionality, consistency, compliance, administration, coordination and expression. It is thus clear that simplicity is a multi-faceted concept.

### **2.4.2.1 Dimensions of simplicity**

Tran-Nam (2000) identified two measures of simplicity which can be used to assess a tax system. The first is legal simplicity. Tran-Nam (2000) defines this as "the ease by which a body of a tax law can be read and correctly understood and applied to practical situations". Based on that definition there are some essential requirements for legal simplicity identified by Tran-Nam (2000) as:

- i.) Clarity: tax legislation and rulings should be expressed in plain language and developed in a logical manner.
- ii.) Consistency: tax legislation and rulings should be consistent, both internally and externally, and properly coordinated.
- iii.) Certainty: any particular tax situation covered by the law must give rise to a unique tax liability

The notion of clarity here is defined in broad enough terms so as to encompass not only the linguistic expression of the legislation but also the organisational scheme and the 'principles versus rules' approach adopted by the law drafters. Tran-Nam (2000) notes that consistency has several dimensions: internal consistency, coordination and external consistency. Internal

consistency means that different parts of the legislation must be mutually consistent. Coordination means that different parts of the tax law should be linked in a plausible manner. External consistency means the legislation does not contradict other tax laws under the same jurisdiction.

Another aspect of consistency, elaborated by Cooper (1993), is that the legislation deals with similar issues in the same way, thus avoiding arbitrary distinctions. Certainty means that a taxpayer's 'true' tax liability can be uniquely determined from a minimal supply of relevant data with reasonable efforts. This then means with the same data different people should arrive at the same tax liability. The second measure of tax simplicity is effective simplicity which is based on the ability to determine tax liability correctly (Evans and Tran-Nam, 2010).

Long and Swingen (1987) identified six dimensions of tax complexity: ambiguity (uncertainties in tax laws that lead to more than one defensible position); computations (difficult computations that need to be made); changes (frequent or recent changes in law); detail (numerous rules and exceptions to rules); record-keeping (detailed special records must be kept); and lastly forms (format or instructions for forms are confusing). Tax complexity is thus also a multi-dimensional concept, with various indicators that have been employed in the literature.

Since this study is examining business tax payers, complexity will be defined using the four aspects as discussed by Evans and Tran-Nam (2010) which are comprehensive and cover all the areas of complexity that this research intends to examine:

- (i) Policy complexity is composed of the number of all taxes at the various levels of government in a country; tax expenditures relating to business taxpayers as a proportion of tax revenue collected from businesses; and the proportion of business taxpayers affected by those taxes; Policy complexity examines the number of taxes that a tax payer has to abide with at various levels. In Kenya business tax payers have to contend with national and county taxes and the greater the number of taxes the higher the policy complexity.
- (ii) Statutory complexity is composed of: the length of tax laws; the readability of tax laws; the proportion of business taxpayers requesting private rulings; the proportion of external tax disputes by business taxpayers; and the frequency of tax rule changes. This dimension of complexity examines whether the income tax law itself is clear and thus,

for example, the fewer the disputes there are between KRA and tax payers, the less complex the tax system is.

- (iii) Administrative complexity is composed of: Tax administrative costs (relating to business taxpayers) incurred by revenue authorities as a proportion of business tax revenue collected; the frequency of tax reporting; and the frequency of tax payments. As the name suggests this dimension examines how easy it is to comply with the administrative requirements of a tax. The more demands there are on a tax payer, the higher the complexity. For example, in Kenya, businesses have raised concerns about the high number of tax payments they have to make when compared to other countries.
- (iv) Compliance complexity is composed of: Gross business tax compliance costs as a proportion of GDP; the extent of the use of professional tax advisers; and the extent and use of IT in tax administration/business interactions. This dimension examines how easy it is to comply with the requirements of a given tax. For instance, what is the extent of IT usage in submitting returns and paying taxes? the lower the use the higher the compliance complexity.

#### **2.4.2.2 Review of empirical studies on simplicity (non-complexity)**

A review of tax complexity in a comparative study of seven countries by Strader and Fogliasso (1989) suggests that Japan, the UK, France, Italy and the US, all have highly complex tax system. Only Sweden and the Netherlands are considered to have a moderately complex tax system. The complexity in most of those countries is due to the fact that the tax laws are quite lengthy and burdensome. For example Strader and Fogliasso (1989) note that:

*“the current US tax code introduced in 1986 resulted in 2,704 changes in the code, 42 new regulations, 65 announcements and 48 new tax forms. Not only do the tax payer and tax practitioner have a difficult time keeping up with the changes, the IRS itself struggles to keep current. A recent survey found that the IRS gave incorrect answers to 39% of the questions posed by people who called for help with their tax returns.”*

Richardson (2006b) studied 45 countries and found that complexity is the most important determinant of non-compliance, apart from education, income source, fairness and tax morale. His findings were consistent with Cox and Eger (2006) who focused on the State Road Funds in the US State of Kentucky. Cox and Eger (2006) found that procedural tax complexity contributes to an increase in tax non-compliance. In Australia, McKerchar (2005), who carried out a survey among tax agents, noted that tax agents were not happy with the increasing complexity of the tax law. She further claimed that tax agents desired a much simpler tax law, with less regulatory material and ad-hoc change. Similar findings were documented by Kirchler

et al. (2006). He found that taxpayers were more likely to comply when the tax law was perceived as less complex.

### **2.4.3 Operating Costs of Taxation**

The importance of the costs of taxation was raised as early as in Adam Smith's four canons of taxation where he stressed the need to minimise the operating costs involved in raising tax revenues. Over the years several studies have been published on both compliance and administrative costs. Before discussing the subject further, it is important to define the administrative and compliance costs of taxation. Allers (1994) defines administrative costs as "costs incurred by public sector agents in order to administer the tax-benefit system". He then goes on to note that "it is not immediately obvious, exactly, which activities should be attributed to the operation of the system". For example, should the costs of the legislation or the costs of legal disputes, be included within the measure of administrative costs? And how are the costs of some other very obvious elements, such as the depreciation of buildings and other physical infrastructure, to be measured?

Evans and Tran-Nam (2001) limit administrative costs to the costs of running and maintaining revenue agencies, including salaries of staff, and pensions, accommodation and other expenses relating to those staff; administrative costs of legislative enactment relating to the tax system, from initial policy formulation through to statutory or other rule enactment, and the judicial costs of administration of the tax dispute system. Calculations of administrative costs in the majority of the literature have focused on the costs of revenue agencies and have ignored legislative and juridical costs. But Evans and Tran-Nam (2001) advise that there is no inherent reason other than simplicity of measurement as to why this should be the case.

In this research administrative costs are taken to include tax legislative and juridical costs. There is also uncertainty about what should be included in the measurement of taxation compliance costs. Tax compliance costs are those costs "incurred by taxpayers, or third parties such as businesses, in meeting the requirements laid upon them in complying with a given structure and level of tax" (Sandford, Godwin & Hardwick ,1989). Typically, these will include:

- (i) The costs of labour time consumed in completion of tax activities, for example, the time taken by a business person to acquire appropriate knowledge to deal with tax

obligations such as Pay As You Earn (“PAYE”); or the time taken in compiling receipts and recording data in order to be able to complete a tax return;

- (ii) The costs of expertise purchased to assist with completion of tax activities usually the fees paid to professional tax advisers; and
- (iii) Incidental expenses incurred in completion of tax activities, including computer software, postage, travel etc.

For the purposes of this research, the operating costs of taxation are taken to include both administrative and compliance costs. Most of the research on compliance costs has been undertaken in the US, Asia and Europe. Very few published studies on compliance have been done for African countries. The most cited study in Africa is on small businesses in South Africa by Smulders, Stiglingh, Franzsen and Lizelle (2012) who concluded that gross tax compliance costs are regressive. Compliance with VAT represented around 38% of internal time costs, thus confirming previous research that compliance with this type of tax is very costly for the taxpayer.

The vast majority of the studies on compliance costs concentrate on the costs incurred by taxpayers. In contrast, very few studies, for example, Green (1994) and Evans (2003b), consider the perspective of the practitioner, even though practitioner costs have always been a very significant component of the compliance costs incurred by business and non-business taxpayers. It is also surprising how few international comparative studies have taken place over the last 20 years. Some of the national studies contain comparative sections where the outcomes for one country are compared with those in others, for example, Evans, Ritchie, Tran-Nam and Walpole (1997).

The dangers of international comparisons are well known to most researchers. For example, Sandford (1995) identifies a number of reasons why such comparisons are more likely to mislead than enlighten, as a result of differences in the time periods studied, the quality of the data (because of differences in sample frames and response rates), the definitions used, the methods used to estimate compliance costs; and the baseline or units of measurement for international comparisons (for instance the differences in tax structures, tax populations, and tax rates).

#### **2.4.4 International Compatibility**

In tax literature there is no technical definition of the term compatibility, which is sometimes used interchangeably with the term harmonization. The International Tax Glossary of the International Bureau of Fiscal Documentation (IBFD) (Larkin, 2005) defines tax harmonization as “the elimination of differences or inconsistencies between the tax systems of different jurisdictions, or making such differences or inconsistencies compatible with each other”. González Cano (1996) notes that compatibility involves adjusting the tax structure in order to counteract or compensate for the distortionary effects caused by tax burden disparities. Barreix and Villela (2003) explored the plausibility of adding a new feature to the classic four of a tax system (sufficiency, efficiency, simplicity and equity) which is “coordinability”. This can be defined as a tax jurisdiction’s ability to coordinate with the jurisdictions of its main economic partners. From this definition one can conclude that compatibility is also a multifaceted dimension which can take various forms.

According to Velayos, Barreix and Villela (2005), harmonization can take various forms. The first is standardization; this consists of having the same tax in several tax jurisdictions. An example is the adoption of a Common External Tariff (CET) which the East African Countries are trying to implement to promote the movement of goods. The second is compatibility and as the definition suggests this would involve ensuring that the Kenyan tax system is compatible with that of its trading partners, this would involve, for example, the signing of multilateral agreements for the avoidance of double taxation. It is important not only to sign treaties with trading partners but a critical examination of those treaties is important: for example, is one country at a disadvantage compared to the other, are the treaties beneficial at all to Kenyan companies? The last aspect is convergence which would entail a country having clear transfer pricing guidelines to avoid conflict between the revenue authority and companies operating under that authority. In the last one year, several companies in Kenya have been embroiled in transfer pricing disputes with KRA, and it would be important to document the areas of disputes and how they can be tackled.

There is increased tax competition for portfolio investment, qualified labour, financial services, business headquarters, and, most importantly for developing countries, foreign direct investment. This means that taxes do matter, and a country with a tax system which is more punitive than that of competing countries will lose investment opportunities from potential investors

#### **2.4.5 Corporate Characteristics and Compliance Behaviour**

The few studies which have been conducted on corporate tax payers have concluded that non-human factors applicable to corporate taxpayers need to be considered. Factors such as business profile, industry and economic elements (OECD, 2004) may have an influence on corporate compliance. The first empirical study on corporate tax compliance was conducted by Rice (1992), who examined data of small corporations (with assets of between US\$1 and US\$10 million). He reported that compliance is positively related to being a publicly traded company, in a highly regulated industry, where such characteristics which assure public disclosure of information tend to encourage better tax compliance. He also found that the more profitable corporations are relatively less compliant. Rice (1992) also showed that firm size and tax compliance are not positively related but that the higher the amount of a firm's turnover, the greater the reporting gap.

Hanlon, Mills and Slemrod (2007) conducted some exploratory analysis using data sets of audit and appeal records, matched with the tax returns and financial statements of several thousand corporations in the US. Among other variables, the size of a company was found to be positively correlated with non-compliance. However, combined with other information, corporate tax non-compliance is U shaped, suggesting that medium-sized companies have the lowest rate of noncompliance. Blackwell (2000) examined data sets from New Mexico's Department of Taxation and Revenue and that found firms that are larger, older and have less complicated tax situations are more compliant than firms that are smaller, younger and have more complicated tax situations. This study will examine four demographic factors which include: size (turnover), tax liability, ownership structure and length of time the company has been in business. KRA has in the recent past accused multinational firms of non-compliance in terms of transfer pricing and it would be important for the authority to know whether the local companies are more compliant or not in transfer pricing.

## **2.5 Summary of Knowledge Gaps**

Table 2.1 highlights the methodological and contextual gaps that this study addresses. It also points out the focus of this study as follows:

**Table 2.1 : Summary of knowledge gaps**

<b>STUDY</b>	<b>FOCUS OF THE STUDY</b>	<b>FINDINGS AND CONCLUSIONS</b>	<b>KNOWLEDGE GAPS</b>	<b>HOW CURRENT STUDY ADDRESSED THE GAPS</b>
Hanlon, Mills and Slemrod (2007)	The extent and nature of corporate tax noncompliance among large and medium sized companies in the US	Noncompliance as a fraction of a scale measure increases with the size of the company. They also found evidence that incentivized executive compensation schemes are associated with more tax noncompliance.	The study used actual tax compliance data from tax returns was an exploratory study. It did not consider the effect of behavioural factors on tax compliance behaviour.	The current study used survey data and thus examines a different methodology which can be used in tax compliance studies. This study also examined the effect of both economic and behavioural factors on compliance behaviour.
Jabbar (2009)	The influence of tax compliance costs on non-compliance of corporate Small and Medium Enterprises (SMEs) in Malaysia.	The study provided evidence of the influence of tax complexity and probability of tax audit on corporate SME tax non-compliance in Malaysia. Compliance costs, business size, tax level, and managerial perceptions about tax fairness and the Inland Revenue Board (IRB) relationship were found not to influence corporate tax non-compliance.	Although this study sets the stage for further corporate tax compliance studies, generalizations of the findings to Kenya may not be advisable as the operating business environment especially for SMEs are not similar in different countries, SME in less developed countries such as Kenya are characterized by informality and a large shadow economy.	This study examines a wider sample of corporate tax payers, and the findings are quite different from the ones in this study indicating the possibility that country specific variables influence tax compliance.

**Table 2.1: cont'd**

<b>STUDY</b>	<b>FOCUS OF THE STUDY</b>	<b>FINDINGS AND CONCLUSIONS</b>	<b>KNOWLEDGE GAPS</b>	<b>HOW CURRENT STUDY ADDRESSED THE GAPS</b>
Smart (2012)	Application of the Theory of Planned Behaviour (TPB) and structural equation modelling in tax compliance behaviour in New Zealand	Noneconomic variables, such as beliefs and attitudes, are good predictors of tax compliance behaviour. The results also suggest that tax compliance behaviour is complex and different determinants of compliance behaviour affects different sub-groups of taxpayers differently.	The study is on individual tax payers in the context of Malaysia and New Zealand and thus did not include variables such as compliance costs which are more important in the Kenyan context.	This study looks at the applicability of the TPB on corporate tax payers within a less developed country. It extends the TPB by examining corporate variables such size and compliance costs which have an impact on corporate tax compliance behaviour.
Sapiei, Kasipillai and Eze (2014)	Determinants of taxpayer compliance behaviour with respect to corporate income tax reporting requirements in Malaysia.	The findings of this study reveal that business age, tax liability and tax complexity consistently influence the likelihood of tax non-compliance behaviour in the areas of under-reporting income, over-claiming expenses and overall non-compliance. Nonetheless, the tax compliance costs have an insignificant relationship with the non-compliance behaviour of corporate taxpayers.	The study only examines large companies listed on the Malaysian Stock Exchange, and collected data from questionnaires using the survey method only	This study uses adds data from medium companies and even for the large tax payers some companies are listed and others are not listed. This study also utilized data from interviews with a sample of partners from large audit firms in Kenya and thus used a variety of methods to collect and analyse data.

**Table 2.1: Cont'd**

<b>STUDY</b>	<b>FOCUS OF THE STUDY</b>	<b>FINDINGS AND CONCLUSIONS</b>	<b>KNOWLEDGE GAPS</b>	<b>HOW CURRENT STUDY ADDRESSED THE GAPS</b>
Mirza Mohamed (2016)	Import tax compliance of customs agents in Malaysia utilising the theory of planned behaviour.	Psychological, institutional and economic factors, consisting of attitude, ethics, beliefs, sanctions and enforcement, complexity of procedure and quality of tax assessment service, are important in explaining Customs agents' behavioural intention to comply with import tax law	The study was on indirect tax compliance behaviour of individual tax payers and did not incorporate moderating variables which affect corporate compliance behaviour.	This study uses corporate tax payers and examines compliance behaviour from a direct tax perspective and has added more variables to the TPB such as compliance costs and moderating variables to explain the compliance behaviour of this group of tax payers

**Source: Author (2018)**

## CHAPTER 3

### CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

#### 3.1 Introduction

This chapter presents the research hypotheses of this study. The key objective of this research is to determine the factors that affect tax compliance behaviour among large and medium sized business tax payers in Kenya. Section 3.1 presents a discussion of the conceptual framework, Sections 3.2, 3.3 and 3.4 describe the development of the hypotheses in respect of the research model, and the final section 3.5 concludes by providing a summary of this chapter.

#### 3.2 Conceptual Framework

The main objective of this research was to establish the determinants of income tax compliance among large and medium sized business tax payers in Kenya. To meet this objective, the researcher developed a formal conceptual framework which examined in greater detail the relationship between the selected factors: intention to comply and compliance behaviour. The variables in the conceptual framework are discussed below:

##### 3.2.1 Intention to comply

In the TPB, the intention to perform behaviour is motivated by a person's attitude, subjective norms and the perceived behavioural control of that person. Behavioural intention functions as a proxy for actual behaviour in situations when it is difficult to measure actual behaviour (Ajzen, 1991; Armitage & Conner, 2001). Due to the difficulty in obtaining information on actual tax compliance behaviour (which is regarded as a sensitive issue to taxpayers), this study adopts the intention to comply as a proxy for actual compliance. Previous studies in accounting and taxation, such as Bobek and Hatfield (2003), Buchan (2005) and Saad (2011), used a similar approach to treat intention as a proxy for actual behaviour in explaining the influence of the elements in TPB in complying with the tax laws. Ajzen and Fishbein (1980) define intention as a description of the cognitive readiness to perform a behaviour. Intention is the willingness or the effort that individuals exert to perform a specific behaviour (Ajzen, 1991). Therefore, the stronger the intention to engage in a behaviour, the more successful the performance of the actual behaviour in achieving the desired objective. Ajzen (1991) further asserts that intention is the most influential factor in the prediction of behaviour and it is a mediator for attitude, subjective norm and PBC. A mediator, according to Sekaran and Bougie (2011), is a variable that appears between the time the independent variables operate to

influence the dependent variable and the time their impact is felt on it, which means that the influence of attitudes, subjective norms and PBC on behaviour depend on the intentions of a person to perform a behaviour. A meta-analysis by Armitage and Conner (2001), which considers the effect of intention, indicates the predictability of actual behaviour on intention. The analysis demonstrates that intention and PBC have most explanatory power within the TPB framework. Trivedi et al. (2005) and Saad (2011) provide strong support for the connection between intention to comply and actual compliance behaviour. Thus, this study expects intention to be the most appropriate measure for determining business tax payers' compliance behaviour. Intention also acts as a mediator between attitudes, subjective norms and perceived behaviour control, and income tax compliance behaviour, as depicted in the conceptual framework.

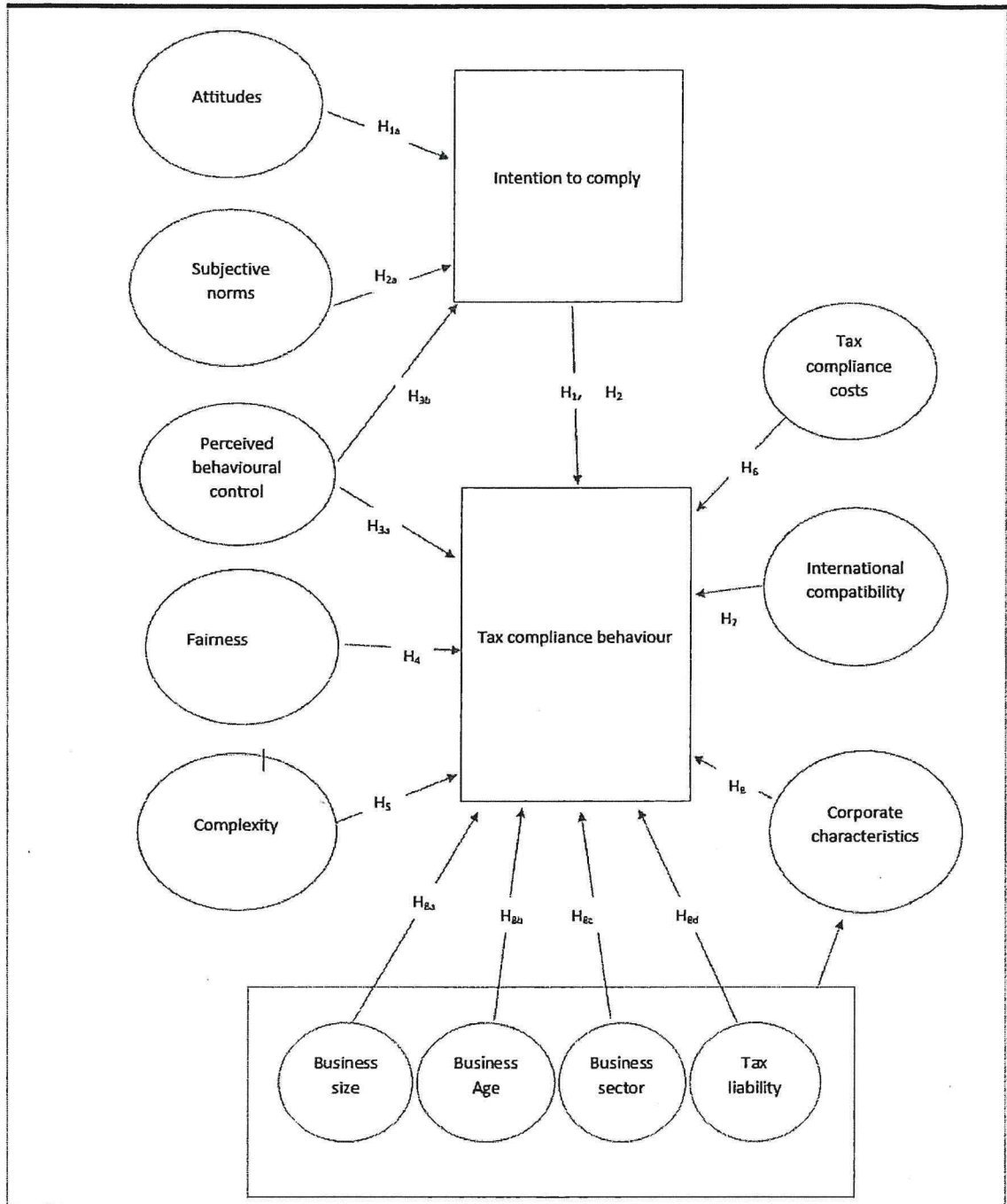
### **3.2.2: Other relevant tax compliance determinants**

The review of past studies in Chapter 2 led to the proposed conceptual framework depicted in Figure 3.1. The conceptual framework proposes that the business tax payers' intention to comply is influenced by their attitudes towards complying with the tax laws, the influence of subjective norms (important others), the perceived behavioural control and their perception of the four tax system variables.

PBC is considered to influence behaviour both directly and through behavioural intentions, and includes all anticipated impediments and obstacles with respect to performing the behaviour of interest. This may include the availability of resources, skills, confidence and the ease or difficulty of performing or refraining from the behaviour and anticipated obstacles. The TPB assumes that the control component will predict behavioural intention, and in situations where the amount of actual control an individual has over the behaviour can be correctly predicted, it will also predict behaviour directly. The path from PBC to behavioural intention reflects the motivational influence of control on the target behaviour, through intentions (Madden et al., 1992). The direct path between PBC and behaviour reflects the actual control a person has over performing the target behaviour (Madden et al., 1992). If people perceive that they have limited control over the behaviour of interest, then their intention to perform that behaviour may be low, even if attitude towards the behaviour and subjective norms are favourable. This suggests that if attitudes and normative influences are strong, PBC may be less useful in predicting intentions (Ajzen, 1991). Ajzen (1991) adds that the magnitude of the relationship between PBC and behavioural intention is dependent upon the type of behaviour and the nature of the situation. Generally, if individuals believe that the target behaviour is achievable, they are more

likely to attempt to engage in that behaviour. In this study therefore, the PBC can affect compliance behaviour directly.

**Figure 3.1: Conceptual framework of business taxpayers' compliance behaviour.**



Source: Author, 2016

The moderating variables are also expected to affect compliance directly by enhancing or reducing the expected behaviour. For example, we expect that as the company ages, it becomes more compliant, as it becomes more familiar with the legal tax requirements of a company; on the other hand it can engage in aggressive tax planning which may lead to a reduction in compliance. Eze, Sapiei, Kasipillai & Uchenna (2014) found evidence of a significant influence of business age and tax liability on taxpayer non-compliance behaviour. In terms of business age, the possibility of non-compliance decreased the longer a company had been in operation. It is inferred that companies that have been in operation longer are more compliant than their younger counter-parts. The other two variables are expected to affect compliance indirectly through intention to comply.

### **3.3 Hypotheses Development**

#### **3.3.1 Attitude towards Tax Compliance**

Attitudes can influence a person's intention by increasing the person's motivation to engage in a particular behaviour. That is, individuals are more likely to engage in behaviours that are perceived to have favourable outcomes for them, and are less likely to engage in activities that are associated with unfavourable outcomes. Attitudes based on non-legal sanctions include measures of guilt feelings, sense of civic duty and moral values. These are collectively referred to as tax morale, and are considered to have significant influence on tax compliance behaviour (Kirchler, 2007; Kornhauser, 2007; Torgler, 2007). Attitudes based on legal sanctions include measures of perceived probability of detection, perceived certainty of punishment and perceived severity of penalties. A majority of the available literature on tax compliance, based on the economic models of tax compliance, report a significant relationship between these elements of legal sanctions and tax compliance behaviour (Jackson and Milliron, 1986; Maciejovsky, Kirchler & Schwarzenberger, 2001). The prediction is that taxpayers with a positive attitude (based on informal or non-legal sanctions) towards tax compliance are more likely to develop strong intentions to comply with their tax obligations. Conversely, taxpayers with a positive attitude based on effects of formal (or legal) sanctions will not have any significant effect on behavioural intentions. This is reflected in the following two alternative hypotheses, which propose to test the relationships between attitudes and intentions to comply:

- H<sub>1a</sub>: Positive attitudes towards tax compliance will positively influence behavioural intentions.
- H<sub>1b</sub>: Positive attitudes towards tax compliance will significantly affect tax compliance behaviour.

### **3.3.2 Influence of Subjective Norms**

Subjective norms refer to the social pressure that an individual faces whether to perform a specific behaviour or not. According to Ajzen (1991), human beings form their beliefs from people important to them, whether these people approve of or disapprove of their behaviour, and whether these “important other” themselves perform the behaviour. The TPB postulates that if important others approve of or perform the behaviour, there is a high possibility that an individual might also perform the behaviour. Literature review suggests that previous studies have documented mixed findings on the influence of subjective norms. This is possibly because the concept of ‘norm’ itself is difficult to operationalize (Kirchler, 2007). While there is considerable evidence from other tax jurisdictions on the influence of the subjective norm in tax compliance, little is known about this relationship in Kenya. Hence, this study proposes the following alternative hypotheses:

H<sub>2a</sub>: Positive subjective norms will positively influence behavioural intentions.

H<sub>2b</sub>: Positive subjective norms will positively influence tax compliance behaviour.

### **3.3.3 Perceived Behavioural Control and Tax Compliance**

The TPB posits that an individual’s behaviour can be predicted by the individual’s appraisal of his or her ability, and the perceived ease (or difficulty) in performing (or refraining from or avoiding) the target behaviour (Ajzen 1991). Control is achieved by having the relevant skills, opportunities, resources and the absence of any obstacles in performing the desired behaviour (Madden et al., 1992). Those with the structural opportunity have more control over their income, and therefore will have a higher level of control over their tax reporting behaviour (Slemrod, 2007; Warneryd & Walerud, 1982). Income subject to third party reporting or income visibility can exert a significant influence on compliance (Carnes & Englebrecht, 1995; Kagan, 1989). A highly visible income stream would impede or represent an obstacle to any noncompliant intentions. Warneryd and Walerud (1982) suggest that financially distressed individuals are more likely to engage in tax evasion than those experiencing less or no economic strain. The lack of funds to pay taxes would inhibit or present an obstacle to any compliance intentions taxpayers may have. Studies have also demonstrated that financial constraints have a direct and strong influence on the compliance behaviour of self-employed taxpayers (Loo, Mckercher & Hansford, 2008). Therefore, the greater the person’s beliefs about the presence of factors that may impede noncompliant behaviour, the greater will be the likelihood of them complying with the tax laws. This prediction is stated formally in the two

following hypotheses, which test the relationships between PBC and behavioural intentions, and between PBC and behaviour:

H<sub>3a</sub>: Lower degrees of perceived behavioural control will negatively influence behavioural intentions to comply.

H<sub>3b</sub>: Lower degrees of perceived behavioural control will negatively influence tax compliance behaviour.

### **3.4 Perceptions of the Tax System**

#### **3.4.1 Fairness**

Fairness or equity is a key issue in designing a tax regime, but what is considered equitable or fair by one person may differ from the conceptions held by others. While previous studies indicate differences in fairness perceptions between countries, it is difficult to directly compare the fairness perceptions due to differences in tax jurisdictions, time period, methods adopted, sample selection and measures used in each study. Gerbing (1988) observes that tax fairness is a multidimensional construct, and existing tax fairness literature suggests that there are four tax fairness dimensions: horizontal equity, vertical equity, exchange equity, and procedural fairness. Their relationship with tax compliance has been extensively discussed in chapter 2. These four dimensions will be used to assess fairness in this study.

H<sub>4</sub>: The four dimensions of tax fairness significantly affect the income tax compliance behaviour.

#### **3.4.2. Complexity**

Richardson (2006a) studied 45 countries and found that complexity is the most important determinant of non-compliance, apart from education, income source, fairness and tax morale. His findings were consistent with (Cox & Eger, 2006; Kirchler et al., 2006; McKerchar, 2005). However, White (1990) asserts that both the tax authority and tax professionals (tax lawyers and tax accountants) prefer complexity in the tax law but at different levels. The tax authority prefers tax complexity that will increase their probability of winning cases in disputes, while tax lawyers, on the other hand, are in favour of tax complexity that gives rise to a higher probability that the taxpayers will win the case. Similarly, tax accountants' preferences are also towards a high level of tax complexity as it will increase the demand for their tax services. Despite these differing levels of desired complexity, literature from chapter 2 supports the fact that taxpayers were more likely to comply when the tax law is perceived as less complex. For purposes of this study this concept will be hypothesized as follows:

H<sub>5</sub>: The level of tax simplicity is positively correlated with tax compliance.

### **3.4.3 Operating Costs of Taxation**

The measurement of estimated tax compliance costs in this study, used the methods employed by researchers who have carried out studies in this field such as Evans, Tran-Nam and Walpole (1997), Pope (1995), and Evans and Tran-Nam (2010). Most of these studies agree that a lower operating cost is positively correlated with compliance as hypothesized below:

H<sub>6</sub>: Operating costs of taxation have a significant influence on income tax compliance.

### **3.4.4 International Compatibility**

Although there is no technical definition of international compatibility, increased globalization of the business environment has made this factor important, given the evidence of transfer pricing, profit shifting, international tax evasion and so on. During the interview with tax experts this was identified as an important factor in tax compliance, especially for multinational firms. The inclusion of this variable, although not well researched in tax compliance literature, will add to tax compliance knowledge.

H<sub>7</sub>: International tax compatibility significantly affect income tax compliance behaviour.

## **3.5 Corporate Characteristics and Compliance Behaviour**

A review of past literature in chapter 2 identified some corporate characteristics such as size and age, as determinants of corporate taxpayer compliance decisions although the results were mixed. For example, Rice (1992) did not find a relationship between firm size and tax compliance. However, Hanlon, Mills and Slemrod (2007) observed that the non-compliance rate for corporations, relative to their size, was U-shaped: larger companies were observed to be more non-compliant than their smaller counterparts, but medium-sized companies had the lowest non-compliance rate. According to the authors, the unexpected finding was connected with the opportunity for non-compliance. Other researchers such as Blackwell (2000) found firms that are larger, older and have less complicated tax situations are more compliant than firms that are smaller, younger and have more complicated tax situations. Although limited the studies have identified some of the corporate characteristics that affect compliance behaviour. The results also highlighted that the significance of the relationship between the determinants and tax compliance behaviour should be confirmed through empirical work in other tax jurisdictions. Four demographic factors which include (i) size (turnover), (ii) tax liability, (iii) ownership structure and, (iv) length of time the company has been in business, will be examined in this study as identified from the literature review:

H<sub>8</sub>: There is a relationship between corporate characteristics (firm size, age, sector and legal Structure) and the tax compliance of business taxpayers.

H<sub>8a</sub>: There is a significant positive relationship between business size and income tax compliance of business taxpayers.

H<sub>8b</sub>: There is a significant relationship between business sectors and the income tax compliance of business tax payers.

H<sub>8c</sub>: There is a significant positive relationship between business age and the income tax compliance of business tax payers.

H<sub>8d</sub>: There is a significant negative relationship between business tax liability and the income tax compliance of business taxpayers.

### **3.6 Chapter Summary**

This chapter presented the theoretical framework and the development of the research hypotheses to be tested. The discussions presented the TPB, the theoretical characteristics of the components of the TPB, and the proposed effects of these components on behavioural intentions and behaviour. Further, this study will also examine the contribution of a number of other elements outside the TPB in predicting tax compliance behaviour. A number of hypotheses testing the influence of the TPB elements and other compliance determinants on compliance behaviour were proposed in this chapter.

## CHAPTER 4

### RESEARCH METHODOLOGY

#### **4.1 Introduction**

Leedy (1993) defines research methodology as the framework within which facts are placed so that meaning can be extracted from them. Leedy and Ormrod (2005) further state that the core of any research is its methodology. A research methodology is important since research can be successful only if it is properly planned, structured and implemented. Section 4.2 of this chapter examines the various philosophical approaches used in research and a justification for the approach selected for this study is provided. Sections 4.2.1 and 4.2.2 will discuss the ontological and epistemological approaches used for the purpose of this research. The rest of the chapter discusses the methodology that will be used to conduct the research, including the sample selection, data collection methods, data analysis and testing.

#### **4.2 Philosophical Approach**

The first step in any social research is to explain the research paradigm being used and justify its use compared to other approaches within social research. Two major research philosophies have been identified in social science research, namely positivist and interpretivist (Levin, 1988). Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Levin, 1988). To a positivist, knowledge is derived from the direct measurement of phenomena; the object being studied is independent of the researcher (Krauss, 2005), which underlies the quantitative approach in data collection and measurement. Philips and Burbules (2000) note that in this approach a researcher begins with a theory, collects data that either supports or refutes the theory and then makes necessary revisions and conducts additional tests.

However, in recent years there has been debate on whether human behaviour in the social world and in natural science should be viewed from the same approach. There is thus an argument for a different approach to examine the social world. Interpretivism is the paradigm that recognizes the existence of subjective meanings in understanding phenomena by acknowledging the differences between humans (Brand, 2009). Hudson and Ozanne (1988) observe that the goal of the interpretivist researcher is to understand and interpret human behaviour rather than to generalize and predict causes and effects. For an interpretivist researcher, it is important to understand motives, meanings, reasons and other subjective

experiences which are time and context bound (Hudson & Ozanne, 1988). Interpretivism is normally associated with the qualitative approach (Brand, 2009) as it allows for an interaction between the researcher and the subject being examined.

Several researchers have advocated for mixed methods which draw from both quantitative and qualitative assumptions in order to benefit from the strengths and minimize the weaknesses of both (Tashakkori & Teddlie, 2003). Onwuegbuzie and Leech (2004) advocate for a mixed methods research as a third research paradigm that can offer a method and philosophy that attempts to fit together the in-sights provided by qualitative and quantitative research into a workable solution. One approach commonly used and favoured in research enquiry using the mixed method approach is the pragmatic approach supported by Johnson and Onwuegbuzie, (2004), Johnson et al. (2007), Creswell (2009), and Feilzer (2010). In this approach a researcher is free to choose the methods, techniques and procedures of research that best suit his/her needs and purpose (Feilzer, 2010). The subject of taxation is multi-disciplinary attracting researchers from various disciplines such as law, accounting, economics and political science, and thus the tax researcher should be open to various methods of research (McKerchar, 2008). Although most of the studies in taxation follow a positivist approach, this thesis was based on the pragmatic approach as taxation is a subject that reflects the social and political aspirations of a society and thus this approach was selected to put the subject in context. In addition, applying the pragmatism paradigm for this study allowed the researcher to use a quantitative method (survey) and a qualitative method (interview), which provided a more comprehensive understanding of the issue under study.

#### **4.2.1 Ontological Approach**

Burrell and Morgan (1979) observe that all approaches to social science are based on an interrelated set of assumptions regarding ontology, human nature and epistemology. Morgan and Smircich (1980) built on this idea and argued that researchers need to figure out their assumptions about the nature of social reality and what it means to be human (ontology) and the nature and purpose of knowledge (epistemology) before deciding which research methods might be appropriate. They provided an overview of this relationship based on a continuum which had subjectivist-objectivist extremes.

According to Morgan and Smirchich (1980) subjectivist assumptions view reality as imagined and therefore a product of the human mind and that knowledge is personal and experiential and therefore research methods need to explore individual understandings and subjective

experiences of the world. On the other hand, objectivist assumptions hold that reality is a concrete given, something that is external to, imposing itself on, and even determining individual behaviour. Cunliffe (2011) observes that researchers make choices about whether to take an objectivist approach focusing on structures, actions, systems, and processes or a subjectivist approach focusing on how people give meaning to, interact with, and construct their world.

In this study of tax compliance, at the objectivist end of the typology, the researcher would be interested in observing behaviour with the aim of determining the effect of one's perception of the tax system on compliance. This assumption would mean that the researcher can accurately measure the tax payer's behaviour and its effect on compliance. This assumption is rigid and inflexible. On the subjectivist extreme the researcher would explore the interrelation between the tax payer, tax laws and the tax authorities and make conclusions about the nature of these relationships. This assumption makes it difficult for the researcher to make concrete conclusions about these relationships as they will be ever changing.

The ontological assumption taken in this research therefore lies in the middle of the objectivist and subjectivist extremes. This research assumes reality as a social construction (Morgan & Smirchich, 1980). It is a change in epistemology that reflects a move away from a conception of the world as a machine, or closed system, to a conception of the world as an organism, an open system which calls for different modes of research as a means of generating knowledge. This approach assumes that human beings influence and are influenced by their environment. This assumption was adapted for this study because tax compliance as an area of study examines the relationship between tax payers and the tax system and how the design of the tax system affects the tax payer's decisions.

#### **4.2.2 Epistemological Approach**

According to Morgan and Smirchich (1980), an objectivist view of the social world encourages an epistemological stance that emphasizes the importance of studying the nature of relationships among the elements constituting that structure. Knowledge of the social world from this point of view implies a need to understand and map out the social structure, and gives rise to the epistemology of positivism. Objectivist research also tends to take a macro perspective studying organizations at a structural, strategic and societal level and drawing generalizations about group and individual behaviour (Scherer & Palazzo, 2007). Subjectivist researchers embrace ethnographic, dialogic, hermeneutic, constructivist and phenomenological

approaches to research. They may focus on micro-interactions (e.g., senior management strategy team meetings, work interactions) or more macro level organizational and societal discourses and their impact (Scherer & Palazzo, 2007).

This research embraces an epistemology in the middle of the continuum with objectivist and subjectivist extremes. The ontology of reality as a concrete process supports an epistemological position which stresses the importance of the monitoring process; the manner in which a phenomenon changes over time in relation to its context (Burns & Stalker, 1961; Emery & Trist, 1965). This epistemological stance calls for different modes of research as a means of generating knowledge. This research used both positivism and interpretivism as discussed in 4.2, because the subject matter of taxation lend itself to social reality with multiple relationships between the government, business entities, audit firms, different corporate cultures etc. However, taxation also has observable characteristics which lend themselves to testable hypotheses. For example, a researcher can monitor the behaviour of a tax payer through tax returns and test whether he is compliant or not. Thus it was deemed appropriate to use both quantitative and qualitative data in order to adequately address the subject matter.

### **4.3 Research Design**

In one part of the study a cross-sectional survey was selected. This research design was selected because it enabled the researcher to collect data across different firms. This data was then then used to identify the determinants of tax compliance behaviour among LMBTs. The other reason for selecting this design was because the researcher intended to collective descriptive data that would be accorded statistical analysis for hypothesis testing to come up with objective conclusions (Cooper &Schindler, 2011).

The second part of the research involved incorporating quantitative and qualitative elements using the survey and interview methods of enquiry. The different approaches used allowed the researcher an opportunity to include divergent views which could lead to a deeper and comprehensive understanding of the tax compliance behaviour of business tax payers in Kenya. McKerchar (2010) suggests that the use of mixed methods (qualitative and quantitative methods) in tax compliance studies could address different objectives, of the study which cannot be achieved by a single method, inform one approach from the other at the design or data interpretation stage, and compare findings from multiple approaches.

Johnson and Onweugbuzie (2004), Onweugbuzie and Collins (2007), and Creswell and Clark (2011) agree that before a researcher selects a mixed methods research design he should consider several factors, such as the timing of conducting the study, the weight to be given to each quantitative and qualitative strand, the choice of subjects as samples for the study, and the interpretation of the findings. In this study the convergent parallel design was selected, where a researcher collects and analyses two independent strands of quantitative and qualitative data at the same time in a single phase. The quantitative data and analysis offer a general view of the issue being examined, while the qualitative data and analysis refine and provide further insights into the quantitative phase (Harrison, 2013). Data collected from the survey offered a general overview of compliance behaviour of business tax payers in Kenya and was subjected to quantitative analysis. Information from the interviews with the tax consultants provided a deeper understanding of the issues raised from the survey of the business tax payers.

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## **4.4 Quantitative Testing and Analyses**

### **4.4.1 Population for the Study**

Zikmund (2003) defines a population as being any complete group or collection of items under consideration for the research purpose. Such a group or a collection has similar characteristics or homogeneity easily identifiable. The population for this study included three categories of tax payers; Large sized tax payers, medium sized tax payers, and tax audit firms (who are tax payers and also tax consultants in Kenya). The Kenya Revenue Authority (KRA), the tax authority in Kenya, defines large tax payers as those with an annual turnover of Kshs.750 million and above, and provides a comprehensive list of all large companies. As of 1<sup>st</sup> May 2014, 1,315 companies, were registered as large tax payers. These companies pay 75% of the taxes collected from business (KRA, 2015). The tax authority defines a medium tax payer company as one with an annual turnover of between Ksh.350 million and Kshs.750 million. As of 1<sup>st</sup> May 2014, KRA had 1,538, companies registered as medium sized tax payers. These two groups of taxpayers are spread over 15 different sectors of the economy, consisting of private and public businesses, parastatals and government owned companies. This target population was viewed as an adequate representative of the corporate world in Kenya.

Ten audit firms were also targeted. This sample was identified by the respondents by indicating their external tax auditor during the survey. Audit firms usually prepare tax returns for their tax clients as well as giving them advice on how to comply with tax laws and thus possess extensive experience and knowledge on tax matters. The opinions of this population will provide a deeper insight of tax compliance behaviour of the corporate tax payer in Kenya.

### **4.4.2 Sampling Method**

A sample has been defined as a subset or a group of carefully selected participants with the characteristics of the population under study which it represents (Cooper and Schindler, 2008

p.717). It is important to ensure that the selected sample is adequate and sufficient to increase the accuracy and quality of research (Bartlett, Kotrlík and Higgins, 2001). There are various ways to determine the appropriate sample size, for instance, variance estimation and error estimation (Cochran, 1963; Krejcie and Morgan, 1970; Yamane, 1967). In this study, the sample size was determined using the sampling formula by Yamane (1967) expressed as follows:

$$n = N / [1 + N (e)^2]$$

Where “n” represents the sample size, “N” is the total population, “e” is the standard error which depends on the required confidence level selected for the study. If the confidence level is 95 percent, then the e value would be 0.05. A significance level of 0.05 has been established as a generally accepted level of confidence in most behavioural sciences (Corbin, 2008; Hill, 1998) and is thus assumed for this equation. When applying this formula to obtain the sample size from a population of 2,853 (total large and medium size tax payers) results in a recommended sample size of 350. The calculated sample size of 350 is cross-referenced with the sample calculation provided by Krejcie and Morgan (1970, p.608) who provide a table which guides on a minimum sample given the population. For a population of between 2,900 and 3,000 a sample of 341 is recommended which is close to the selected sample of 350. 350 consent forms (150 large tax payers and 200 medium tax payers) were randomly sent to the various respondents. From the population of the medium and large tax payers, approximately 45% are large and the rest are medium tax payers. These percentages were used to select the companies to be sampled. 52 businesses indicated that they do not wish to participate in the survey, the researcher thanked them for their response and no further contact was made. 48 businesses did not respond within the time period of one month even after several calls; the researcher did not send them the questionnaire. An effective sample of 250 was then adopted. The researcher then sought to obtain responses from 115 large-sized firms and 135 medium-sized firms<sup>1</sup>.

#### 4.4.3 Method of Data Collection

Data collection is the process of gathering the required information in order to achieve the research’s primary and secondary objectives. The choice of data collection method to use depends on the researcher’s intended goal. In the field of tax compliance research, surveys are

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<sup>1</sup> The sample of large firms to be targeted for the study is obtained by multiplying the proportion of large firms in the population by 250, i.e.  $(1,315/2853)*250$  which yields 115 firms. Similarly, Medium-sized firms sample is obtained by multiplying their proportion in population by 250.

commonly used as the main method of data collection, given the ability of surveys to elicit responses on unobservable measures used to study compliance behaviour (Andreoni, James, Erard, Brian & Feinstein, Jonathan, 1998). This method is considered to be the most economical and feasible method (in comparison to other methods) to elicit the views of a large number of participants on a nationwide basis (Sandford, 1995). In this study the survey method was also selected due to unavailability of actual compliance data. The Kenya Revenue Authority does not provide actual compliance data due to confidentiality laws which protect tax payers. Further, the survey methodology enables researchers to transfer and apply the knowledge gained from a representative sample to a larger target population (Creswell, 2003).

Survey data can be obtained in different ways, which include interviews (either face-to-face or telephone), questionnaires (either administered personally, by mail, e-mail or web) and panel discussion groups. Due to technological advancements the electronic survey is considered more convenient to use than the mail survey. Possible advantages of using the Internet include cost savings related to eliminating the printing and mailing of survey instruments (Cobanoglu, Moreo & Warde, 2001), as well as time and cost savings in having the responses in an electronic form ready for analysis. However, weaknesses of mail surveys are that they are distinctly centred on the response rate and the quality of responses (Evans et al., 1996; Kerlinger and Lee, 2000; Miller, 1991).

Dennis (2003) advocates for four specific measures to reduce the nonresponse rate, namely (i) follow-ups and reminders, (ii) monetary incentives, (iii) university sponsorship and (iv) stamped return envelopes. Sandford (1995) suggested additional methods, such as the backing of relevant people and organisations, promising confidentiality and anonymity and using a telephone reminder. In this study, the email was selected to administer the questionnaire. The issue of nonresponse rate was encountered in this study and to improve the response rate several methods were adopted. The first was to use the respective companies' external auditors to urge the respondents to complete the questionnaire. External auditors command professional respect and trust in the companies they represent. This improved the response rate immediately. This was followed by several telephone reminders which also helped especially for those very busy employees who easily forget such tasks which do not form part of their core duties. Lastly before any questionnaire was sent a promise of confidentiality was attached to the questionnaire and the assurance that the data collected would be used only for this particular research.

To improve the quality of responses, Sandford (1995) suggested a raft of measures including: (i) clear wording of the questions; (ii) promising confidentiality and anonymity; (iii) carrying out a pilot survey very carefully; and (iv) appropriate timing of the survey. Pope (1995) emphasised a number of other specific aspects which include: (i) discussing the questionnaire with tax experts, tax officials and tax academics; (ii) investigating attitudes and opinions (using a five-point or seven-point Likert scale); (iii) offering respondents an opportunity to express their views (by asking a few open-ended questions at the end of the questionnaire); and (iv) also giving respondents the option of providing their contact details. To address the issue of quality, 3 partners of audit firms and three tax managers in three different companies were used to help in the design of the questionnaire. They also filled the initial questionnaire. Their comments were then used to develop the final questionnaire. A seven point Likert scale was used in this study with several open ended questions where the respondents expressed their opinions. The problem of quality was not a major issue in this study as most of the respondent were experts in tax compliance matters.

In addition to the survey instrument, data was collected through interviews due to the sensitivity of the data being collected. The use of interviews is appropriate in obtaining either multifaceted or sensitive information, as well as understanding concepts which require elaboration (Hair, Money, Samouel, & Page, 2007). Tax compliance data is considered sensitive information by business people and thus this approach was considered suitable. Qualitative data also provided in-depth insight into the data collected by the survey instrument. Kilpatrick, Ruggiero, Acierno, Saunders, Resnick and Best (2003) identified three different categories of interviews: (i) structured; (ii) semi-structured; and (iii) unstructured or in-depth interviews. The different types of interview serve different purposes of studies. In structured interviews the questions are fixed and asked in a specific order. The advantages of this kind of interview method includes lower levels of item nonresponse and the ability for an interviewer to mitigate inappropriate responses (Fowler et.al., 2002). However, structured interviews, do not benefit from the flexibility of response that open questions permit (Smith, 2003). Semi-structured interviews are often used when the researcher wants to delve deeply into a topic and to understand thoroughly the answers provided (Fowler et.al., 2002). This interview method was selected as it allows the researcher freedom to vary questions from one respondent to the other and therefore seek clarification on several issues which may emerge. In addition, the semi-structured interview was also used to discover if there were any other factors that which were

not highlighted by the survey which may influence business tax payers as they strive to comply with tax laws in Kenya.

#### **4.4.3.1 Procedures used in data collection**

Bryman and Bell (2011) note that there are two types of online surveys: electronic mail (email) and web-based surveys. In an email survey, the questionnaire is sent to the respondents via email, either as an attachment or embedded in the email itself. The respondents state their responses in the attachment file and return it to the sender as an attachment. In this study an introduction email was sent to 250 potential respondents explaining the purpose of the study, confirming the anonymity of the survey answers and confirming the relevant ethical clearance. The respondents were given two weeks to provide their responses and in an effort to increase the response rate a reminder email was sent to all potential respondents after a week. Two weeks after sending the questionnaire the researcher made telephone calls to follow up with the potential respondents. Due to the slow response, the researcher sought the help of their external tax agents for the various companies to encourage their clients to respond. Some of the survey respondents preferred to print out the questionnaire, fill it out and have it collected by the researcher. After contact by the external tax adviser several businesses filled the questionnaire, others requested for more time, upon which the researcher increased the time to a further two weeks. The response rate improved to over 40%, which was quite good for a study on tax compliance. For example, in a recent online tax compliance survey among small business taxpayers in Australia, Lignier and Evans (2012) obtained a response rate of only around 4.5 percent.

Interviews were conducted upon completion of the survey. From the questionnaires only six different audit firms were mentioned by the tax payers as being tax advisers. Some of the businesses did not utilize the services of external tax advisors. The six external tax advisors were requested through email for an interview; two declined. Tax partners in the four largest audit firms in Kenya accepted to be interviewed. These firms, Deloitte & Touche Ernst & Young, KPMG, and PriceWaterhouseCoopers, control more than 80% of the tax audit work in Kenya. Before the start of the interview, the researcher briefly explained to the interview participants about the objective of the study, the interview process, and asked for their consent to have the interview recorded. The interview was recorded using an audiotape and this allowed the researcher to concentrate on questioning and listening during the interview. The recordings of the interviews provide opportunities for a more thorough examination on the information

which could lead to more accurate findings (Bryman & Bell, 2011). The interview queried the factors that affect income tax compliance behaviour as identified in the conceptual framework.

#### 4.4.4 Construct Validity and Reliability Tests

For research constructs to be considered credible, the constructs must be reliable and valid. To be considered credible, a construct must be able to give the expected results without significant errors. Validity has been defined as “*the ability of a construct’s indicators to measure accurately the concept under study*” Hair et al. (1998, p.584).). Validity ensures that the data collected reflects what is being studied, Collis and Hussey (2003, p.186) and adequately reflects the real meaning of the concept under consideration. Validity can be classified as content validity, criterion validity, construct validity, and face validity (Turocy, 2002). Content validity examines whether a given measure incorporates all aspects or content of a construct under study. Criterion validity demonstrates the accuracy of the measure, by comparing it with an already tested and valid instrument or another external accepted criterion.

Construct validity, denotes “the degree to which an operational measure correlates with the theoretical concept investigated”. Construct validity provides the researcher with confidence that a survey actually measures what it is intended to measure (Turocy, 2002). Face validity is the evaluation by both experts and sample participants to determine if they believe that an instrument measures what it is intended to measure. Face validation is subjective and the weakest of the assessment methods scientifically; however, it is essential in the development of a valid survey tool. Face validity helps to ensure that the instrument will be acceptable to “those who administer it, those who are tested by it, or those who will use the results” (Turocy 2002). Of all the above measures, construct validity is considered the most complex.

Hair *et al.*, (2006) state that reliability denotes the extent to which a particular test’s results are consistent and accurate over time. Such results should be identical if repeated in similar conditions. Kirk and Miller (1986) have identified three types of reliability: (i) the degree to which a given measurement repeatedly give the same results; (ii) the stability of a measurement over time; and (iii) the similarity of measurements within a specified period. Having discussed both the validity and reliability measures of constructs, it is important to consider their application to the current study. According to Hair et al. (2006), one of the most common and popular measures of validity and reliability is using the Cronbach coefficient (alpha). The measure examines how homogenous and reflective a tool is in relation to the underlying

constructs. In this study the Cronbach coefficient alpha was used to determine the validity of the various constructs in the questionnaire. The use of Cronbach-alpha coefficient analysis has been widely used as a measure of construct reliability and validity. Accordingly, a Cronbach coefficient alpha (CA) of 0.70 or above is considered good reliability while one of 0.80 is considered even better (Hair et al., 2006). Likewise, when the Cronbach coefficient alpha is between 0.60 and 0.70, reliability is acceptable only if other indicators are good. Results on the alpha scores are presented and discussed in Chapter 6. Open-ended interviews were taped and the tapes carefully labelled to ensure reliability of the data gathered using interviews.

## **4.5 Data Analysis**

### **4.5.1 Introduction**

After data was collected, the quantitative data was analysed using Structural Equation Model (SEM) program, which has been cited in literature as appropriate for testing relationships among multiple independent and dependent constructs (Gefen, Straub, & Boudreau, 2000). SEM advocates for use of large samples for ease of analyses and robustness of results. Farrington (2009, p.362) observed that when using SEM, the sample size should not be small, as the model relies on tests which are sensitive to sample size as well as to the magnitude of differences in covariance matrices. In a survey of 72 SEM studies Farrington (2009) shows that researchers recommended an average sample size of 198 for better results which is consistent with recommendation of Loehlin (1992) who suggests a sample size of between 100 and 200. In supporting this view, Kline (1998) notes that a sample with less than 100 respondents would be untenable in SEM.

### **4.5.2 Structural Equation Model of Analysis**

The Structural Equation Model (SEM) is a multivariate statistical approach created by Jöreskog (1973). Unlike other widely used methods (such as multiple regression, multivariate analysis of variance and factor analysis) which can examine only a single relationship at a time, SEM combines factor analysis with multiple regressions, which facilitates the investigation of a series of dependent relationships (Hair *et al.*, 2006). The technique is a multivariate approach that allows researchers to concurrently examine both measurement and structural components of a model by testing the relationships among multiple independent and dependent constructs. According to Haenlein and Kaplan (2004, p.286), SEM identifies the measurement model and underlying variables by “*converting theoretical and derived concepts into unobservable*

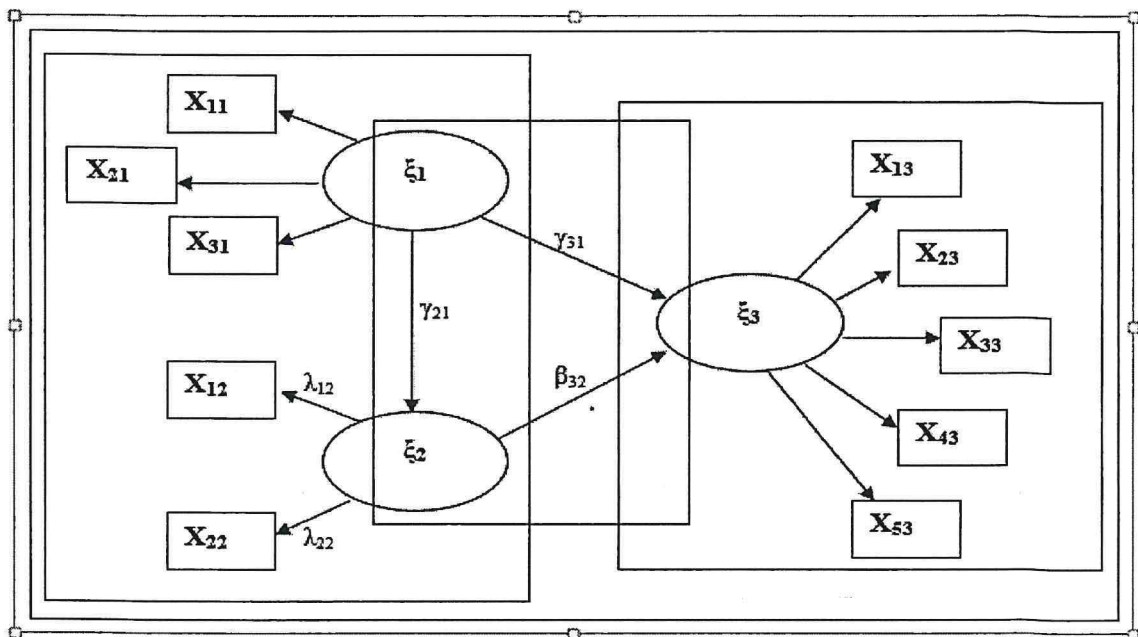
(latent) variables, and empirical concepts into indicators, which are linked by a set of hypotheses.” This technique encompasses confirmatory factor analysis, path analysis and multiple regression components, thus making it the dominant multivariate technique in modern research (Cooper & Schindler, 2008).

The study has several latent independent variables and a dependent variable which will be measured using several constructs. In this regard, SEM analysis is the ideal method for analysing the quantitative data, specifically to test the research hypotheses. The choice of SEM is also supported by a number of reasons which are desirable for this study. For instance, Fornell (1982) and Haenlein and Kaplan (2004) observe that SEM allows researchers to explicitly model measurement error for observed variables; incorporate abstract and unobservable constructs (latent variables) measured by indicators; simultaneously model relationships among multiple predictor and criterion variables; and combines and tests a priori knowledge and hypotheses with empirical data. In addition, SEM is able to express complex variable relationships through hierarchical or non-hierarchical, and recursive or non-recursive structural equations to present a more complete picture of the entire model. The complex network analysis facilitated by SEM characterizes the real world situation better than correlation-based models. In this regard, it is best suited to serve both theory and practice (Barroso, Carrión, & Roldán, 2010; Gefen et al., 2000). Although SEM is a strong analytical model, like any other model, has limitations which the researcher has to keep in mind. These limitations are discussed in section 4.5.3. A SEM model facilitates the evaluation of the measurement and structural models in a single systematic and comprehensive analysis (Barroso et al., 2010; Gefen et al., 2000). This evaluation allows measurement errors of the observed variables to be analysed as an integral part of the model and factor analysis to be combined in one operation with the hypothesis testing (Gefen et al., 2000). The model usually presented in a diagram where the names of the measured variables are within rectangles and the names of factors/ latent variables in ellipses. Rectangles and ellipses are connected with lines having an arrowhead on one (unidirectional causation) or two (no specification of direction of causality) ends.

Figure 4.1 illustrates the relationship between a measurement model and the structural model in the SEM framework adopted from Chin (2009). The latent variable  $\xi_1$  is the unobserved variable implied by the covariance among the measured block of indicators  $X_{11}$ ,  $X_{21}$  and  $X_{31}$ . Similarly, the latent variables  $\xi_2$  and  $\xi_3$  are measured by their associated observed measures;  $X_{12}$  and  $X_{22}$  and  $X_{13}$ ,  $X_{23}$ ,  $X_{33}$ ,  $X_{43}$  and  $X_{53}$ , respectively. The variables represented by  $X_s$  in

rectangular boxes are measurable indicators for the latent variables in oval shapes. A group of Xs linked to a particular construct depict a measurement model for that particular construct. A group of measurement models are linked together in a structural model. (For example in this study, the latent variables represented by symbol  $\xi$  would represent the constructs being measured such as fairness, perceived behavioural,  $X_{11}$ ,  $X_{21}$ , and  $X_{31}$ , would represent the variables measuring the constructs, for instance perceived behavioural control is measured using three variables described in Table 4.2,  $\gamma_{31}$  symbols represent the path coefficients showing how strongly the variables measure the constructs)

**Figure 4.1 Measurement and Structural Models in a SEM**

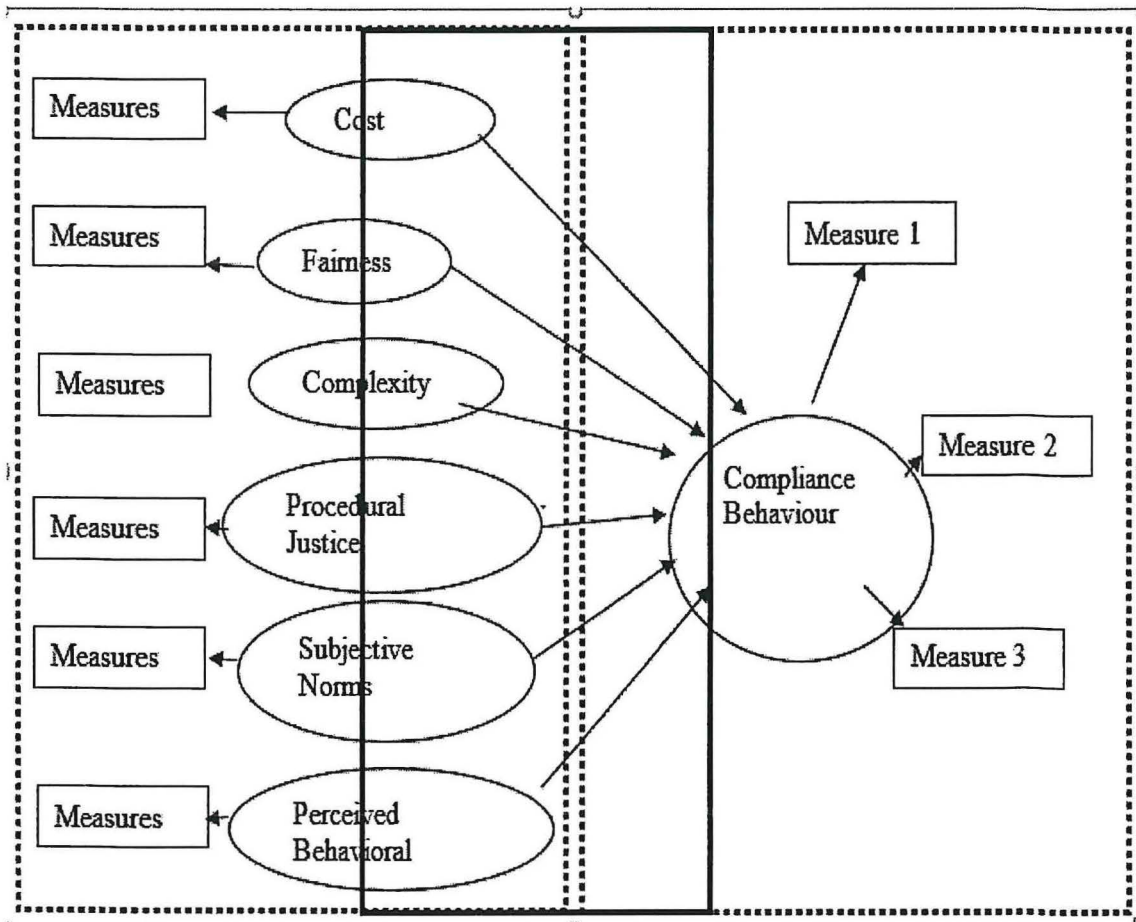


*Source: (Adopted from Chin, 2009)*

The number of latent variables represents the number of measurement models of the analysis. In this case, the three latent variables and their associated indicators represent three measurement models. The relationship among the latent variables is shown by the structural model that is represented by the middle square. The arrows between the latent variables show the path coefficients measuring the relations between the constructs. In this study the SEM model can be presented as follows:

Figure 4.2 illustrates the relationship between measurement models of each of the constructs /latent variable measures (cost, fairness, complexity, procedural justice, subjective norms, and perceived behavioural control) as well as the structural model (between constructs and compliance behaviour). The number of latent variables represents the number of measurement models of the analysis. In this case, the three latent variables and their associated indicators represent three measurement models. The relationship among the latent variables is shown by the structural model that is represented by the middle square (thick line). The arrows between the latent variables show the path coefficients measuring the relations between the constructs.

**Figure 4.2: Measurement and Structural Models for large and medium sized business tax payers in Kenya**



*Source: Author 2016*

#### 4.5.3 SEM Estimation

SEM can be estimated in two main distinct ways: via a Covariance-Based SEM (or CB-SEM) and a Partial Least Squares SEM (PLS-SEM) (Anderson & Gerbing, 1988). The CBSEM and PLS approaches to data analyses are quite distinct in that each of these methods differ in terms of their objectives, statistical assumptions and the nature of the fit statistics they produce, (Baroso et al. 2010). This differences are highlighted in Table 4.1. The CB-SEM places greater emphasis on a strong theoretical foundation. It focuses on the estimation of model parameters in order to minimize the difference between the observed and predicted covariance matrix in the theoretical model (Hair et al., 2011; Monecke & Leisch, 2012). In contrast, the PLS-SEM emphasizes prediction by maximizing the explained variance of the endogenous latent constructs (Sarstedt, Henseler, & Ringle, 2011). Secondly CB-SEM is designed to operate with the reflective measurement model indicator, although it can be applied to the formative under

certain circumstances, with the inclusion of complex and limiting specification rules (Hair et al., 2011). PLS-SEM, on the other hand, is less demanding on data and the specification of relationships; moreover it can handle both reflective and

**Table 4.1: Comparison between PLS and CBSEM**

Criterion	PLS	CBSEM
Objective	Prediction oriented	Parameter oriented
Approach	Variance based	Covariance based
Assumptions	Prediction specification (nonparametric)	Typically multivariate normal distribution and independent observations (parametric)
Parameter estimates	Consistent as indicators and sample size increase (for example, consistency at large)	Consistent
Latent variables scores	Explicitly estimated	Indeterminate
Epistemic relationship between a latent variable and its measures	Can be modelled in either formative or reflective mode	Typically only with reflective indicators
Implications	Optimal for prediction accuracy	Optimal for parameter accuracy
Model complexity	Large complexity (e.g., 100 constructs and 1000 indicators)	Small to modest complexity (e.g., less than 100 indicators)
Sample size requirements	Power analysis based on the portion of the model with the largest number of predictors - minimal recommendations range from 30 to 100 cases	Ideally based on power analysis of specific model – minimal recommendations range from 200 to 800

(Reproduced from Chin & Newsted, 1999, p.314)

formative measurement indicators (Hair et al., 2011; Henseler et al., 2009). In terms of the model, PLS-SEM has the capability of handling complex models with a higher number of constructs and indicators. In contrast, CB-SEM runs into difficulties when handling a model with 50 or more items (Chin & Newsted, 1999; Chin, 2010). In addition, the sample size requirement as recommended for CB-SEM is relatively large, ranging between 200 and 800 (Chin & Newsted, 1999). PLS however, can handle relatively small sample sizes, so is less of a constraint, as compared to CB-SEM (Chin, Marcolin & Newsted, 2003; Hair et al., 2011). Another distinct characteristic is the data distribution. CB-SEM can only operate when the data distribution is normal. In contrast, PLS-SEM has the advantage of being able to handle both normal and non-normal data distributions (Hair et al., 2011).

Notwithstanding the benefits of SEM, there are also constraints in the approach, especially with the covariance-based SEM that a researcher needs to keep in mind. The first constraint of CB-SEM is in one of the assumptions, where the observed variables are expected to be normally distributed and that observations are independent of one another (Chin & Newsted, 1999).

Where this assumption is not met, CBSEM becomes inefficient and unbiased (Gotz et al., 2010). Secondly, there is a sample size requirement. Chou and Bentler (1995) consider a sample of less than 250 as inadequate for this type of SEM. An inadequate sample size may result not only in poor parameter estimates and model test statistics (Chou & Bentler, 1995; Hu & Bentler, 1999), but also in the tendency to over-reject models, especially when the latent variables are dependent (Hu & Bentler, 1999). A third issue relating to covariance-based SEM is that it places great emphasis on having a strong theoretical foundation. Under CB-SEM, it is expected that the analyses will be performed using a strong theory with well-developed measures that have gone through a series of exploratory analyses (Chin & Newsted, 1999). This requirement suggests that it might not be an appropriate technique when the theory is relatively tentative or when the measures are newly developed. In this instance the emphasis should be placed more on the data than the theory.

The key research goal of this study is to understand the determinants of compliance behaviour through the application of the Theory of Planned Behaviour (TPB) as the base theory, which is prediction oriented. This study used Partial Least Squares SEM (PLS-SEM) because of its relevance and its numerous advantages over the CBSEM including: (i) focus on the prediction of the dependent variables (both latent and observed) through maximization of the explained variance (R-squared) of the dependent variables thus more suited for predictive applications and theory building or exploratory analysis; (ii) makes no measurement, distributional or sample size assumptions; (iii) ability to ensure that misspecification in one part of the model will have less influence on the parameter estimates in other parts of the model; (iv) avoids problems associated with inadmissible solutions and factor indeterminacy; (v) allows working with both formative and reflective indicators; (vi) can handle very complex models with a large number of constructs, indicators and relationships; and (vii) can work with smaller sample sizes. However, PLS works only with recursive (unidirectional) relationships (Baroso et al. 2010).

#### **4.5.4 Model Evaluation**

There are two steps in evaluating the SEM model that involves assessment of the measurement model, and then the structural model. In doing this, the traditional parametric-based techniques for testing significance are considered appropriate due to the fact that PLS makes no assumption on the distribution other than predictor specification (Chin, 1998). In this regard, tests consistent with the distribution-free predictive approach of PLS are adopted (Wold, 1982).

#### **4.5.5 Measurement Model Evaluation**

The objective of assessing this model is to test its validity and reliability by examining two main elements of factorial validity: discriminate and convergent validity (Gerbing & Anderson, 1988). Validity tests that illustrate how well the measurement items relate to the constructs are performed to ensure that measures perform adequately. When factorial validity is satisfied, it implies that each measurement item correlates strongly with the construct it is related to, while correlating weakly or not significantly with all other constructs. There are several criteria for validating reflective constructs in literature which include indicator reliability, construct reliability, convergent validity and discriminant validity (Barroso et al., 2010, Chin, 1998b; Gefen & Straub, 2005; Gotz et al., 2010)<sup>2</sup>. A brief discussion of these measures is provided below.

##### **(i) Indicator Reliability**

Individual indicator reliability is evaluated by examining the loadings (correlations) of the indicators with their respective corresponding latent variables (Barroso et al., 2010). A commonly accepted threshold is to accept items with loadings of 0.707 or more, which implies that there is more shared variance between the constructs and its measures than error variance (Barroso et al., 2010 ; Gotz et al., 2010). Chin (1998b) however, cautions against eliminating measures with low loadings in cases where the measures are important to the construct. It is advisable that the only time to remove measures with low loadings is if these measures are influenced by additional factors, such as a method effect or some other concept to the extent it helps minimise the residual variance, as long as other more reliable indicators exist (Chin, 2010). Unlike in CBSEM where inclusion of additional poor indicators will lead to a poor fit, this in PLS helps to extract the useful available information in the indicators to create a better construct score (Barroso *et al.*, 2010).

##### **(ii) Construct reliability**

This allows the evaluation of the degree to which a variable (or a set of variables) is consistent with what it intends to measure (Straub, Boudreau & Gefen, 2004). It is established by examining the composite reliability that measures internal consistency (Werts, Linn, & Joreskog, 1974) which is usually applicable to latent variables with reflective indicators (Chin, 1998b). Internal consistency is evaluated by computing composite reliability through a bootstrapping resampling procedure. Composite reliability is given by:

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<sup>2</sup> All these measures are generated by the bootstrapping procedures of PLS-Graph Version 3.

$$\rho_c = \frac{(\sum \lambda_i)^2 \text{var } F}{(\sum \lambda_i)^2 \text{var } F + \sum \Theta_{ii}}$$

where  $\lambda_i$ ,  $F$  and  $\Theta_{ii}$  are the factor loading, factor variance and unique/ error variance, respectively. If  $F$  is set at 1, then  $\Theta_{ii}$  is 1-square of  $\lambda_i$  3.

### (iii) Convergent validity

Convergent validity for reflective measures is commonly measured using the Average Variance Extracted (AVE) (Fornell & Larcker, 1981; Gotz *et al.*, 2010). AVE attempts to measure the amount of variance that a latent variable captures from its indicators, relative to the amount due to measurement error (Chin, 1998b). It is arguably a more conservative ration than composite reliability measure and is applicable only to constructs with reflective indicators. It is computed as follows:

$$AVE = \frac{(\sum \lambda_i)^2 \text{var } F}{(\sum \lambda_i^2) \text{var } F + \sum \Theta_{ii}}$$

where  $\lambda_i$ ,  $F$  and  $\Theta_{ii}$  are as defined before. Similarly, if  $F$  is set at 1, then  $\Theta_{ii}$  is 1-square of  $\lambda_i$ . AVE values should be greater than 0.50, indicating that 50 percent or more of the indicator variance should be accounted for (Bagozzi & Yi, 1988; Barroso *et al.*, 2010; Chin, 1998b; Chin & Dibben, 2010;).

### (iv) Discriminant Validity

Discriminant validity shows the extent to which a given construct differs from other constructs and is mainly examined through cross loadings and analyses of AVE (Fornell & Larcker 1981; Barroso *et al.*, 2010). It is established when each measurement item correlates weakly with all other constructs except for the one to which it is theoretically associated (Gefen & Straub, 2005)<sup>4</sup>. It is assessed by first examining how each item relates to the latent constructs (cross loadings), then secondly comparing the square root of the AVE with the correlations among constructs. Cross loadings measures are derived by correlating the component scores of each latent variable with both their respective block of indicators and all other items included in the model (Chin, 1998b). Using the AVE test, there are arguments in theoretical literature that the correlation of the latent variable with its measurement items should be larger than its

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All these measures are generated by the bootstrapping procedures of PLS-Graph Version 3.

tors are equally weighted (Chin, 1998b). Values larger than 0.6 are considered to be acceptable (Bagozzi & Yi, 1998)

<sup>4</sup> Currently, there is no universally accepted threshold to establish discriminant validity. However, it is agreed that all loadings of the measurement items on their assigned latent variables should be larger than any other loadings (Gefen & Straub, 2005). Chin (1998b) argues that any indicator that loads higher with other latent variables than the one it is intended to measure should be eliminated.

correlation with the other latent variables (Gefen & Straub, 2005), and should be at least 0.50 (Fornell & Larcker, 1981).

#### 4.5.6 Structural Model Evaluation

As earlier indicated, the structural model specifies the relationships among the latent constructs. SEM analysis does not prove causation, but tests the strength of the association between the various dimensions, e.g., fairness, equity, etc., and compliance. The main aim of evaluating the structural model is to test for the model's predictive power and the stability of the estimates. Given that PLS models cannot be evaluated using the traditional parametric-based techniques, non-parametric prediction-oriented measures will be considered. This includes application of R-squared ( $R^2$ ) measures to predict the power of endogenous constructs in influencing the predicted / dependent variable.

Besides using the R-squared measuring path coefficients were also used to analyse the predictive power of the model. The path coefficients values are interpreted in a similar manner to standardized regression coefficients (Fornell & Cha, 1994; Gefen et al., 2000). The coefficients indicate the strength of the relationships between dependent and independent variables in the model.

#### 4.5.7 Overall Model Validation

Once the structural model has been evaluated, the overall model can be validated by computing the goodness of fit index. A global criterion of goodness of fit index as proposed by Tenenhaus, Vinzi, Chatelin and Lauro (2005) was applied to measure the quality of the causal model. The greatest advantage of this approach is that the GoF index takes into account the model's performance in both the measurement and the structural model, providing a single measure for the overall prediction performance of the model<sup>5</sup>. The model fit is determined by the square root of the product of the geometric mean of the average communality and the average  $R^2$  as below:

$$GOF = \sqrt{\text{Average Communality} * \text{Average } R^2}$$

Where the average communality is computed as a weighted average of all the communalities (weights being the number of manifest variables / indicators of every construct) and the average

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<sup>5</sup> There are no widely accepted thresholds to judge the significance of the index, however, recent studies (for example, Tenenhaus *et al.*, 2005; and Duarte and Raposo, 2010) argue that an index measuring 0.3 seems adequate.

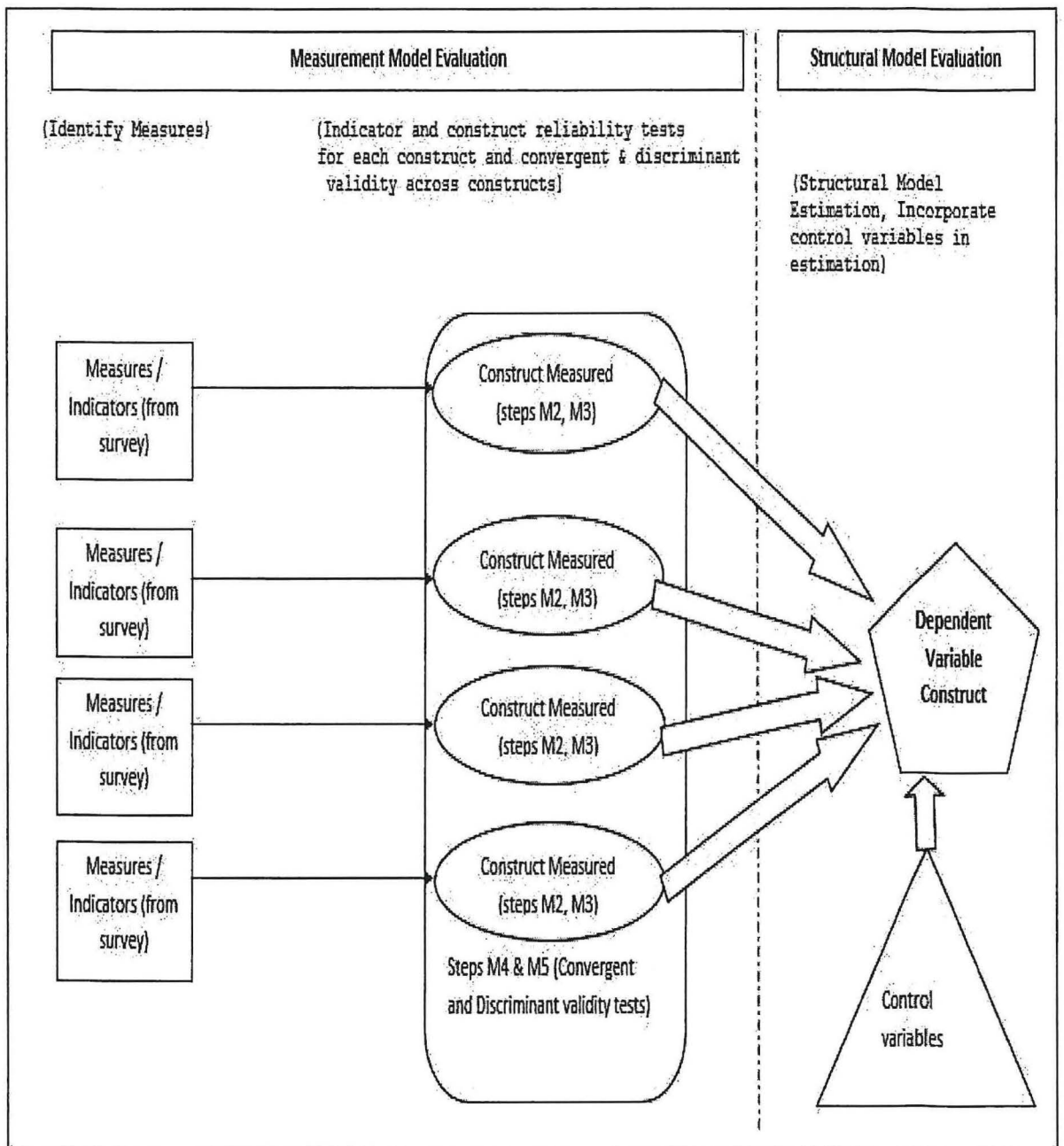
$R^2$  of all the endogenous constructs<sup>6</sup>. Communality captures the percentage of variance for a specific variable that is explained only by the factors. In essence, the average communality measures the quality of the measurement (outer) model and the average  $R^2$  measures the quality of the structural (inner) model.

SEM analysis can be summarized in two steps. The first step is to establish the measurement model, which will then be evaluated as follows: From survey, identify measures/indicators based on theory and literature; Check whether measures actually measure what they are intended to measure (indicator reliability test); Check whether there is consistency between measures and the constructs they measure (construct reliability); Check whether a construct share more variance with its measures than with other constructs in the model (convergent validity); Establish the extent to which a given construct is different from other constructs in the model (Discriminant validity analysis). The second step is to evaluate the structural model. Based on the results of the measurement model evaluation, draw a structural model indicating the measures approved for each construct and link each construct to the dependent construct – compliance behavior. Only measures that passed the four tests above should be used. Then run the structural model (using the maximum likelihood estimation technique with missing values, showing standardized estimates). The results would show both measurement model results (path coefficients of each measure in influencing their respective construct) and structural model results (path coefficients, their Z Statistics and P-values for each construct-indicating how each construct impacts on the dependent construct). This summary can be presented as follows:

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<sup>6</sup> This computation of the average communality should be used only for constructs with multiple indicators. Single indicator constructs should not be used for the computation of the average communality, because they yield averages of 1 (Tenenhaus *et al.*, 2005).

**Figure 4.3: Description of SEM analysis**



Source: Author (2017)

**Table 4.2: Description of variables**

Construct	Specific Measure/ Indicator	Variable type (categorical or continuous measure)[1]	Description based on Survey Question measure/ indicator
<b>Firm Characteristics (Observed Measures)</b>			
Size	Firm Turnover (BEHV1)	Continuous	What was the approximate turnover for your company in the year 2014 (millions of Kshs)?
Sector	Sector	Categorical	What is the main activity of the business?
Legal Structure	Legal structure	Categorical	What is the legal structure of the business?
Age	Age	Continuous	How long has this business been trading (Years)?
<b>Latent Constructs / Measures</b>			
Compliance Behaviour	Filing of Tax Returns (BEHV2)	Categorical	To what extent did your organization meet income tax returns requirements in 2014?
	Number of times of Payment of Tax Liability (BEHV3)	Categorical	In 2014, how many times did your organization make tax payments on time?
	Tax Over Payment (over compliance behavior measure), BEHV4	Categorical	How often has your organization over paid income tax in the last3 years?
<b>Complexity</b>			
Statutory	Statcomp_1	Categorical	The terms used in tax publications (e.g. Income Tax Act (ITA), Finance Act) are difficult for businesses like ours to understand.
	Statcomp_2	Categorical	The language used in the ITA is difficult and not user friendly
	Statcomp_3	Categorical	The rules related to the determination of income tax are not clear
	Statcomp_4	Categorical	Changes in income tax compliance rules are too frequent
	Statcomp_5	Categorical	KRA changes the income tax rules too frequently.
Legal	Legal_1	Categorical	Tax legislation and rulings are expressed in plain and simple language
	Legal_2	Categorical	The rulings and tax laws are consistent
	Legal_3	Categorical	The various parts of the Income Tax Act and other related legislation are organized in a logical manner.
	Legal_4	Categorical	The various parts of the ITA do not contradict each other.
	Legal_5	Categorical	The income tax legislation is inconsistent with international law & practice
	Legal_6	Categorical	Given the same data, KRA and the tax payer can agree on the tax liability with certainty.
	Legal_7	Categorical	The volume of directives, laws, regulations, etc. is too cumbersome for the tax payer.

**Table 4.2: Cont'd**

Administrative	Admincomp_1	Categorical	The frequency of reporting income taxes in Kenya is high.
	Admincomp_2	Categorical	The frequency of paying income taxes is also high.
	Admincomp_3	Categorical	The administrative costs of complying with income taxes as a proportion of revenues earned is high
	Admincomp_4	Categorical	All the income tax payments can be done on line.
	Admincomp_5	Categorical	Most of the income tax returns can be submitted on line.
	Admincomp_6	Categorical	The number of taxes (state and local) that the business has to comply with are too many.
International Compatibility	Intcomp_1	Categorical	The number of double tax agreements signed by the Kenyan Government are adequate
	Intcomp_2	Categorical	Kenyan law restricts the benefits of treaties to Kenyan companies
	Intcomp_3	Categorical	Kenyan treaties are prepared according to international standards
	Intcomp_4	Categorical	Treaties between Kenya and other countries are reviewed regularly
	Intcomp_5	Categorical	Kenyan transfer pricing guidelines are clear
	Intcomp_6	Categorical	KRA staff are qualified to handle transfer pricing matters
International Compatibility	Intcomp_7	Categorical	There are adequate dispute resolution mechanisms put in place to deal with transfer pricing matters
	Intcomp_8	Categorical	Taxes in Kenya are not in line with international best practices
	Intcomp_9	Categorical	Kenyan transfer pricing guidelines are drawn in line with International standards e.g. OECD guideline
	Intcomp_10	Categorical	Tax burden for Kenyan businesses with cross border operations is high
<b>Tax Compliance Cost Drivers</b>			<b>General Question asked was: <i>What do you think are the main drivers of income tax compliance costs?</i></b>
	Cost_1	Categorical	The industry sector in which your business is in
	Cost_2	Categorical	The complexity of commercial transactions
	Cost_3	Categorical	The complexity of tax laws
	Cost_4	Categorical	The frequency of changes in tax rules
	Cost_5	Categorical	The number of different taxes that your business has to deal with
	Cost_6	Categorical	The frequency of changes in tax administrative practices
	Cost_7	Categorical	The compliance and regulatory tax requirements(local authority)
	Cost_8	Categorical	The compliance and regulatory tax requirements (KRA)

**Table 4.2: Cont'd**

Tax Fairness			
Exchange Fairness	EF_1	Categorical	The company gets a fair value for the amount of money paid in terms of benefits received from the government.
	EF_2	Categorical	The income taxes that the company pays are unreasonably high considering the benefits provided by the government
	EF_3	Categorical	Tax revenues in Kenya are not well utilized and most of it is wasted.
Procedural Fairness	PF_1	Categorical	The tax office's decisions are usually fair.
	PF_2	Categorical	The rules and approaches applied by the tax office treat all taxpayers equally.
	PF_3	Categorical	The tax office's decisions are mainly based on facts and not on opinions.
	PF_4	Categorical	In a dispute, the tax office would evaluate my information objectively and fairly.
	PF_5	Categorical	The dispute resolution mechanisms put in place by the tax office are fair
	PF_6	Categorical	The decisions of the income tax local committee are generally fair and unbiased.
	PF_7	Categorical	The tax office takes the circumstances of each company when making decisions.
	PF_8	Categorical	The tax office corresponds with taxpayers in a timely manner.
	PF_9	Categorical	The tax office has been given too much power over tax payers
	PF_10	Categorical	The tax office is more concerned about making their own job easier than making it easier for taxpayers.
	PF_11	Categorical	The tax office consults widely about how they might change things to make it easier for taxpayers to meet their obligations
Horizontal Fairness	HF_1	Categorical	It is fair for my company to pay a similar share of income tax compared with other companies earning an equivalent amount of income.
	HF_2	Categorical	Two companies which are similar in all aspects should pay similar amount of income tax irrespective of the industry in which they operate.
	HF_3	Categorical	It is unfair for all companies to pay the same rate irrespective of income generated. Companies with higher profit margins should pay higher taxes
Perceived Behavioral Control	PBC_1	Categorical	How often does your organization receive income that is not subject to reporting by others (e.g. banks, regulators, etc.)
	PBC_2	Categorical	If my organization encounters any financial pressure it would be easy for the company to justify under-reporting its income.
	PBC_3	Categorical	How often does your organization encounter financial pressure that would require the firm to Under-report its income?

**Table 4.2: Cont'd**

Subjective Norms	SNORM_1	Categorical	Most business associates who are important to our organization think that our organization should report all its income in its next tax return.
	SNORM_2	Categorical	Most business associates who are important to my organization may not include all their income in their next tax return.
	SNORM_3	Categorical	Most business associates who are important to the organization would not respect our firm if it
			Under-reports its income in the next tax return.
	SNORM_4	Categorical	My organization would be deterred from underreporting its income if management believes that
the firm will lose the respect of most of its business associates who are important to the firm			
SNORM_5	Categorical	Generally, the organization would be deterred from underreporting its income if management believes that the firm will lose the respect of its most important business associates.	
Procedural Justice	PJ_1	Categorical	If you do not file /pay taxes in the next twelve months do you expect KRA to detect this omission within twelve months.
	PJ_2	Categorical	If your organization does not pay and file its income tax returns in the next twelve months I expect the penalties imposed by KRA to be severe.
	PJ_3	Categorical	How many times has your organization paid any penalties to KRA in relation to income tax in the last 3 years?

**Source: Literature review (2016)**

## CHAPTER 5

### QUALITATIVE DATA ANALYSIS

#### 5.1 Introduction

The first part of this chapter presents the findings of data collection from the interview sessions with the respondents from the four audit firms. This information will be used to answer the main objective. The second part compares the information from the interviews with the results of the survey seeking for convergence or divergence of opinions. The aim of the interviews was to explore in detail the drivers of compliance behaviour among the large and medium business taxpayers and to obtain any other data that pertains to compliance behaviour which is deemed important by the practitioners and may not have been captured in the questionnaire. The information gathered from the interviews will be used to enrich and complement the results from the survey. The data from the interviews will also help in deriving policy recommendations which will be presented in chapter seven. In addition, this chapter seeks to consolidate the results of the qualitative and quantitative phase of the research as per the convergent parallel design method adopted for this research.

#### 5.2 Interviews

##### 5.2.1 Background of Respondents

Six respondents were selected for the purpose of the interviews based on purposive sampling. The business tax payers identified whether they had an external tax agent and out of the sample of 142 firms 74% had a dedicated tax expert to deal with the firm's tax matters. The respondents were requested to indicate the external tax agents used and a list of six agents emerged. They were all asked through an email on whether they were willing to participate in an interview with the researcher on the issue of tax compliance. Two firms turned down the request, the other four signed a consent to participate form and the researcher called to book an interview date. Details of the respondents are presented below:

**Table 5.1 : Designation**

<b>Respondents</b>	<b>Gender</b>	<b>Designation</b>
A1	Male	Tax Partner
A2	Male	Tax Partner
A3	Male	Associate Director, Tax
A4	Male	Associate Director, Tax

**Source: Author (2017)**

The four respondents represent the four largest audit firms in Kenya, commanding over 80% of the tax audit business in Kenya and therefore the sample was deemed to be adequate

## 5.3 Data Analysis and Findings

### 5.3.1 Data Analysis

The interview data were analysed using Microsoft Excel software to categorize responses into the subthemes identified in the conceptual framework. This method of analysis was selected as opposed to QDAS (qualitative data analysis software) as the interview involved a small sample size of only four participants. The key findings or quotes from the interview transcripts were extracted and categorized into the subthemes identified.

### 5.3.2 Interview Findings

The four respondents were requested to provide views on tax compliance behaviour among the large and medium tax payers in Kenya. To put them at ease they were first asked a general question on the difficulty of complying with tax laws in Kenya generally. Four areas were identified as a common problem experienced in the Kenyan jurisdiction as follows:

**Table 5. 2 : Difficulties in complying with tax laws**

Item	Respondent	Views of the respondents
1. Disconnect between KRA, Treasury and the business community.	ALL	Laws are set by government and then KRA is left to implement the laws. Consultation between the three stakeholders is not well coordinated leading to enactment of laws which do not reflect business realities. A1 gave the example of capital gains on shares which had to be withdrawn due to implementation difficulties.
2. Tax laws not aligned to the Constitution and Vision 2030.	ALL	Sometimes the tax laws do not reflect the spirit of the Constitution and the Vision of the country. A2 gave an example of the Vision to create technology and financial hubs yet the tax laws have not been changed to reflect such aspirations.

**Table 5.2: Cont'd**

Item	Respondent	Views of the respondents
3. Small tax base	ALL	KRA needs to include other tax payers to reduce the burden of tax paying businesses. A1 & A3 especially cited the informal sector which needs to be included. This will enhance compliance by everyone as businesses will feel that the government is making an effort to reduce reliance on corporate tax as its main source of income.
4. Tax rate	ALL	Although all the respondent observed that the tax rates on incomes in Kenya are not very high when compared to other African countries, they all advocated for different tax rates for different sectors. They noted that young sectors such as the mining should attract special rates.

**Source: Author (2017)**

The respondents were then asked about their views on the subthemes identified in the conceptual framework as follows:

#### **5.3.2.1 Complexity of the tax laws**

Surprisingly all the four tax auditors agreed that they would not have a problem with complex tax laws provided that the laws are clear, they noted that although Kenyan tax laws are simple enough for a tax expert they may pose a challenge for business people not trained in taxation. A1 noted that even if the laws are complex what is important is that they should have *“Clarity, clear precedents, clear procedures and most important decisions of the tax authority should be predictable”*. He noted that investors do not like unpredictability as it adversely affects planning, therefore he advised against introducing new laws frequently and changing the rules of compliance. Other views were as follows:

**Table 5. 3: Complexity of tax laws**

Item	Respondent	Views of the respondents
1. Age of Income Tax Act (ITA)	A2	The respondent observed that this law is too old (enacted in 1974) and should be completely revamped to reflect current business realities.
2. Alignment of national taxes and local taxes	A1	Introduction of several taxes at local level has led to too many taxes which leads to complexity as they are 47 counties and if each was to introduce new taxes this could lead to complexity.
3. Sectorial differences	ALL	KRA needs to recognize the special needs of the different sectors which can be addressed in the laws. A4 gave the example of the mining sector which needs clear tax laws on disposal of land for prospecting where ordinary land laws do not apply. Other sectors such as the film industry should have clear laws to encourage its growth.

Source: Author (2017)

### 5.3.2.2 International compatibility

This aspect of the tax system attributes mainly related to those companies with cross border businesses.

**Table 5. 4 : International compatibility**

Item	Respondent	Views of the respondents
1. Tax treaties	ALL	All the respondents noted that Kenya has signed treaties with only ten countries since independence. These are too few given the size of the economy and trading partners. A1 also advised that treaties should track trading partners, e.g., more treaties with Asian economies such as China and Japan should be negotiated given the volume of trade between Kenya and these countries.

**Table 5.4: Cont'd**

<b>Item</b>	<b>Respondent</b>	<b>Views of the respondents</b>
2. Transfer pricing rules	ALL	The current rules in the ITA are too brief and vague which leads to frequent disputes between KRA and businesses. Detailed rules and procedures in line with international standards should be drawn
3. Dispute tribunal	ALL	At the moment disputes involving transfer pricing appear before the income tax tribunal, which is not well equipped in terms of personnel to handle transfer pricing cases which are usually complex and requires international tax knowledge. A1&A4 advised that a special tribunal should be set up for faster and fair resolution of transfer pricing disputes.
4. Restrictions	A1 & A2	A1 felt that treaties should be reviewed regularly to reflect developments in the international tax arena such as BEPS (Base Erosion Profit Shifting) rules which need to be adopted. A2 noted that restrictions have been placed by KRA where Kenyan laws override international laws which goes against the spirit of international treaties.

**Source: Author (2017)**

### **5.3.2.3 Tax compliance costs.**

All the respondents noted that on average it takes about 60-70 days per year to comply with income tax laws in Kenya which compares very well with other African countries. According to Paying taxes (2016) World Bank survey the African countries average days to comply is 87days and EU countries is 37days, thus there is still room for improvement. They also observed that income tax payments are highly computerized making submission of returns and actual payment of taxes quite easy. However they noted that compliance can still be improved in the following areas:

**Table 5.5: Tax compliance costs**

<b>Item</b>	<b>Respondent</b>	<b>Views of the respondents</b>
1. Understand business Processes.	A1 and A2	These two auditors noted that KRA needs to understand the value chain of businesses especially their cash cycles in order to introduce flexibility in payment of taxes. They also advised that simple templates e.g., simple tax compliance software for medium/small businesses can be introduced which lower compliance costs for them to avoid reliance on tax experts
2. Review Penalty System	A3	For large companies with developed accounting systems complying with the Kenyan ITA is not costly but for medium companies with semi- automated systems compliance costs are still high. He also noted that for both categories of tax payers the penalty for noncompliance with most of the laws is quite punitive and he noted that the penalty system should be revamped, e.g. missing a tax payment by just a day attracts interest penalties.
3. Record Keeping	A4	Too much documentation is required when filling returns which could be quite costly to compile especially when there is a dispute for earlier years. This cost is even more pronounced for the medium tax payers with some manual records.
4. Slow dispute resolution	ALL	Most of the auditors felt that whenever there is a tax dispute with KRA e.g. interpretation of the law, mode of calculation etc., it takes too long to resolve, this leads to a pile up of time, administrative, monetary costs emanating from lengthy legal processes.

**Source: Author (2017)**

#### **5.3.2.4 Fairness**

This attribute was discussed from four aspects i.e. exchange fairness, procedural fairness, general and horizontal fairness. In general, most of the auditors felt that the tax system was fair but raised the following issues:

**Table 5.6: Fairness of the tax system**

Item	Respondent	Views of the respondents
1. General fairness	ALL	All the respondents noted that the informal sector is largely untaxed in Kenya, leaving the burden of taxation on the formal sector. They observed that KRA has not done enough to rope in this sector and has instead largely concentrated on extracting revenue from the formal sector which was not fair as services are provided to all sectors. Recommendation to tax this sector will be provided in chapter six
2. Exchange fairness	A3	The government can do more to improve service provision to the business tax payer given they are the largest contributors to the income tax kit. The government should do more to reduce the cost of infrastructure such as transports costs due to poor road network. Most importantly all the respondents noted that the government needs to be more transparent on how tax revenues are utilized and what % is ploughed back to reduce the burden on business tax payers.
3. Procedural fairness	ALL	They all observed that KRA has improved on its efficiency in terms of enacting rules and laws that aid compliance, however their dispute resolutions mechanisms are still not transparent and members of such tribunals should undergo a rigorous interview process rather than being hand- picked as is the case now. However they commended KRA for their efforts in making it easy to file and pay taxes.

**Table 5.6: Cont'd**

Item	Respondent	Views of the respondents
4. Horizontal fairness	ALL	Most of the respondents observed that although not all companies need to pay taxes at the same rate, there could be special cases such as hospitals, there are too many exemptions to certain companies especially at the EPZ which gives them an unfair advantage yet over the last ten years exports remain at the same figure. The government should urgently review some of the exemptions.

**Source: Author (2017)**

### **5.3.3 Overall Findings**

In conclusion the respondents raised four main areas which negatively impact income tax compliance and thus require policy improvement. The first is enforcement. All business should pay taxes even if not at the same rate, to ease the burden on those who are compliant. They noted that KRA should enact laws which are long term to address this issue and avoid minor adjustment to the Finance Act which do not adequately address this problem. Several sectors such as the informal sector, transport industry, e-commerce, the property sector etc. are not been properly taxed. This may eventually discourage those paying taxes. Second they noted that consultation between KRA and the business sector is not well coordinated. Each sector has its own special needs which need to be addressed and therefore they recommended enactment of subsidiary acts which are sector specific, for example, an Act just to address the mining sector to be developed by experts in the area. Third, when most of the laws dealing with transfer pricing were enacted, they had in mind a foreign company with a subsidiary in Kenya, but over time several Kenyan companies own subsidiaries in foreign countries and thus laws need to be reviewed in line with the developments which have occurred in this country. In addition, the volume of trade between Kenya and the Asian countries and certain African countries has increased over the years and thus trade agreements need to be put in place. Lastly the dispute resolution mechanisms to deal with local as well as international disputes need to be put in place to shorten the time period required to settle disputes, this will reduce compliance costs in terms of time and money.

## **5.4 Data analysis from the survey**

The findings from the survey on the four subthemes discussed above are presented as follows:

### **5.4.1 Assessment of Perceptions on Firms' Difficulties in Dealing with Tax Issues**

The study sought to identify the key difficulties that taxpayers face in the process of handling tax issues. Probable difficulties as identified from literature were presented in the data collection questionnaire to the respondents and asked to gauge the extent to which they feel the difficulties were applicable. From the frequency tables in Appendix 3, it is evident that almost all firms do not strongly identify with the listed difficulties. This implies that enterprises in Kenya seem to face unique difficulties when dealing with tax issues compared with enterprises elsewhere. In particular, about 89% of firms do not have a problem estimating income tax payable, while more than half understand income tax legislations (83.52%). At the same time, about 75% of the firms seem not to identify as a challenge the implementation of tax changes, while about 63% do not have a problem with the frequency with which tax laws are changed. However, about 40% of the firms consider as a great challenge, the burden of record keeping that tax requirements call for, while 34% identify cash flow position as the main challenge. The time spent in filing returns is not a problem at all except for a minority of firms (26%). In terms of dealing with the key stakeholders, only 22% of the firms indicate a difficulty in dealing with tax advisers. A large proportion (61%) of the firms find the tax authority not a challenge to deal with, while in fact a larger proportion (74%) say that corruption in the tax authority is not a major difficulty. This was expected given that 103 out of the 142 firms that participated in the survey have dedicated departments to deal with tax issues. Unlike individuals who may not have the relevant training on tax matters, tax experts are not expected to experience great difficulty in understanding and implementing the law. Therefore, the only difficulty identified by the two populations is the burden of record keeping which tax payers have to cope with. Cash flow problems when paying taxes was a recurring issue among the medium tax payers.

### **5.4.2 Measures of Tax System Complexity**

Complexity was measured from three dimensions; statutory, legal and administrative. Policy complexity examines the number of taxes that a tax payer has to cope with at various levels. Statutory complexity deals with whether the income tax law itself is clear, while administrative complexity examines how easy it is to comply with the administrative requirements of a tax. The descriptive statistics in form of frequency distributions of responses on each of the three

dimensions measures is provided in Table 5.7 below. The tables show distribution of frequencies of measures of perceptions of firms on tax system complexity. In general, the firms sampled perceive the tax system in Kenya to be extremely noncomplex (displaying simplicity) from the perspective of statutory complexity. In particular, 65% of the firms hold the view that the terms used in the tax publications (say Income Tax Act (ITA), Finance Act) were not difficult for them to understand. Similarly, 60% of the firms find that the language used in the ITA was not difficult and was in fact user friendly. In addition, 64% of the firms disagreed with the argument that the rules related to the determination of income tax were not clear-thus supporting the notion that they were in fact clear. With regard to the changes in the income tax compliance rule, a majority of the firms (67%) strongly disagreed that the changes were too frequent.

**Table 5.7: Frequency Distribution of Measures of Statutory Complexity**

Measures	Strongly Disagree				Strongly Agree			Total
	1	2	3	4	5	6	7	
statcom_1	1	2	3	4	5	6	7	
<i>Frequency</i>	38	18	11	26	19	21	9	142
<i>Percent</i>	26.76	12.68	7.75	18.31	13.38	14.79	6.34	100
<i>Cumulative</i>	26.76	39.44	47.18	65.49	78.87	93.66	100	
statcom_2	1	2	3	4	5	6	7	
<i>Frequency</i>	31	14	14	27	27	15	14	142
<i>Percent</i>	21.83	9.86	9.86	19.01	19.01	10.56	9.86	100
<i>Cumulative</i>	21.83	31.69	41.55	60.56	79.58	90.14	100	
statcom_3	1	2	3	4	5	6	7	
<i>Frequency</i>	25	20	13	33	30	16	5	142
<i>Percent</i>	17.61	14.08	9.15	23.24	21.13	11.27	3.52	100
<i>Cumulative</i>	17.61	31.69	40.85	64.08	85.21	96.48	100	
statcom_4	1	2	3	4	5	6	7	
<i>Frequency</i>	30	14	14	30	39	5	10	142
<i>Percent</i>	21.13	9.86	9.86	21.13	27.46	3.52	7.04	100
<i>Cumulative</i>	21.13	30.99	40.85	61.97	89.44	92.96	100	
statcom_5	1	2	3	4	5	6	7	
<i>Frequency</i>	35	18	10	32	24	14	9	142
<i>Percent</i>	24.65	12.68	7.04	22.54	16.9	9.86	6.34	100
<i>Cumulative</i>	24.65	37.32	44.37	66.9	83.8	93.66	100	

**Source: Author (2017)**

In terms of legal complexity, a majority of firms indicated that the tax system is complex. For instance, 70% of them strongly disagreed with the notion that the tax legislation and rulings were expressed in plain and simple languages. In fact, 60% of them perceive that the rulings

and tax laws were inconsistent. However, slightly more than half of the firms (53%) strongly feel that the various parts of the ITA and other related legislations were organized in a logical manner, and 55% feel that the various parts of the ITA did not contradict each other. But in terms of consistency with international law and practice, 58% of the firms sampled strongly disagreed that the Kenyan tax legislations were consistent with international law and practice. In the event that both KRA and taxpayers share relevant information for computation of tax liability, a majority of firms (60%) feel that both firms and KRA would agree on the tax liability with certainty. This ratio of firms implies that there is still scope for a more standardized way of computing the tax liability simple enough for all taxpayers to understand. Finally, many firms (64% of those sampled) feel that the volume of directives, laws, regulations and other requirements were too cumbersome for the taxpayers.

**Table 5.8: Frequency Distribution of Measures of Legal Complexity**

Measures	Strongly Disagree				Strongly Agree			Total
Legalcomp_1	1	2	3	4	5	6	7	
<i>Frequency</i>	14	17	22	46	27	8	8	142
<i>Percent</i>	9.86	11.97	15.49	32.39	19.01	5.63	5.63	100
<i>Cumulative</i>	9.86	21.83	37.32	69.72	88.73	94.37	100	
Legalcomp_2	1	2	3	4	5	6	7	
<i>Frequency</i>	7	11	19	48	27	19	11	142
<i>Percent</i>	4.93	7.75	13.38	33.8	19.01	13.38	7.75	100
<i>Cumulative</i>	4.93	12.68	26.06	59.86	78.87	92.25	100	
Legalcomp_3	1	2	3	4	5	6	7	
<i>Frequency</i>	7	10	17	32	49	17	10	142
<i>Percent</i>	4.93	7.04	11.97	22.54	34.51	11.97	7.04	100
<i>Cumulative</i>	4.93	11.97	23.94	46.48	80.99	92.96	100	
Legalcomp_4	1	2	3	4	5	6	7	
<i>Frequency</i>	9	8	13	34	40	32	6	142
<i>Percent</i>	6.34	5.63	9.15	23.94	28.17	22.54	4.23	100
<i>Cumulative</i>	6.34	11.97	21.13	45.07	73.24	95.77	100	

**Table 5.8: Cont'd**

<b>Measures</b>	<b>Strongly Disagree</b>				<b>Strongly Agree</b>			<b>Total</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	
Legalcomp_5								
<i>Frequency</i>	32	12	12	27	28	20	11	142
<i>Percent</i>	22.54	8.45	8.45	19.01	19.72	14.08	7.75	100
<i>Cumulative</i>	22.54	30.99	39.44	58.45	78.17	92.25	100	
Legalcomp_6								
<i>Frequency</i>	47	11	4	23	26	16	15	142
<i>Percent</i>	33.1	7.75	2.82	16.2	18.31	11.27	10.56	100
<i>Cumulative</i>	33.1	40.85	43.66	59.86	78.17	89.44	100	
Legalcomp_7								
<i>Frequency</i>	8	10	8	25	37	24	30	142
<i>Percent</i>	5.63	7.04	5.63	17.61	26.06	16.9	21.13	100
<i>Cumulative</i>	5.63	12.68	18.31	35.92	61.97	78.87	100	

**Source: Author (2017)**

Table 5.8 shows the frequency distributions for the six measures of administrative complexity. These measures capture the frequency of tax payment, the ease with which these payments are made as well as the number of taxes that the firms have to comply with. From the perceptions survey on the administrative complexity of the Kenyan tax system, most firms (58%) feel that the frequency of reporting income taxes and paying taxes is not high. Slightly more than half of the firms (55%) disagree with the argument that the administrative costs of complying with income taxes as a proportion of the revenues earned was high. In terms of the mode of payment, 92% of the firms feel that all the income tax returns can be done online, with 87% feeling that the tax payments too can be done online. With regard to the number of taxes (state and local) that the taxpayers have to comply with, 75% of the firms indicate they are too many. In conclusion, there are mixed feelings on the status of administrative complexity of the tax system, especially when the different measures are considered.

**Table 5.9: Frequency Distribution of Measures of Administrative Complexity**

Measures	Strongly Disagree				Strongly Agree			Total
	1	2	3	4	5	6	7	
Admincomp_1	1	2	3	4	5	6	7	
<i>Frequency</i>	23	31	13	16	27	16	16	142
<i>Percent</i>	16.2	21.83	9.15	11.27	19.01	11.27	11.27	100
<i>Cumulative</i>	16.2	38.03	47.18	58.45	77.46	88.73	100	
Admincomp_2	1	2	3	4	5	6	7	
<i>Frequency</i>	23	28	13	19	24	20	15	142
<i>Percent</i>	16.2	19.72	9.15	13.38	16.9	14.08	10.56	100
<i>Cumulative</i>	16.2	35.92	45.07	58.45	75.35	89.44	100	
Admincomp_3	1	2	3	4	5	6	7	
<i>Frequency</i>	13	30	17	17	31	13	20	141
<i>Percent</i>	9.22	21.28	12.06	12.06	21.99	9.22	14.18	100
<i>Cumulative</i>	9.22	30.5	42.55	54.61	76.6	85.82	100	
Admincomp_4	1	2	3	4	5	6	7	
<i>Frequency</i>	2	1	1	14	9	32	83	142
<i>Percent</i>	1.41	0.7	0.7	9.86	6.34	22.54	58.45	100
<i>Cumulative</i>	1.41	2.11	2.82	12.68	19.01	41.55	100	
Admincomp_5	1	2	3	4	5	6	7	
<i>Frequency</i>	3	2	1	6	6	32	92	142
<i>Percent</i>	2.11	1.41	0.7	4.23	4.23	22.54	64.79	100
<i>Cumulative</i>	2.11	3.52	4.23	8.45	12.68	35.21	100	
Admincomp_6	1	2	3	4	5	6	7	
<i>Frequency</i>	8	8	2	17	21	31	55	142
<i>Percent</i>	5.63	5.63	1.41	11.97	14.79	21.83	38.73	100
<i>Cumulative</i>	5.63	11.27	12.68	24.65	39.44	61.27	100	

**Source: Author (2017)**

The business tax payers agree with KRA that the ease of filing and paying taxes in Kenya has improved. However, in term of administrative complexity the businesses observed that there are too many taxes to comply with at the county and national level, this point was especially raised as a big problem for companies in the agricultural sector. In addition, there still exists an element of legal complexity in that the legislations and rulings are not expressed in a simple language as well as the volume of directives which was deemed as quite cumbersome. These findings are generally in agreement with the sample from the auditors.

### 5.4.3 Measures of International Compatibility

The study considered 10 measures to gauge international compatibility of the Kenyan tax system. Here, only about 116/7 firms out of 142 respondents provided responses on these measures, perhaps because not all firms in Kenya have cross border exposures. From the survey results, 75% of medium and large corporate taxpayers in Kenya strongly disagree with the argument that the number of double tax agreements signed by the Kenyan government, are adequate. On the other hand, 57% of the firms feel that the Kenyan law does not restrict benefits of treaties to Kenyan firms and 81% of them feel that the Kenyan treaties are prepared according to international standards. However, 77% of the firms perceive that the treaties between Kenya and other countries are not reviewed regularly.

**Table 5.10: Frequency Distribution of the Measures International Compatibility of Tax System**

Measures	Strongly Disagree				Strongly Agree			Total
Intcomp_1	1	2	3	4	5	6	7	
<i>Frequency</i>	46	9	10	23	13	12	4	117
<i>Percent</i>	39.32	7.69	8.55	19.66	11.11	10.26	3.42	100
<i>Cumulative</i>	39.32	47.01	55.56	75.21	86.32	96.58	100	
Intcomp_2	1	2	3	4	5	6	7	
<i>Frequency</i>	8	14	16	29	24	10	16	117
<i>Percent</i>	6.84	11.97	13.68	24.79	20.51	8.55	13.68	100
<i>Cumulative</i>	6.84	18.8	32.48	57.26	77.78	86.32	100	
Intcomp_3	1	2	3	4	5	6	7	
<i>Frequency</i>	3	--	5	14	43	29	23	117
<i>Percent</i>	2.56	--	4.27	11.97	36.75	24.79	19.66	100
<i>Cumulative</i>	2.56	--	6.84	18.8	55.56	80.34	100	
Intcomp_4	1	2	3	4	5	6	7	
<i>Frequency</i>	40	15	15	20	11	10	6	117
<i>Percent</i>	34.19	12.82	12.82	17.09	9.4	8.55	5.13	100
<i>Cumulative</i>	34.19	47.01	59.83	76.92	86.32	94.87	100	

**Table 5.10 Cont'd**

Measures	Strongly Disagree				Strongly Agree			Total
	1	2	3	4	5	6	7	
Intcomp_5								
<i>Frequency</i>	16	20	16	31	8	19	6	116
<i>Percent</i>	13.79	17.24	13.79	26.72	6.9	16.38	5.17	100
<i>Cumulative</i>	13.79	31.03	44.83	71.55	78.45	94.83	100	
Intcomp_6								
<i>Frequency</i>	10	5	20	19	23	27	11	115
<i>Percent</i>	8.7	4.35	17.39	16.52	20	23.48	9.57	100
<i>Cumulative</i>	8.7	13.04	30.43	46.96	66.96	90.43	100	
Intcomp_7								
<i>Frequency</i>	20	13	23	26	15	11	8	116
<i>Percent</i>	17.24	11.21	19.83	22.41	12.93	9.48	6.9	100
<i>Cumulative</i>	17.24	28.45	48.28	70.69	83.62	93.1	100	
Intcomp_8								
<i>Frequency</i>	19	15	17	26	16	11	12	116
<i>Percent</i>	16.38	12.93	14.66	22.41	13.79	9.48	10.34	100
<i>Cumulative</i>	16.38	29.31	43.97	66.38	80.17	89.66	100	
Intcomp_9								
<i>Frequency</i>	5	5	7	12	30	38	19	116
<i>Percent</i>	4.31	4.31	6.03	10.34	25.86	32.76	16.38	100
<i>Cumulative</i>	4.31	8.62	14.66	25	50.86	83.62	100	
Intcomp_10								
<i>Frequency</i>	2	4	6	10	24	42	28	116
<i>Percent</i>	1.72	3.45	5.17	8.62	20.69	36.21	24.14	100
<i>Cumulative</i>	1.72	5.17	10.34	18.97	39.66	75.86	100	

Source: Author (2017)

On transfer pricing, 72% of the firms used in this study feel that the guidelines are not clear, even when 53% of them believe that the KRA staff are qualified to handle transfer pricing matters. A large proportion of firms (71%) feel that there are no adequate dispute resolution mechanisms put in place to deal with transfer pricing matters. In terms of alignment of the tax system to international best practice, 66% of the firms in Kenya feel that local taxes are in line with the best practice. In particular, 75% of the firms feel that the transfer pricing guidelines

were drawn in line international standards such as the OECD (guidelines). However, 81% of the firms strongly feel that the tax burden of Kenyan firms, especially those with cross border operations, is high (Table 5.10). These results are largely in agreement with views from the qualitative findings.

#### **5.4.4 Measures of Tax Compliance Costs**

We review tax compliance costs on the basis of how a company undertakes tax related activities, and the time each firm takes to deal with tax matters. While only 38% deal with tax matters in-house, a small number (5%) fully outsource the service to experts or agents. Notably, slightly over half of the (58%) partially deal with tax issues in-house while some activities are outsourced to tax experts/agents. Out of all the firms sampled, 74% have a dedicated tax expert or department to deal with tax matters. In terms of days spent in dealing with tax issues, a majority of firms (61%) use between 70 and 90 days. There is however a notable proportion (20%) that use less than 60 days. We further analysed the reasons for firms' use of a tax expert or agent when dealing with tax issues. The results show two main reasons. First, 83% of the firms believe that there would be faster resolution of tax disputes if an agent is engaged. Second, 62% of firms also believe that tax agents would enhance the firm's ability to legitimately minimise their tax liabilities. In terms of the direct monetary costs in tax administration, over 86% of firms spend less than Ksh 10 million every year on tax administrative costs such as accountant fees, legal fees and other internal costs. Out of this, 36% of them spend between Ksh 1 million and Ksh 10million. It is noteworthy to indicate that 27% of firms spend less than Ksh 500,000 on tax administration and only 9% of the firms spend over Ksh 20 million. We also examined the key drivers of tax compliance costs. Most firms identified the following as the key drivers of tax compliance costs: the industry sector in which the firm operates (57% of firms identify with this), the complexity of commercial transactions (61% of firms), and the number of the different taxes that the firms have to deal with (74%) However, the frequencies with which tax rules changed was not identified as a strong driver of costs. It is worth noting that the firms were split (with equal proportions indicating opposing views) on the rest of the other factors identified as drivers from literature.

The qualitative data provided a more detailed explanation of what drives compliance than the survey findings, however the survey identified two items as the major drivers of compliance; the complexity of commercial transactions and the number of taxes business have to deal with. The latter reason has been identified by the qualitative data and it is an emerging problem that

the Kenyan tax authority has to deal with. The qualitative data also called for a close examination of the different needs of varied industries. The more complex the commercial transaction the higher the probability of arriving at different tax liabilities. A detailed view of the policy recommendations will be provided in chapter seven.

#### **5.4.5 Measures of Tax System Fairness**

Tax system fairness as earlier outlined is measured in three different forms applicable for corporate tax payers: procedural, horizontal, and exchange fairness<sup>8</sup>. In terms of exchange fairness, the descriptive statistics reveal that 56% of firms strongly agree with the assertion that their firms get a fair share of the amount of money paid as taxes in terms of benefits received from the government. However, about the same proportion of the firms (55%) strongly agree that the income taxes paid to government were unreasonably high and 67% strongly support the view that the tax revenues collected in Kenya were not well utilized by the government. The views on exchange fairness are similar to those identified by qualitative data. It is important to note that about 50% of the businesses thought that income taxes paid in Kenya are high and this view supports the qualitative data which called for a reduction in taxes to improve compliance rates. Most businesses would also like to see some transparency on how taxes collected are utilized. Horizontal fairness was not a major problem for the business tax payers but strong views were raised in relation to procedural fairness.

Data collected showed that the tax office's decisions are usually fair (60%); that the rules and approaches applied by the tax office treat taxpayers equally (65%); and that the decisions of the tax office are mainly based on facts and not opinions (53%). Slightly over half of the firms perceive that in a dispute situation, the tax office would evaluate their information objectively and fairly (58%); that the decisions of the tax office's income tax committee were generally fair and unbiased (55%); that the tax office considers the circumstances of each firm when making decisions (66%); that the tax office makes timely correspondence with the taxpayers (75%); and that the tax office consults widely when they would consider changing procedures to enhance ease of meeting tax obligations (80%). The strong disagreements with a majority of measures that capture procedural fairness indicate that the tax system in Kenya is largely considered procedurally unfair. This measures will be analysed further using the SEM model to indicate the significance of each measure.

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<sup>8</sup>Vertical fairness is excluded since in Kenya all corporate taxpayers are subjected to the same fixed tax rate irrespective of their income levels.

## 5.5 Chapter Summary

This chapter provided a chance to compare the qualitative and quantitative analysis which revealed a lot of similarities in views between the two samples. This is expected given that business tax payers receive a lot of advice on how to handle tax matters from their tax external agents. The views of both business tax payers and tax experts allowed the researcher to address the first objective of the study which was to examine the extent to which the four subthemes identified above influence tax compliance behaviour. A summary is provided below:

### (i) Complexity

Literature suggests that tax complexity, is one of the determinants of tax compliance (Chan et al., 2000; Fischer, Wartick, & Mark, 1992; Forest & Sheffrin, 2002; McKerchar, 2008; Richardson, 2006; Saad, 2011). It has been established that a more complex tax system leads to noncompliance behaviour among taxpayers. However, according to a study by Forest and Sheffrin (2002), simplifying the tax system may not be an effective tool to deter tax evasion, because taxpayers do not consider tax simplification as a barrier to evading tax. The empirical findings of their study using econometric analysis of 1784 taxpayers' data, indicate that there is no consistent correlation between complexity and noncompliance. In summary, previous studies indicate that there is contrasting evidence from the literature that either supports or rejects the correlation between complexity and compliance. However, most cases, either in tax compliance literature or other inter-disciplinary literature, support the relationship between complexity and compliance. In this study it was expected that complexity would be a significant determinant of tax compliance and it was surprising that it was not the case. The possible explanation could be the size of the companies selected as most of them (74%) have external tax advisers who would assist in case of any problem. The results could be different from other European countries in that over the years their tax systems have become quite complex with revisions almost on annual basis, whereas the Kenyan tax system has not been revised for a long time. The Income Tax Act therefore is more outdated rather than complex.

The most important contribution in terms of policy is that there is an accumulation of taxes at the national and county level and this needs to be addressed as it was cited as one of the major drivers of complexity. This is a unique situation emanating from how the government system is structured in Kenya. The issue of new sectors (e.g. mining, technology) which have grown in the Kenyan economy need to be addressed with appropriate tax laws. This has brought to focus the fact that the current Income Tax Act need to be replaced to reflect the new business

environment. Although at the moment complexity is not the main driver of noncompliance in Kenya it has the potential to become a deterrent to compliance as the number of taxes and new sectors of the economy increase. Data from the tax experts provided a deeper understanding of the drivers of complexity.

**(ii) Compliance costs**

Literature review shows that although a large number of studies on individual tax compliance behaviour exist, there is a scarcity of research on the corporate sector, with even fewer studies on the relationship between compliance cost and corporate tax compliance behaviour. This is mainly attributed to lack of data and the difficulty of measuring compliance behaviour of corporates in that an individual represents the views of the company which may or may not reflect the real situation. Several authors, (Eze et al., 2014; Sapiei, 2012; Slemrod, 2003; Tran-Nam et al., 2000) have proposed that the level of compliance costs could potentially be one of the factors affecting the compliance decisions of corporate taxpayers although results have been mixed. Some of the authors such as (Sapiei, 2012; Slemrod, 2003) found a significant relationship between tax compliance costs and compliance behaviour while Abdul-Jabbar (2009) studied SMEs in Malaysia found that compliance cost is not a significant factor in explaining compliance behaviour. Compliance cost is also driven by complexity of the tax system. The increasing number of taxes was driving complexity and was also a major factor driving compliance costs. It is difficult to compare compliance costs across countries but the contribution for this study will be identifying the drivers of compliance costs and the policies to reduce these costs.

**(iii) Fairness and international compatibility**

There is limited literature on fairness perceptions in Kenya to draw upon. Empirical findings from previous studies indicate that taxpayers from different countries have dissimilar levels of fairness perceptions towards their respective income tax system. Several studies have confirmed that fairness perceptions influence tax compliance behaviour (Efebera et al., 2004; Roth et al., 1989; Turman, 1995). Similarly, (Harris, 1989; Roberts, 1994), found tax compliance to be significantly associated with perceptions of an improved tax system. There are studies which found no evidence of any association between fairness perceptions and compliance (Coleman, 1997; Porcano, 1988). While previous studies indicate the difference in fairness perceptions between the countries, it is difficult to directly compare the fairness perceptions due to differences in tax jurisdictions, time period, methods adopted, sample selection and measures used in each study. In this study the external tax agents commented on exchange fairness, i.e., on the need of the state to treat all tax payers equally, this was supported

by the business tax-payers. This was expected given that governments in African countries are not transparent on how tax money collected is utilized. However, it was expected the business tax payers to be affected by other measures such as procedural fairness which have been identified as important factors affecting compliance behaviour of individual tax payers. Most of the business tax payers found the tax system in Kenya to fair, however most observed that the main hindrance to compliance is the high compliance costs in terms of time and the finances required to hire an external tax consultant.

Factors of international compatibility were largely exploratory in nature as it is not a factor which has been studied in tax compliance literature extensively. This factor affected mainly the large tax payers with dealings with businesses across the world. Surprisingly it was an area that both study samples wanted KRA to improve. KRA performed poorly on this factor due to the fact that the Income Tax law has remained static while the business environment in Kenya has drastically changed. The tax payers demanded more treaties to be signed and more laws enacted. The contribution to research in this area is that measures of international compatibility were identified and going forward these measures can be refined further. This is a factor which clearly affects developing countries given the fact that companies are increasing becoming global in nature and are able to manipulate their tax liabilities in their favour. This negatively affects compliance especially in countries where the tax system is still relatively not well developed

## CHAPTER 6

### RESULTS FROM MODEL EVALUATION

#### 6.1 Introduction

This chapter covers the analysis of the results using the Structural Equation Modelling methodology explained in Chapter 4. Section 6.2 shows the results of the survey and includes the response rate for the selected sample. Section 6.3 describes the data screening approaches used in the study, while Section 6.4 presents the results of the non-response bias analysis and sample characteristics. Section 6.5 provides descriptive statistics of the study variables. Section 6.6 discusses the evaluation of the models that explain tax compliance behaviour, particularly based on the Theory of Planned Behaviour (TPB). In particular, this involves an examination of the relationships of the elements of TPB and other tax compliance variables with an objective of providing their link to actual tax compliance behaviour. Section 6.7 presents results from the evaluation of the measurement models (outer models) and discusses the results from the assessment of the structural models (inner models). The section also links the outcomes of the structural models to the study hypotheses and discusses the results of the corporate taxpayer model. Finally, Section 6.8 summarizes the chapter by providing a summary of the results.

#### 6.2 Analyses of Survey Responses

##### 6.2.1 Response Rate

We analyse the response rate to ensure that generalizations from the results are not compromised. The response rate is calculated as a percentage of all those respondents in the initial sampling frame that received the survey instrument, were able and willing to participate in the study by completing and returning the questionnaire. A total of 250 survey questionnaires were dispatched in April-May 2016 with the sample generated from a stratified random sampling process from all the sectors of the economy but specifically for the medium and large business taxpayers. A total of 142 questionnaires were duly filled and returned. This represents a 56 percent response rate. The 44 percent non responses were in fact expected to be higher due to the sensitivity of the research questions (Neuman, 2006). Other studies of tax compliance have yielded much higher non response rates, for instance Tran-Nam and Karlinsky (2008) reported an overall non response rate of 91.4 percent. Despite this, there are no universally agreed standards for minimum acceptable response rates for surveys (Fowler, 2009). Based on the reasonable response rate achieved for this study, there was a limited need

to account for nonresponse bias in this study. As such, we proceeded to screen the data for missing observations.

## **6.3 Data Screening**

### **6.3.1 Missing Data**

Data screening for missing observations is done in order to ensure that the respondents' views are well reflected. This includes checking for the codes, any emerging patterns in the missing data, unusual responses and ensuring that the data satisfied the required statistical assumptions (Meyers et al., 2006). Checking of the data revealed reasonably high quality of data. The responses for each firm were first checked for completeness and consistencies. In particular, consistency checks were conducted by comparing and cross-checking the responses to similar questions. This examination revealed that very few items were overlooked or disregarded and consistencies in responses were apparent. The variables were also checked for missing observations. The idea was to isolate variables with more than 10 missing observations. No observation had more than 10 missing data points. The presence of missing data dictates the estimation technique adopted for analysis. In circumstances with widespread missing data, a maximum likelihood estimation technique with missing data must be used to ensure convergence of parameter estimates (Hair et al., 2006). In such cases, Hair et al., (2006) argue that constructs whose indicators have missing values should be excluded from analysis. Because of the minimal missing data points in the 142 observations, all the observations were used for analysis. The completeness of questionnaires was achieved through the fairly short survey instrument that encouraged respondents to fully complete the questionnaire. Sandford (1995) recommends a short and precise questionnaire as one of the strategies to increase the response rate.

### **6.3.2 Data Analysis**

Before SEM analysis was conducted on the data collected, a number of statistical tests were done to assess the potential impact of outliers and to determine the normality of the distribution responses. SEM analysis however, does not require data to display certain assumptions underlying most multivariate techniques. SEM analysis is robust and more tolerant of the violations of the normality assumption (Smart, 2006).

**Table 6.1: Results of Skewness and Kurtosis Statistics (N =142)**

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
admincomp_1	0.14	0.2	-1.31	0.4
admincomp_2	0.07	0.2	-1.31	0.4
admincomp_3	0.06	0.2	-1.2	0.41
admincomp_4	-1.93	0.2	4.02	0.4
admincomp_5	-2.63	0.2	7.36	0.4
admincomp_6	-1.16	0.2	0.42	0.4
age	1.98	0.2	4.68	0.4
BEHV1	0.13	0.2	-1.41	0.4
BEHV2	2.48	0.2	4.19	0.4
BEHV3	-3.92	0.2	17.86	0.4
BEHV4	2.23	0.21	5.9	0.41
BI1	-0.44	0.2	-1.79	0.4
BI2	1.11	0.21	-0.77	0.41
BI3	1.64	0.21	2.02	0.41
BI3	0.63	0.2	0.1	0.41
BI4	0.43	0.23	-1.3	0.45
cost_1	-0.25	0.2	-1.31	0.41
cost_2	-0.38	0.2	-1.21	0.41
cost_3	-0.08	0.2	-1.37	0.41
cost_4	0.13	0.2	-1.26	0.41
cost_5	-0.82	0.2	-0.39	0.41
cost_6	-0.08	0.2	-1.22	0.41
cost_7	-0.18	0.2	-1.31	0.41
cost_8	-0.04	0.2	-1.52	0.41
EF_1	-0.49	0.2	-0.9	0.4
EF_2	-0.43	0.2	-1.02	0.4
EF_3	-0.87	0.2	-0.67	0.4
HF_1	-0.76	0.2	-0.05	0.4
HF_2	-0.37	0.2	-1.3	0.4
HF_3	0.23	0.2	-1.64	0.4
Intcomp_1	0.39	0.22	-1.2	0.44
Intcomp_2	-0.04	0.22	-0.75	0.44
Intcomp_3	-0.95	0.22	1.77	0.44
Intcomp_4	0.52	0.22	-0.93	0.44
Intcomp_5	0.15	0.23	-0.98	0.45
Intcomp_6	-0.43	0.23	-0.67	0.45
Intcomp_7	0.18	0.23	-0.82	0.45
Intcomp_8	0.13	0.23	-0.98	0.45
Intcomp_9	-1.04	0.23	0.63	0.45
Intcomp_10	-1.17	0.23	1.14	0.45
Legalcomp_1	-0.01	0.2	-0.36	0.4

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Legalcomp_2	-0.14	0.2	-0.28	0.4
Legalcomp_3	-0.44	0.2	-0.08	0.4
Legalcomp_4	-0.68	0.2	-0.02	0.4
Legalcomp_5	-0.12	0.2	-1.22	0.4
Legalcomp_6	0.08	0.2	-1.46	0.4
Legalcomp_7	-0.62	0.2	-0.32	0.4
PBC_1	-1.19	0.2	0.15	0.41
PBC_2	-0.7	0.2	-1.15	0.41
PBC_3	-1.4	0.2	0.64	0.41
PENAL_1	1.18	0.2	1.59	0.4
PENAL_2	1.38	0.2	0.86	0.41
PF_1	-0.35	0.2	-0.7	0.4
PF_10	-1.27	0.2	0.85	0.4
PF_11	0.56	0.2	-0.66	0.4
PF_2	-0.04	0.2	-1.03	0.4
PF_3	-0.52	0.2	-0.26	0.4
PF_4	-0.26	0.2	-0.71	0.4
PF_5	-0.47	0.2	-0.12	0.4
PF_6	-0.55	0.2	0.04	0.41
PF_7	-0.15	0.2	-0.95	0.4
PF_8	0.54	0.2	-0.92	0.4
PF_9	-1.05	0.2	0.34	0.4
PJ1	-0.42	0.2	-0.86	0.4
PJ2	1.79	0.2	2.03	0.4
PJ3	2.48	0.2	6.47	0.4
sector	0.34	0.2	-0.61	0.4
SNORM_1	2	0.2	3.09	0.4
SNORM_2	0.44	0.2	-1.38	0.41
SNORM_3	2.25	0.2	4.69	0.41
SNORM_4	2	0.2	2.99	0.41
SNORM_5	2.22	0.2	3.99	0.4
statcom_1	0.13	0.2	-1.33	0.4
statcom_2	-0.01	0.2	-1.18	0.4
statcom_3	-0.1	0.2	-1.08	0.4
statcom_4	-0.06	0.2	-0.98	0.4
statcom_5	0.09	0.2	-1.18	0.4
tax_agent_reason_2	0.28	0.23	-1.38	0.45
tax_agent_reason_3	0.88	0.23	-0.55	0.45
tax_agent_reason_4	-0.41	0.23	-1.21	0.45
tax_agent_reason_5	-1.36	0.23	0.83	0.45
tax_agent_reason_6	-1.91	0.23	2.88	0.45
taxdifficulty_1	1.72	0.2	2.18	0.41
taxdifficulty_10	0.99	0.2	-0.59	0.4
taxdifficulty_2	1.24	0.2	0.32	0.4
taxdifficulty_3	0.83	0.2	-0.59	0.4
taxdifficulty_4	0.4	0.2	-1.17	0.4
taxdifficulty_5	0.26	0.2	-1.36	0.4
taxdifficulty_6	0.44	0.2	-1.14	0.4
taxdifficulty_7	0.92	0.2	-0.39	0.4
taxdifficulty_8	0.28	0.2	-1.13	0.4
taxdifficulty_9	0.95	0.2	-0.29	0.4
Turnover	-0.33	0.2	-1.78	0.4

For this study, the normality test was performed by evaluating the skewness and kurtosis, following the approach of several researchers (Mirza, 2016; Pallant, 2011; Smart, 2012). The results on the descriptive statistics presented in Table 6.1 show that a majority of the skewness and kurtosis were within the acceptable range of +/-2, except for a few observations which were outside the acceptable range. However, for a large sample size (i.e. over 50 observations) such as the one used by this study, the influence of excess kurtosis or skewness is minimal, so that a deviation from normality may not make a substantive difference in analysis (Hair et al., 2006; Tabachnick & Fidell, 2007). An extreme value analysis was also done to ascertain the existence and potential impact on estimation results (Pallant, 2011). The 5 percent trimmed means statistic is used as a threshold to assess whether any extreme values are distorting the results. The top and bottom 5 percent of the extreme cases are removed from analysis. The original overall mean value is then compared with this new trimmed mean. If the trimmed and the original mean values are very different, these data points need to be investigated further to determine how much of a problem the outlier observations may be causing (Pallant, 2011). The results, as posted in Appendix III, show a majority of the variables have their two mean values not significantly different.

#### **6.4 Response Bias Analysis and Sample Characteristics**

The representativeness of the observed samples was established by ascertaining whether the sampled businesses adequately represent the corresponding population distribution. This is examined by focusing on six main attributes from the population, i.e. age of the firm, sector within which each firm operates, total firm turnover that captures the size of the firm, the legal structure of the firm, income tax liability as well as the general assessment of firms' perceptions of difficulties in dealing with tax issues. The results of these analyses are presented in frequency tables in Appendix V. Below is a discussion of each of the business characteristics.

##### **6.4.1 Business Age**

**Table 6.2: Business Age**

Age	Number	%
2--10	43	30.28%
11--20	41	28.87%
21--30	25	17.61%
30--115	33	23.24%
Total	142	100.00%

**Source: Author (2017)**

59.15% of the businesses lie in the age bracket between 2-20years, the rest (40.85%), had their age distributed between 21 - 115 years. As such, the sample represented a wide range of businesses at various age categories in Kenya. The age groups seem to be well spread out across the age distribution spectrum, with no particular significant notable clustering of businesses within any of age brackets.

#### **6.4.2 Business Size (Measured by Turnover)**

This is measured by total turnover of the business which is categorized as 1: *between Ksh 350-550 million*; 2: *between Ksh 551-750 million*; 3: *between Ksh 751-1,000 million* and 4: *over Ksh 1,000 million*. Findings of preliminary analysis indicate that 70 businesses out of a total of 142 businesses that participated in the survey were drawn from the medium size category while 72 business were from the large business size category. One business did not indicate the turnover level. But within the medium sized category, 50 businesses reported turnovers of between Ksh 350-550 million while 20 businesses had their turnovers between Ksh 551 million and Ksh 1,000 million (9 in category class 2 and 11 in category class 3).

#### **6.4.3 Income Tax Liability**

The range of tax liability levels for the survey were categorized as follows: 1: Nil tax liability; 2: Less than Ksh 29.5 million; 3: Ksh 30-55 million; 4: Ksh 55.1-75 million; 5: Ksh 75.1 -100 million; and 6: over Ksh 100 million. The sample data shows that 19 businesses (representing 13.3%) had tax liabilities of less than Ksh 29.5 million, 35 businesses (or 24.5%) had tax liabilities in the category class 2, 19 businesses (13.3%) tax liability was in the class category 3, 22 businesses (or 15.4%) tax liability was in category 4, 11 businesses (7.7%) fell in class category 5 and 36 businesses (25.2%) were in the tax liability bracket 6. Notable insight from this is that high tax liability holders were proportionally equal to the lowest category group and as such some symmetry in analysis is likely to be preserved. The rest of the businesses are well distributed in the income tax liability groups.

#### **6.4.4 Firm Sector**

The sample of businesses were spread out in 18 sectors of the economy. Out of the 142 businesses sampled, the finance and insurance services sector contributed 21.83% of all the businesses being the largest representation. The rest of the businesses were spread out evenly across the other sectors. This reflects proportional representation of the businesses in the entire population as shown below:

**Table 6.3: Firm sector**

<b>Sector</b>	<b>Freq.</b>	<b>Percent</b>
Electricity, gas, water supply, waste services	10	7.04
Construction	4	2.82
Wholesale trade	4	2.82
Transport , postal and warehousing	8	5.63
Information, media and telecommunications	8	5.63
Finance, insurance services	31	21.83
Rental, hiring and real estate services	8	5.63
Professional, scientific and technical services	14	9.86
Administrative and support services	3	2.11
Agriculture, forestry and fishing	10	7.04
Mining	3	2.11
Manufacturing	11	7.75
Retail trade (includes shops)	8	5.63
Accommodation and food services	6	4.23
Education and training	8	5.63
Health care and social assistance	3	2.11
Art and recreation services	1	0.7
Public administration and safety	2	1.41
<b>Total</b>	<b>142</b>	<b>100</b>

Source: Author (2017)

The frequency tables indicate that a large majority (104 out of 142) of the businesses sampled described their legal structures as private companies (73.24%). Public companies comprise the next largest group represented by 16 firms (or 11.27%).

**Table 6.4: Firm structure**

Legal Structure	Number	Percent
Sole proprietorship	0	0
Private company	104	73.24
Public company	16	11.27
Un-incorporated association	2	1.41
Partnership	3	2.11
Trust	3	2.11
Incorporated association	5	3.52
Parastatal	6	4.23
State Corporation	1	0.7
Savings and Credit Cooperative Organisations (Sacco)	1	0.7
Charter	1	0.7
<b>Total</b>	<b>142</b>	<b>100</b>

Source: Author (2017)

These are the semi-public businesses that have significant government shareholding and therefore are engaged in profit making ventures. The rest of the businesses were spread across the different legal structures (UN/incorporated associations, trust firms, parastatals, state corporation's private savings and credit associations) with average representation of about 2%. The significant number of private businesses sampled renders the study results of greater importance to private enterprises than the public enterprises. This is consistent with reservations that in theory it may be difficult for state owned entities or enterprises with government shareholding/ representation to fail to comply with government tax requirements which may not be the case in practice

#### 6.4.5 Assessment of Perceptions on Firms' Difficulties in Dealing with Tax Issues

The study sought to identify the key difficulties that taxpayers face in the process of handling tax issues. Probable difficulties as identified from literature were presented in the data collection questionnaire to the respondents who were asked to gauge the extent to which they feel the difficulties were applicable. From the frequency tables in Appendix 3, it is evident that almost all firms do not strongly identify with the listed difficulties. This implies that businesses in Kenya seem to face unique difficulties when dealing with tax issues compared with businesses elsewhere. In particular, about 89% of the businesses do not have a problem estimating income tax payable, while more majority understand income tax legislation (83.52%). At the same time, about 75% of the businesses seem not to identify as a challenge

the implementation of tax changes, while about 63% do not have a problem with the frequency with which tax laws are changed. However, about 40% of the businesses consider as a great challenge, the burden of record keeping that tax requirements call for, while 34% identify cash flow position as the main challenge. The time spent in filing returns is not a problem at all except for a minority of businesses (26%). In terms of dealing with the key stakeholders, only 22% of the businesses indicate a difficulty in dealing with tax advisers. A large proportion (61%) of the businesses find the tax authority not a challenge to deal with, while in fact a larger proportion (74%) say that corruption in the tax authority is not a major difficulty. This was expected given that 103 out of the 142 businesses that participated in the survey have dedicated departments to deal with tax issues. Unlike individuals who may not have the relevant training on tax matters, tax experts are not expected to experience great difficulty in understanding and implementing the law.

## 6.5 Descriptive Statistics of the Study Variables

The descriptive statistics of interest here include the mean, standard deviation, minimum and maximum scores computed for the TPB (particularly the perceived behavioural and subjective norm) measures, tax fairness, complexity, international compatibility and tax compliance measures, all of which are presented in Appendix 1.

### 6.5.1 Measures of Perceived Behavioural Control (PBC)

There are three measures of PBC which capture income subject to third party reporting (PBC1), presence of opportunity not to report/comply (PBC2) and a measure that captures compliance behaviour when financial distress is experienced (PBC3).

**Table 6.5: Descriptive Statistics for the Perceived Behavioural Control (PBC) Measures**

PBC indicator	Obs	Min	Max	Mean	Std Dev
PBC1 (third party reporting)	141	1.00	7.00	5.87	1.65
PBC2 (opportunity)	141	1.00	7.00	5.23	2.19
PBC3 (financial distress)	141	1.00	7.00	5.86	1.81

Source: Author (2017)

The standard deviation measures capture the degree to which the responses were varied from the mean position; the larger it is the more the variability in the responses. For instance, PBC2 recorded the highest standard deviation of 2.19 implying that on average responses on PBC2

were largely varied compared to say PBC3 which reported a smaller standard deviation of 1.81. It is evident from the mean scores that lack of income subject to third party reporting, opportunities and financial distress could prevent firms from their intentions to comply with their tax obligations. Because of the lowest mean, opportunities seem to be the most important measure influencing tax-payers' intentions to comply or not comply. This is followed by presence of financial distress and finally presence/absence of income subject to third party reporting. In this regard, presence/absence of financial distress and income subject to third party reporting are rated as the second and third most important measures influencing intentions to comply, respectively.

### 6.5.2 Measures of Subjective Norms (SNORM)

Subjective norms are captured by five measures, but representing three perspectives, namely referents expectations, referents' behaviour and referents' response. While each of the three perspectives assess the normative beliefs and the taxpayers' motivation to comply, the referents' expectation measure captures taxpayers' expectations with regard to compliance, referents' behaviour measure captures how the taxpayers behave, and referents' response measure capture the perceived loss of respect from the referents if firms do not comply with their tax obligations. Referents' expectations are captured by three measures while referents' expectation and behaviour are each represented by one measure as follows:

**Table 6.6: Referents expectations and behaviour**

SNORM1	Business behavior towards compliance.
SNORM2	Referents' behavior towards compliance
SNORM3	Dangers associated with loss of respect to the business from associates if the business does not comply with tax requirements
SNORM4	The business would be deterred (not generally) from underreporting if the business would lose respect from important business associates
SNORM5	The business would generally be deterred from underreporting if the business would lose respect from important business associates

Source: Author (2017)

The descriptive statistics for the measures of subjective norms are presented in Table 6.7.

**Table 6.7: Descriptive Statistics for the Subjective Norms (SNORM) Measures**

<b>Subjective Norm (SNORM) indicator</b>	<b>Obs</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std Dev</b>
SNORM1(Referents expectation)	142	1	7	1.82	1.57
SNORM2 ( Referents behaviour)	141	1	7	3.20	2.26
SNORM3 (Referents response)	141	1	7	1.81	1.50
SNORM4 (Referents response)	141	1	7	1.85	1.64
SNORM5 (Referents response)	142	1	7	1.73	1.53

Source: Author (2017)

In terms of the influence of each of the measures on the tax-payers' intentions to comply with tax obligations, it is evident that referents' response (SNORM3), that measures perceptions on dangers associated with loss of respect to business from associates if the business does not comply with tax requirements and referents expectation of business's compliance behaviour are relatively more influential than the other measures. Ranked based on their importance, these measures are followed by SNORM5, SNORM4, and SNORM2 that respectively capture perceptions that the business would generally be deterred from underreporting if management believes that the business would lose respect from its important business associates, perceptions that the business would be deterred (not generally) from underreporting if management believes that the business would lose respect from its important business associates, and referents' behaviour towards compliance. The influential measures of subjective norms in the order of importance include: (i) General threat of loss of respect from key business associates, (ii) loss of respect from key associates and referents' and (iii) referent's own tax compliance behaviour.

## **6.6 Evaluation of Measurement Models**

The study adopts the validation guidelines provided in literature (Straub et al., 2004; Chin, 2010; Gotz et al., 2010; Smart, 2012), where the measurement models are subjected to four main tests, including indicator reliability (loadings), construct reliability (composite reliability), convergent validity (average variance extracted (AVE) analysis and discriminant validity (square root of AVE and loadings and cross loadings analysis). These validity and reliability tests provide some level of assurance that the survey items are capturing the constructs that they are designed to capture. The results of these tests are presented in the sections that follow.

### **6.6.1 Indicator Reliability (Indicator Loadings)**

The exploratory nature of this study required that a majority of the measures used in analyses to develop models were newly created, while some were adopted from previous studies. In this regard and in many cases, a large number of measures were used with the expectation that many may not meet the required test, since there was no pilot test for the survey instrument. Measures not meeting the requirements were eliminated from analysis.

As earlier discussed, indicator reliability describes the extent to which a measure or a set of measures is consistent in respect of what it intends to measure. In practice, the reliability of one construct is independent of, and usually calculated separately from, that of other constructs (Urbach and Ahlemann, 2010). The bootstrapping technique of estimate generates item loadings and measurement errors with their respective t-values (Gefen et al., 2000). Initially, all measures were included in the models and the reliability of individual indicators/ measures were evaluated by examining the loadings of each measure. A commonly accepted minimum threshold for loadings is 0.707 which technically implies more shared variance between the constructs and its measures than error variance (Hulland, 1999; Barroso et al., 2010; and Gotz et al., 2010). In cases where new items for newly developed scales are employed, it is common to have several items in an estimated model with loadings measuring less than the threshold.

In this study, an item trimming process was done that involved dropping of measures with negative loadings and those with very low loadings one at a time, until most measures achieved reasonable loadings compared with the acceptable minimum threshold of 0.707. In the trimming process, 22 measures out of a total of 64 measures were eliminated, which represents about 34.4 percent of all the measures. A summary of the results on loadings is presented in Table 6.8 that reports loadings after the first trimming exercise as well as the final trimmed measurement model. The loadings of all the measures in the final measurement model (as presented in Appendix VI) were all examined to assess the measure's reliability. Following the approach employed by Smart (2012), a cut-off point of 0.5 was used thus arriving the results posted in Table 6.3. The loadings of the 11 constructs used in this study, 31 variables out of the 42 remaining variables / measures displayed loadings over 0.70 (as recommended by Chin, 1998). Out of the remaining 11 variables, only 3 variables displayed loadings less than 0.60 as argued by Chin (1998b), these measures can be used in analyses since there are other measures

for the same construct. In this regard, the measures that were deleted had extremely low loadings.

**Table 6.8: Loadings for the Measurement Model for each Construct**

<b>Construct</b>	<b>Loadings after the First Trimming Process</b>	<b>Loadings for the Final Trimmed Model</b>
<b>Compliance Behaviour (BEHV)</b>		
BEHV1	0.338	0.343
BEHV2	0.805	0.814
BEHV3	0.853	0.852
BEHV4	0.154	---
<b>Behavioural Intent (BI)</b>		
BI1	0.722	0.713
BI2	0.756	0.781
BI3	0.491	0.625
BI4	0.337	---
<b>Subjective Norms (SNORM)</b>		
SNORM1	0.524	---
SNORM2	0.283	---
SNORM3	0.625	0.563
SNORM4	0.893	0.945
SNORM5	0.841	0.905
<b>Perceived Behavioural Control</b>		
PBC1	0.737	0.737
PBC2	0.71	0.71
PBC3	0.74	0.74
<b>Procedural Justice</b>		
PJ1	Delete	---
PJ2	0.816	0.816
PJ3	0.799	0.799
<b>Tax Compliance Costs</b>		
Cost1	0.579	0.597
Cost2	0.743	0.737
Cost3	0.819	0.83
Cost4	0.802	0.809
Cost5	0.723	0.705
Cost6	0.758	0.779
Cost7	0.567	---
Cost8	0.8	0.805

**Table 6.8 Cont'd**

<b>Tax System Complexity</b>		
<b>Statutory complexity</b>		
Statcomp1	0.558	0.558
Statcomp2	0.627	0.627
Statcomp3	0.722	0.722
Statcomp4	0.764	0.764
Statcomp5	0.768	0.768
<b>Legal Complexity</b>		
Legalcomp1	0.705	0.724
Legalcomp2	0.714	0.692
Legalcomp3	0.725	0.766
Legalcomp4	0.724	0.762
Legalcomp5	0.257	---
Legalcomp6	0.491	---
Legalcomp7	Delete	---
<b>Administrative Complexity</b>		
Admincomp1	0.864	0.93
Admincomp2	0.842	0.927
Admincomp3	0.636	0.673
Admincomp4	Delete	---
Admincomp5	Delete	---
Admincomp6	0.359	---

**Table 6.8 Cont'd**

<b>Tax System Fairness</b>		
<b>Exchange Fairness</b>		
EF1	Delete	---
EF2	0.802	0.822
EF3	0.83	0.822
<b>Procedural Fairness</b>		
PF1	0.603	0.624
PF2	0.64	0.677
PF3	0.766	0.744
PF4	0.805	0.789
PF5	0.656	0.755
PF6	0.614	0.688
PF7	0.529	---
PF8	0.44	---
PF9	Delete	---
PF10	Delete	---
PF11	0.431	---
<b>Horizontal Fairness</b>		
HF1	0.815	0.825
HF2	0.82	0.825
HF3	Delete	---
<b>International Compatibility</b>		
Intcomp1	0.431	---
Intcomp2	0.043	---
Intcomp3	0.363	0.65
Intcomp4	0.715	---
Intcomp5	0.758	0.68
Intcomp6	0.492	0.758
Intcomp7	0.784	0.551
Intcomp8	0.036	---
Intcomp9	0.543	0.798
Intcomp10	Delete	---

**Source: Author (2017)**

In summary, a majority of the measures used in the study exceeded the more stringent cut off threshold of 0.707, which means that more than 50 percent of the observed variable variance is shared with the construct (Barclay *et al.*, 1995). The measures with loadings below 0.707 are further subjected to further tests particularly the discriminant validity test which determines whether the lower scoring measures should still be retained or eliminated (Chin, 2009). The next section assesses the internal consistency of each of the constructs.

### 6.6.2 Construct / Composite Reliability

Construct reliability can be assessed using measures of Cronbach's alphas, which facilitate an evaluation of the extent to which a variable or a set of variables is consistent with what it intends to measure (Straub *et al.*, 2004). Construct reliability is analyzed using the composite reliability index which ranges between 0 (indicating completely unreliable) to 1 (for perfect reliability). The acceptable reliability threshold is 0.6 (Gotz *et al.*, 2010; Kerlinger & Lee, 2000; Urbach & Ahlemann, 2010). Table 6.9 presents the results of the construct reliability test based on the Cronbach alphas. The results show that all the Cronbach alpha measures for all constructs (except PBC, procedural justice, Exchange Fairness and Horizontal fairness) as used in the study exceeded the acceptable threshold of 0.6. In this regard, construct reliability has therefore been established for subjective norms, tax compliance costs, complexity (statutory, legal and administrative perspectives), procedural fairness and international compatibility. The next section therefore examines the convergent validity of the measurement model.

**Table 6.9: Construct Reliability Measures (Cronbach Alphas)**

Construct	Construct Reliability Measure (Cronbach alpha)
Compliance Behaviour (BEHV)	0.5370
Behavioral Intent (BI)	0.4135
Subjective Norms (SNORM)	0.747
Perceived Behavioral Control (PBC)	0.549
Procedural Justice	0.580
Tax Compliance Costs (COSTS)	0.872
COMPLEXITY :	
Statutory (stat comp)	0.724
Legal (legal comp)	0.718
Administrative (Admincomp)	0.805
FAIRNESS:	
Exchange (EF)	0.520
Procedural (PF)	0.805
Horizontal (HF)	0.516
INTERNATIONAL COMPATIBILITY (Intcomp)	0.717

Source: Author (2017)

### 6.6.3 Convergent Validity Test

This is measured using the Average Variance Extracted (AVE), as proposed by Fornell and Larcker (1981). The basic objective of this process is to ensure that the constructs share more variance with its measures than with other constructs in the model (Fornell & Larcker, 1981). The AVE is a commonly used measure (see for instance: Chin, 1998b; Fornell & Larcker, 1981; Gefen & Straub, 2005; Gotz *et al.*, 2010; Hair *et al.*, 2006) that depicts the amount of

variance that a particular latent variable (construct) captures from its measures relative to the amount due to measurement error. The recommended acceptable minimum threshold for the AVE measure is 0.50 (Gefen & Straub, 2005; Hair et al., 2006), so that at least 50 percent of the indicator variance is accounted for. The results of AVE tests are presented in Table 6.10. The results show that all the average variances extracted, except for statutory complexity measures, were above the acceptable level of 0.50. As to whether the AVE measure for statutory complexity of 0.480, which is marginally below the acceptable minimum, is accepted or not depends on the test for discriminant validity measure (Chin, 2009).

**Table 6.10: Convergent Validity Measurement (based on AVE)\***

<b>Construct</b>	<b>Average Variance Extracted (AVE)</b>
Compliance Behaviour (BEHV)	0.502
Behavioural Intent (BI)	0.503
Subjective Norms (SNORM)	0.676
Perceived Behavioural Control (PBC)	0.532
PROCEDURAL JUSTICE	0.652
Tax Compliance Costs (COSTS)	0.571
<b>COMPLEXITY :</b>	
Statutory (stat comp)	0.480
Legal (legal comp)	0.542
Administrative (Admincomp)	0.726
<b>FAIRNESS:</b>	
Exchange (EF)	0.675
Procedural (PF)	0.511
Horizontal (HF)	0.681
INTERNATIONAL COMPATIBILITY (Intcomp)	0.480

\* AVE measures computed as average of squared loadings of measures of the respective construct

#### **6.6.4 Discriminant Validity Test (Loadings & Cross Loadings)**

After assessing the reliability of the measurement model, we conducted a discriminant validity test, which seeks to establish the extent to which a given construct is different from other constructs in the model (Gefen & Straub, 2005). It is confirmed when each measurement item correlates weakly with all other constructs except for the one to which it is theoretically associated. It is primarily assessed by comparing correlations of measures within and across constructs in the model i.e. by examining the loadings and cross loadings matrix. Cross loadings are derived by correlating the component scores of each latent variable with both their respective block of indicators and all other items included in the model (Chin, 1998). Discriminant validity is ascertained when the measurement items load highly on their

theoretically assigned construct and not highly on other constructs (Gefen & Straub, 2005). However, there is no universally accepted threshold to establish discriminant validity. But, it is commonly accepted in literature that all loadings of the measurement items on their assigned constructs or latent variables should be larger than any other loadings (Chin, 1998; Chin, 2010; Barclay et al. 1995; Gefen & Straub, 2005; Schwarz & Schwarz, 2007; Urbach & Ahlemann, 2010).

In this study, the loadings and cross loadings were generated by a correlations matrix of the measures used in the study. The results as presented in Appendix VI show that all the measures loaded higher with other measures within their intended construct than with other measures of different constructs. There were however a few exceptions. For instance, perceptions 13 loads higher on procedural justice construct (with a loading of 0.269), on Administrative Complexity construct (0.227) than on its own Subjective Norms construct; Perceptions 5 loads higher on procedural justice (0.308) and international compatibility (0.339) constructs on its own; intcomp 3 loads more on all other constructs (except Horizontal fairness construct) than within its own international compatibility construct. In addition, Intcomp 7 loads more with statcomp (0.281) and legalcomp (0.254) constructs than its own international compatibility construct.

Finally, complexity 1 and complexity 2 load more highly with administrative complexity construct (0.218 and 0.331, respectively) than with their own statutory complexity construct. Despite the fact that Chin (1998) recommended the removal of these measures that portray little evidence for discriminant validity, their cross loadings are too small to warrant their elimination, and as thus, they are retained to preserve the information content in the model. In fact, marginal cross loadings are attributed to 'noise' (Chin, 1998) and are therefore retained in the model. This is consistent with Schwarz and Schwarz (2007) who also retained measures that loaded below measures that were not assigned to a particular construct. In this respect, the study confirmed widespread discriminant validity in the model. In summary, each measure generally loads more highly within the construct they are assigned to measure than in other constructs.

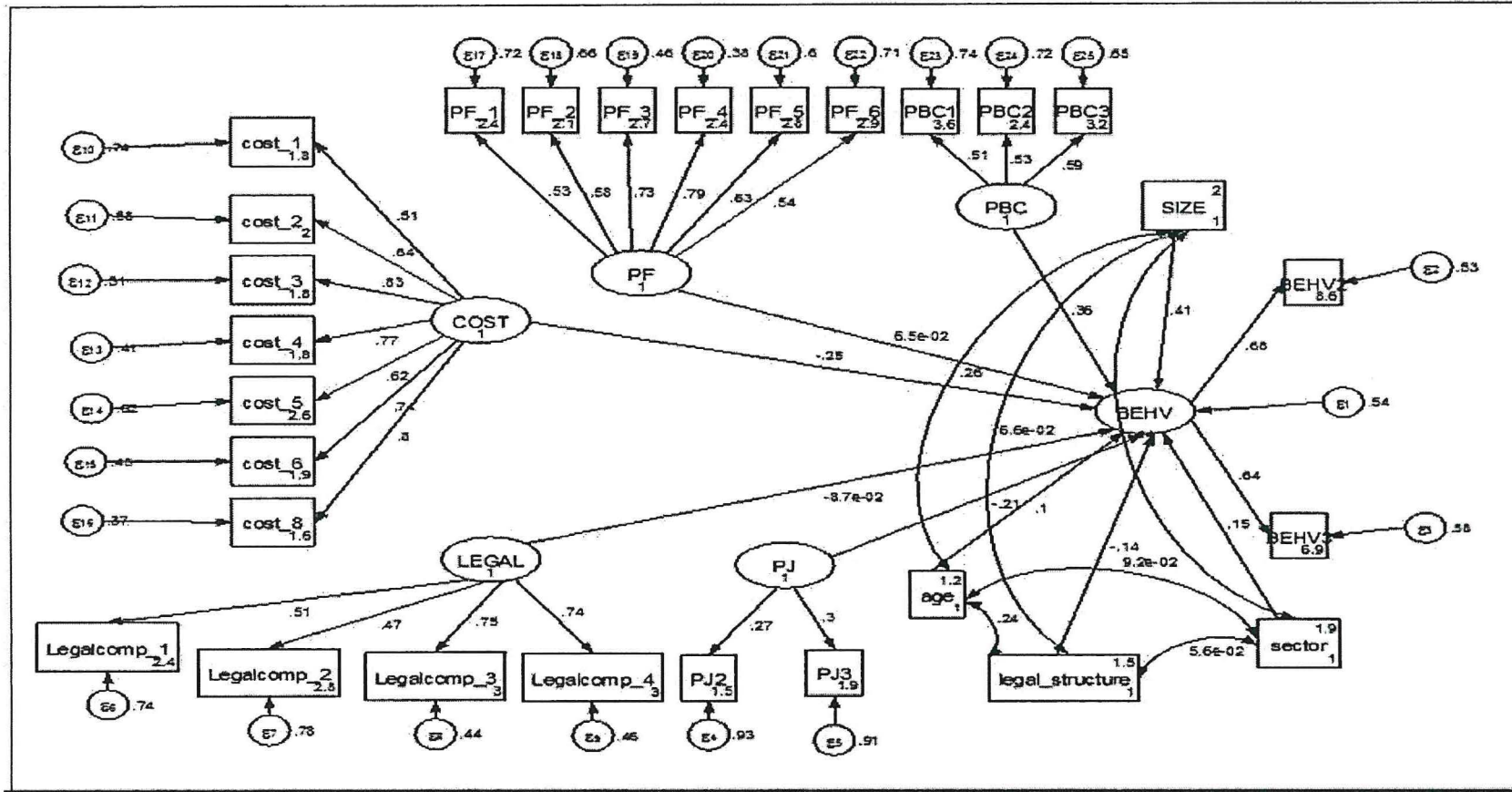
Collectively, the reliability and validity tests above confirm the overall quality of the final measures used in this study. In particular, the test statistics indicate that the component measures are reliable, internally consistent and have both convergent as well as discriminant validity. In this regard, the measurement model is therefore acceptable for further analysis. The

next section therefore presents results of the evaluation of the structural model for tax payer compliance behaviour in Kenya.

## **6.7 Evaluation of Structural Model and Estimation**

The structural model evaluation follows validation of the measurement model in order to provide evidence to support the theoretical model developed for this study. The structural model illustrates the relationship between the different latent variables / constructs that were generated and hypothesised based on the theory for planned behaviour. Diagrammatic representations of the structural models are provided in Appendix VII. The results show each independent construct's effect on the corresponding dependent constructs, the path coefficients and standard errors as well as the coefficients' respective levels of significance. In addition, the measurement model results are also presented showing how each of the indicators of the different independent constructs affect the respective constructs that they measure. In this regard, Model I depicts the tax compliance structural model controlling for firm size (measured by total firm turnover), Model II is a re-estimation of Model I but additionally controlling for the sector within which each firm operates. Model III adds firm legal structure to Model II and finally Model IV includes as how long the firm has been in existence (i.e. firm age). We earlier hypothesized that these firm specific characteristics can potentially influence tax compliance behaviour. Figure 6.1 depicts a structural model for corporate taxpayers in Kenya controlling for firm characteristics – size, sector, legal structure and age.

Figure 6.1: Structural Model Representation (Model IV)



In Figure 6.1, the oval shaped variables (cost construct- (COST), Procedural Fairness Construct- (PF), perceived behavioural control-(PBC), Legal Complexity- (LEGAL), and Procedural Justice construct- (PJ)) represent the latent independent constructs and BEHV is also a latent construct that represents the dependent variable (compliance behaviour). Each construct is linked to its indicators/measures (in boxes) via pointed arrows. In this case, the COST construct has 7 indicators (cost 1...cost 7), while procedural Fairness construct has 6 indicators. There are two measures of BEHV, i.e. BEHV2 and BEHV3 linked to BEHV via the pointed arrows. The indicators are all measured with error – thus the error terms attached to them. The pointed arrows between indicators and independent constructs show the measurement model for each construct which reflects the path coefficients that indicate direction and strength of influence of each of the indicators on the construct. The pointed arrows linking the constructs with the dependent variable construct show the structural model and indicate the path coefficient estimates that reflect the direction and strength of influence between independent variable constructs and the dependent variable construct. The variables in boxes: Size, sector, Legal structure and Age are observed variables that directly influence the dependent variable and are assumed to have a pair wise covariance between each other - thus the bowed double arrowed links between them. The structural models for Model I-IV were estimated. Full scale estimation results for each of the models is presented in Appendix VII, but a summary of the structural model results are provided in Table 6.11. The other constructs capturing measures of subjective norms, exchange and horizontal fairness as well as administrative complexity despite having been found reliable and consistent with validity tests were excluded from analyses in the process of seeking a well-behaved and robust model whose properties are in line with theoretical predictions.

**Table 6.11: Summarized Results Estimation and Evaluation of the structural Model**

	Model I	Model II	Model III	Model IV
	<b>Tax Compliance<sup>10</sup></b>			
<b>Dependent Variable</b>				
<b>Independent variables</b>	<b>Structural Model Path Coefficients</b>			
Procedural Justice	-0.3517 (0.3370)	-0.2892 (0.3185)	-0.2627 (0.3068)	-0.2109 (0.3094)
Legal Complexity	-0.1103 (0.1239)	-0.1202 (0.1199)	-0.0985 (0.1246)	-0.0873 (0.1267)
Compliance Costs	-0.2421** (0.1182)	-0.2499** (0.1166)	-0.2503** (0.1191)	-0.2474** (0.1209)
Procedural Fairness	0.0583 (0.1120)	0.0658 (0.1084)	0.0752 (0.1067)	0.0646 (0.1041)
Perceived Behavioural Control	0.3679** (0.1539)	0.3638** (0.1506)	0.3757** (0.1472)	0.3592** (0.1504)
<i>Firm Size</i>	0.3971*** (0.1031)	0.4201*** (0.0968)	0.4281*** (0.0975)	0.4057*** (0.1055)
<i>Firm Sector</i>		0.1434 (0.0968)	0.1557 (0.0997)	0.1510 (0.09817)
<i>Legal Structure</i>			-0.1151 (0.1069)	-0.1431 (0.1195)
<i>Age</i>				0.1007 (0.0836)
<b>Average Communality</b>	<b>0.393</b>	<b>0.393</b>	<b>0.392</b>	<b>0.392</b>
<b>Average R-Squared</b>	<b>0.397</b>	<b>0.397</b>	<b>0.396</b>	<b>0.396</b>
<b>Goodness of Fit Measure</b>	<b>0.395</b>	<b>0.395</b>	<b>0.394</b>	<b>0.394</b>

Notes. The symbols \*, \*\* and \*\*\* represent 10%, 5% and 1% levels of significance, respectively. Figures in parentheses are respective coefficient standard errors.

From the structural model estimation results, the results provide evidence that measures of compliance costs and perceived behavioural control as well as firm size are the only significant variables that affect tax compliance behaviour. This is reflected across models I-IV. The study therefore dwells on model IV in interpreting the results and more so, on the significant variables. But is worthwhile to indicate that the measures of procedural justice, legal complexity, procedural fairness despite their coefficient signs being in line with expectations were found to be insignificant in influencing compliance behaviour although their finding are discussed below. It is expected that with increased procedural justice (lower levels of quantitative measure in the data capture), compliance behaviour would be enhanced. Similarly, when complexity (for this case legal complexity) increases compliance would be undermined. In addition, whenever the tax system is seen as fair (as measured in the study by procedural fairness), taxpayers would be incentivized to comply more. This explains the respective

<sup>10</sup> An increase in tax compliance implies more evidence of compliance.

negative coefficients on procedural justice and legal complexity constructs, as well as the positive coefficient on the procedural fairness construct.

From our model IV legal complexity 3 and 4 below have a path coefficient of 0.75 and 0.74 respectively which is quite significant which indicates that the drivers of compliance costs are related to complexity.

Legal 3	The various parts of the Income Tax Act and other related legislation are organized in a logical manner
Legal 4	The various parts of the ITA do not contradict each other.

This is consistent with the measures that were significant in compliance costs. The strongest measure of cost that explains compliance cost is related to dealing with complexity of tax laws (cost 3), with a coefficient of 0.83 followed by cost measure for costs related to general compliance and dealing with regulatory tax requirements of KRA (cost 8) whose coefficient is 0.80. All these measures are related to complexity of the income tax laws and point to the need of simplification of the ITA which will greatly reduce complexity.

PF 4	In a dispute, the tax office would evaluate my information objectively and fairly.
PF 5	The dispute resolution mechanisms put in place by the tax office are fair

The two measures of procedural fairness above have path coefficients of 0.73 and 0.79 respectively indicating their importance in explaining compliance behaviour. This measure also relates to how KRA administer the tax laws and corroborate the findings on the complexity of tax laws. The study finds that compliance costs significantly influence compliance behaviour among corporate taxpayers in Kenya. Since the construct measures are variables whose observations were based on perceptions rated on a scale, the interpretation would be based on movement from the mean position in terms of standard deviations. For instance, the cost construct in model IV has a coefficient of -0.2474 which is significant at 10% level of significance. This implies that an increase in the cost measure by 1 standard deviation from the mean would reduce compliance behaviour (measured too on a scale in the survey) by 0.2474 of a standard deviation from its mean level, holding all other factors constant. This coefficient varies marginally across the four models considered in Table 6.4. From this result, it is possible to identify the key cost drivers from the measurement model for compliance costs. The results (appendix 5a-d) indicate that all the cost measures used in the study are significant at 1% level of significance in explaining compliance cost. But their level of influence on compliance costs would vary from one measure to another. The strongest measure of cost that explains

compliance cost is related to dealing with complexity of tax laws (cost 3) , with a coefficient of 0.83 followed by cost measure for costs related to general compliance and dealing with regulatory tax requirements of KRA (cost 8) whose coefficient is 0.80. The rest of the cost measures have coefficients ranging between 0.50 and 0.77. This is reflected across the four models controlling for firm. Based on these results, the study therefore concludes that the key drivers of compliance costs that eventually affect compliance behaviour originate from the tax authority and are specifically incurred on understanding complex tax laws as well as ensuring that firms meet the regulatory tax requirements of KRA.

The other significant variable that influences compliance behaviour is the construct for perceived behavioural control. This construct in model IV depicted a coefficient of 0.3592 which was significant at 5% level of significance (or at 95% confidence interval of coefficient estimates). Like for the case of compliance cost, this construct was also measured based on three measures on a scale in a survey. In this case, a one standard deviation increase from the mean in perceived behavioural control increases compliance behaviour by 0.3592 of a standard deviation in the compliance behaviour measure among corporate taxpayers in Kenya-holding all other factors constant. This study uses three measures of PBC in its measurement model, i.e. the frequency with which firms receive incomes not subject to third party reporting, the tendencies for firms to under-report income if faced with financial distress and the frequency with which firms face financial distress that would require the firms to under-report their incomes. From the results, all the measures were significant at 1% level of significance but their path coefficients differ from one measure to another. The largest path coefficient is borne by the measure of PBC that captures the incentive to underreport income if an enterprise is frequently faced with a financial distress (0.59) followed by when opportunity of underreporting when there is a financial pressure (0.52) then finally when a firm receives income that is not subject to third party reporting. From these results of the four models, the study can conclude that the most important measure of PBC that has the strongest influence on compliance behaviour is when firms are frequently faced with financial distress. It is therefore not so much about occurrence of financial distress but how often the distress circumstances occur that significantly influences firms' compliance decisions.

Among the four control variables that capture firm characteristics (size, sector, legal structure and age), firm size is the only significant variable that influences compliance behaviour. This variable is significant at 1% across all the four models. The variable has a positive coefficient

of 0.4057 in model IV, implying that a one standard deviation increase in firm size from its mean value increases compliance behaviour by 0.4057 of a standard deviation, holding all other factors constant. This means that as firm sizes increase there is a tendency for the firms to be more compliant. This result was not surprising as larger firms have more developed accounting systems and are thus expected to be compliant. However, it was surprising that age was not significant as expected because older firms should have better accounting systems than young upcoming firms.

However, there are mixed results from the limited studies of corporate taxpayer compliance behaviour. Abdul-Jabbar (2009), concluded that business size, has an impact on compliance behaviour. His findings on the impact of business age, industry sector, tax rate and incentives on the compliance behaviour of corporate SMEs were inconclusive. Sapiei et.al. (2014) using data of corporate tax payers in Malaysia found business age and tax liability to be significant variables in explaining non-compliance behaviour. He also found that business size was a significant determinant of underreporting of income and supported the view that larger companies are more compliant than their smaller counterparts. In this study, the sector in which the business is may not be that significant as all companies in Kenya pay taxes at the same rate, concessions are only given to companies operating in the Export Processing Zones.

After ascertaining the model results, the models predictive powers were also assessed. This was done using R-squared at both independent construct levels i.e. within the measurement models as well the structural model level. The R-squared value shows the extent to which the independent constructs (measures of tax costs, complexity, fairness, procedural justice and perceived behavioural control) help explain the dependent construct; the compliance behaviour. The measure of R-squared also provides information on the total variation in the dependent construct (by subtracting the R-squared from 1), which cannot be explained by the independent constructs. In this case, a model with perfect prediction has R-squared value of 1 and the unexplained variation of zero. The R-squared for individual indicators depicts the extent to which each individual indicator explains the constructs that it measures and overall R-squared captures the extent to which all the constructs in the model explain the ultimate dependent variable- compliance behaviour. The R-squared for the construct is computed as the average of all R-squared measures for each of the individual indicators in the respective construct.

The predictive power test results of model (as presented in Appendix VII) show the fraction of variance of compliance behaviour explained by each indicator/measure. The study focuses on the significant latent variables, i.e. compliance costs and measures of PBC. The study analyses measures of R-squared on each indicator of all the constructs used. Discussions here focus on the significant construct measures – tax compliance costs and measures of PBC.

**Table 6.12: Results of the evaluation of the Structural Model IV**

Construct	Indicator	R-squared for individual indicator *	R-squared for Construct	Overall R-squared**
Procedural Justice	PJ2	0.0744	0.0835	0.396
	PJ3	0.0926		
Legal Complexity	Legalcomp_1	0.2571	0.3942	
	Legalcomp_2	0.2208		
	Legalcomp_3	0.5566		
	Legalcomp_4	0.5425		
Compliance cost	cost_1	0.2552	0.5017	
	cost_2	0.4154		
	cost_3	0.6924		
	cost_4	0.5863		
	cost_5	0.3783		
	cost_6	0.5502		
	cost_8	0.6342		
Procedural Fairness	PF_1	0.2843	0.4134	
	PF_2	0.3396		
	PF_3	0.5387		
	PF_4	0.6213		
	PF_5	0.4020		
	PF_6	0.2945		
Perceived Behavioural Control	PBC1	0.2606	0.2972	
	PBC2	0.2793		
	PBC3	0.3518		

Source: Author (2017)

Table 6.12 presents Model IV evaluation of R-squared measures for each individual indicator as well as for the construct level. This helps us identify the most important variables that explain variations in each individual construct, focusing on the significant constructs that explain compliance behaviour- i.e. compliance cost and perceived behavioural control constructs.

On the measures of tax compliance costs, it is evident from the results (appendix 5a-d) that the most important measures of tax costs, i.e. the complexity of tax laws (cost 3) and the compliance and regulatory tax requirements (KRA) (cost 8) as identified above are the ones that explain the greatest proportion of variation in compliance behaviour. For instance, cost\_3 that captures costs in dealing with complexity of tax laws account for 69% of variation in tax compliance costs construct. Tax costs incurred in meeting compliance and other regulatory tax requirements (cost 8) account for 63% of variation in the tax compliance cost construct. This implies that activities of KRA directed at influencing complexity of tax laws as well as enhancing the avenues through which taxpayers can easily comply with tax requirements would greatly influence compliance behaviour. On the perceived behavioural control that ascertains the ease with which firms would be tempted to under-report income, the R-squared measure for the most significant measure (as identified above- the frequency of occurrence of financial distress that may compel firms to underreport income, is at 0.35. This implies that the measure of PBC linearly accounts for 35% of variations on PBC behaviour. These values for R-squared are reflected across the four models even when different attributes of the firms – size, sector, legal structure and age- are accounted for.

The Goodness of Fit (GoF) test was also conducted and a Global goodness of Fit index for validating the research model was computed based on Tenenhaus et al., (2004) which was also applied by Smart (2012). The index accounts for the performance of both the measurement and structural model; providing a single measure for the overall predictive power of the causal model (Tenenhaus et al., 2004; Tenenhaus et al., 2005). The global GoF index is computed from explained variability (R-squared) and communality generated from a bootstrapping procedure. Tenenhaus et al., (2005) argues while R-squared measures are only calculated for endogenous constructs, communalities are computed for both endogenous and exogenous constructs. The average communality represents a weighted average of the various R-squared being the number of factors within each respective construct. In this case, single indicator constructs are usually excluded from the computation of average communality since they add up to 1. In this study, all the control variable constructs (age, size, sector and legal structure of firms) are captured by single indicators and as such are excluded from communality computation. All the rest of the constructs have a minimum of two factors and thus qualify to be used in computation of communality measures.

This study uses five constructs (on procedural justice, legal complexity, compliance costs, procedural fairness and perceived behavioural control) to compute the weighted average communality measure (using number of factors in each construct as the weights). This yielded average communality measures of between 0.393 and 0.392 for all models. The average measure of variability (R-squared) on the other hand ranged between 0.397 and 0.396 across all the four models. In this regard, the global GoF index computed based on the formula presented in section 4.5.7, range between 0.395 and 0.394. For an exploratory study, these results indicate that the models being examined are significant since their respective GoF indices are above 0.3; the empirically recommended minimum for an exploratory study to be described as adequate (see for instance Chin, 2009; Tenenhaus *et al.*, 2005). In fact, the results compare fairly well with those of Smart (2012) that found GoF index measure of 0.42. This implies that the quality of models used for this study is generally within acceptable limits. From the GoF results, we can infer that the combined effect of constructs capturing procedural justice, perceived behavioural control (a component of the theory of planned behaviour), attributes of the tax system fairness (tax fairness as measured by procedural fairness measures) and tax complexity (measured by legal complexity attributes) account for slightly over 39 percent of variations in tax compliance behaviour among medium and large sized business taxpayers in Kenya. At group level and focusing on the significant constructs in influencing compliance behaviour, it is evident that while cost measures jointly account for about 50% of variations in compliance behaviour, measures of PBC jointly account for about 30%. This reflects the relative importance of costs over PBC in influencing compliance behaviour.<sup>11</sup>

For robustness sake, we consider the measurement of GoF approach proposed by Bentler and Raykov (2000) that compares each measures correlation with the dependent variable (for this case compliance behavior) as well as the squared multiple correlation coefficient. The minimum threshold acceptable for individual measure correlation coefficient is 0.3. It is evident from the results presented in Appendix VII that all the individual correlation coefficients were greater than 0.3, thus an indication of adequate goodness of fit in all the models used in the study. These results indicate strong predictive power of the model for an exploratory study and thus justify an assessment of the study hypotheses that were outlined earlier, presented in Table 6.13.

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<sup>11</sup> Group R-squared are computed as average of individual measures within the construct. For this case, the average R-SQUARED measure of 50% for costs is computed from seven cost measures while the PBC measure of 30% was computed from three measures.

**Table 6.13: Summary of Hypotheses Testing**

Hypotheses	Research Hypothesis	Results from Model Estimation
<b>PERCEIVED BEHAVIOURAL CONTROL</b>	Lower degrees of perceived behavioural control over noncompliance will negatively influence tax compliance behaviour.	<i>Accepted</i>
<b>TAX FAIRNESS</b>	The four dimensions of tax fairness are positively correlated with tax compliance	<i>Rejected</i>
<b>TAX COMPLEXITY</b>	The four dimensions of tax complexity are positively correlated with tax compliance	<i>Rejected</i>
<b>TAX COMPLIANCE COSTS</b>	Operating costs of taxation are negatively correlated with tax compliance	<i>Accepted</i>
<b>FIRM CHARACTERISTICS</b>	There is a positive relationship between firm size and compliance behaviour	<i>Accepted</i>
<b>INTERNATIONAL COMPATIBILITY</b>	International compatibility is positively correlated with tax compliance	<i>Rejected</i>

**Source: Author (2017)**

A relook at the hypotheses against the model estimation results as well as the descriptive statistics of the study show mixed results; reflecting the varied measures of the constructs. In particular, while some constructs conform to hypothesized relationships, some in fact remain inconclusive while others negate the hypotheses. In particular, we accept the hypotheses for the influence of the measures on PBC, tax compliance costs, business size, business age and partially for fairness – the procedural fairness measure on tax compliance behaviour. But we reject hypotheses for the influence of the measures of tax complexity (specifically legal complexity) on tax compliance. We however remain inconclusive on the role of international compatibility measures in influencing tax compliance behaviour. The influence of the other measures of fairness equally remains inconclusive mainly because the measures did not meet the requisite threshold to be included in the analyses. This depicts the inapplicability of some of the measures of constructs used in other studies (such as Smart, 2006) for the Kenyan case.

The construct, Perceived Behavioural Control (PBC), which was measured by three elements (financial distress, third party reporting and opportunity) had a significant effect on tax compliance behaviour. This implies that companies with a lower degree of perceived impediments are more likely to comply than those with higher degrees. Studies on this construct are mixed. Trivedi et al. (2005) did not find any significant relationship between PBC

and tax compliance although the study utilized a student sample and not actual taxpayers. Bobek and Hatfield (2003) found a significant relationship between PBC and intentions to comply for only one of the three scenarios used for the study. The other two scenarios used in their study failed to show any relationship between PBC and intentions. This measure was very significant for this study. This is expected as companies with incomes which can be verified by third parties are more likely to comply as such income can easily be detected in an audit. Companies with weak accounting records for example some companies in the construction and transport industries would have lower compliance levels as their income cannot be detected.

Compliance cost was a significant variable in explaining compliance behaviour as expected. Kenyan companies comply with nearly all types of income taxes ranging from employment taxes, withholding taxes on income, taxes on incomes from property etc. Complying with taxes in Kenya requires expert knowledge of the subject as evidenced by the fact that 103 out of the 142 firms that participated in the survey had dedicated departments to deal with tax issues. Tax compliance costs research to date has mainly focused on the estimation and the differences between size and type of businesses. There is empirical evidence on the relationship between compliance cost and tax compliance of corporate taxpayers. The closest reference study was one by Abdul-Jabbar (2009), who studied SME's in Malaysia and found no statistical significance between compliance cost and compliance behaviour of such firms. Studies on compliance costs are also affected by country differences, where each country has its unique cost making comparability difficult.

In countries where tax systems are not completely computerized, like Kenya income tax compliance costs are usually significant and may deter compliance. Highly related to compliance cost is legal complexity. It was a surprise in this study that legal complexity was not a significant variable. This could be due to the fact that most of the companies studied utilized the services of tax experts which means that they could have expert advice on unclear tax issues as well as expert representation in case of a dispute with tax authorities. Most of the tax compliance studies on individual tax payers have found complexity and fairness to be an important determinants of tax noncompliance (Saad, 2010; Smart, 2012). Procedural fairness was expected to be an important variable for companies as it is for individuals but surprising it was not significant. According to the sample of tax experts most of the companies in Kenya are not worried about whether the systems are fair or not, they just need the laws to be clear and they would find a way to comply.

## 6.8 Chapter Summary

This chapter presented the results from the evaluation of the measurement and structural models. The measurement model was evaluated based on the reliability and validity tests in order to determine the adequacy of the measurement model before structural model was assessed. The assessment of the structural model included use of a global goodness of fit index that encompass R-squared and measures of communalities at each construct level, as well as correlation measures between each individual measure with the dependent variable (compliance behaviour). All these tests are embedded in *Stata 12* Software. The combination of measurement and structural model that involves factor analysis and at the same time hypothesis testing is a more rigorous tool for evaluating a theoretical model and as such offer better methodological assessment procedure (Bullock *et al.*, 1994; Joreskog & Sorbom, 1989). From the measurement model evaluation, adequate factor loadings, convergent and discriminant validity was attained for all the constructs. However, a few measures that violated the thresholds were retained since they were considered important measures for the study. From the structural model, the predictor constructs were established to effectively predict the dependent variable (tax compliance), from the goodness of fit measures. Once the measurement and structural models had been effectively evaluated, the results generated from the estimation of the structural model were linked with hypothesis outlined earlier in the study. Eleven out of the fourteen hypotheses were accepted / confirmed or found to be inconclusive. The inconclusive outcome on hypotheses testing was as a result of some of the factors / constructs being eliminated from analysis prior to structural model estimation due to their failure to meet measurement model evaluation criteria. The next chapter interprets the results, draws policy implications for tax authorities and policymakers, addresses some of the study limitations, and also offer recommendations for further research in the area.

## **CHAPTER 7**

### **DISCUSSIONS OF FINDINGS AND IMPLICATIONS**

#### **7.1 Introduction**

The basic objective of this research was to establish the determinants of income tax compliance behaviour among large and medium sized business tax payers in Kenya and examine the effect of the identified variables on compliance behaviour. This final chapter presents a summary of results from the measurement and structural models derived to explain the compliance behaviour of the sample group selected. The next sub-section 7.2 presents an overview of the study, including re-outlining the research questions. Section 7.3 summarises the results outlined in chapters 4, 5 and 6, followed by a discussion of the findings. Section 7.4 highlights the contributions made to the current body of literature and section 7.5 discusses the policy implications of the findings for tax authorities as well as policymakers. Section 7.6 is a brief discussion of some of the limitations of the study, and section 7.7 provides some future directions and possible extensions to the current study. Finally, section 7.8 makes some concluding comments for the study.

#### **7.2 Overview of the Research**

The aim of this research was to establish the determinants of income tax compliance behaviour of Large and Medium Sized Business Tax payers in Kenya, who will be referred to as LMBTs. To achieve this research objective four research questions were utilized as follows:

- SQ1:** To what extent do perceptions of the tax system i.e. (fairness, complexity, compliance cost and international compatibility) influence intentions and tax compliance behaviour of LMBTs in Kenya?
- SQ2:** What are the effects of firm characteristics (size, sector, legal structure and age) on income tax compliance behaviour among LMBTs in Kenya?
- SQ3:** To what extent can the Theory of Planned Behaviour (TPB) be used to predict income tax compliance behaviour among LMBTs in Kenya ?
- SQ4:** What is the applicability of the procedural justice theory in explaining tax compliance behaviour among LMBTs in Kenya ?

The study used survey data collected from 142 respondents sampled from medium and large business taxpayers in Kenya spread across 19 key business areas of the economy as defined by the Kenya Revenue Authority (KRA). These business areas include retail, wholesale,

manufacturing, banking and the financial sector (Table 6.3). A large tax payer is defined by KRA as one with an annual turnover of Kshs.750 million and above, whereas a medium sized business tax payer as one with an annual turnover of between Ksh.350 million and Kshs.750 million. Apart from identifying the determinants that affect compliance behaviour, this study also tested the validity and adequacy of the Theory of Planned Behaviour (TPB) in explaining tax compliance behaviour among medium and large business taxpayers in Kenya. To answer the research questions raised, Structural Equation Modelling (SEM) was used to analyse data.

SEM was selected for this study because of its ability to model latent variables, correct measurement error, specify errors and their covariance structures and estimate entire theories simultaneously. According to several researchers, (Bagozzi & Yi, 2012; Henseler et.al., 2009), SEM assists in developing more precise hypothesis specification and construct operationalization; it takes into account the reliability of measures in tests of hypotheses in ways beyond the averaging of multiple measures of constructs, and guides exploratory and confirmatory research by combining self-insight and modelling skills with theory. For example, using SEM this researcher was able to conclude that the construct Perceived Behavioural Control (PBC) is an important determinant of compliance behaviour amongst business taxpayers in Kenya. In addition, it was possible to identify the significant variables that can be used to measure the latent construct PBC. SEM also allowed the researcher to address specific question three, which sought to determine the extent to which the TPB was able to explain tax compliance behaviour among LMBTs in Kenya. Hypotheses were then developed on the relationship between tax compliance and the measures of perceived behavioural control, procedural justice, tax fairness, tax complexity, subjective norms, tax compliance costs, as well as international compatibility. These variables were drawn from the TPB, Deterrence Theory and Procedural Justice Theory.

Studies (Hanlon, Mills & Slemrod, 2005; Joulfaian, 2000) have shown that the compliance behaviour of business tax payers is affected by non-human factors such the size of the business, the age of the business, and the industry in which the business operates. However, results from different tax jurisdictions are still mixed as to which factors are important. This study controlled for firm size (using total turnover), firm age, firm sector and firm legal structure and found size to be a significant variable in explaining tax compliance behaviour.

### **7.3 Summary of Findings**

This section summarizes the findings of this study, according to the objectives set out at the start of the study.

#### **7.3.1 Tax System (Fairness, Complexity, International compatibility and Tax Compliance Costs)**

In response to research question one, the extent to which perceptions of the tax system influences intentions and tax compliance behaviour was examined. The four constructs identified above were used to examine the tax system. The study found that tax compliance cost negatively influence tax compliance behaviour, as tax compliance cost increases, tax compliance reduces. Despite the fact that all the seven measures of costs used in the study were significant, the most important compliance cost drivers identified by respondents in the study were the complexity of tax laws, the compliance and regulatory tax requirements, and the frequency of changes in tax rules. These three factors linearly account for 69%, 63%, and 59% respectively of variations in compliance behaviour, as measured by their respective R-squared. The main tax compliance cost that strongly influence tax compliance behaviour were associated with understanding the complexity of tax laws, regulations and rules. The overall influence of tax compliance cost on compliance behaviour did not change when controlled for firm size, sector, legal structure and age, as evidenced from the fact that the size of the coefficient did not change significantly when different control variables were included in the model.

This result was expected as most studies, mainly on individual tax payers, have found that compliance cost has a negative effect on compliance behaviour (Slemrod, 2004; Tran-Nam, 2003). However, studies on compliance of corporate tax payers are scarce. Abdul-Jabbar (2009) studied SME's in Malaysia and found that compliance cost among the SME's did not significantly affect tax compliance behaviour. Thus there is very little to compare with: however, most of the drivers of compliance cost in Kenya were related to the application of tax laws. However, it is important to note that 74% of the sampled firms utilize the services of a tax expert which means that any unclear issue can be clarified before it becomes an obstacle to compliance.

Despite the fact that the construct complexity was found not to be significant in explaining tax compliance behaviour, four out of the seven legal complexity measures portrayed valid and

reliable estimates in the measurement model<sup>16</sup>. The measures that stood out include those that relate to the organization of the Income Tax Act (ITA) and other related legislations, as well as the extent of contradictions of the various parts within the ITA. Most importantly, legal complexity, based on the measurement model results, is strongly influenced by the logical organization of the ITA and other related legislations more than the extent of contradictions of the various parts of the ITA. For example, Section 4(b) of the Income Tax Act (ITA) on the taxation of partnerships does not recognize the existence of Limited Liability Partnerships (LLPs) and yet these organisations are recognized by other legislations in Kenyan laws and operate in Kenya. Some of the audit firms are set up as LLPs. There is also a contradiction with other laws when it comes to the definition of a commercial vehicle in the ITA which is different from the definition under the Traffic Act.

In addition, within the ITA, the definition of incomes recognises incomes in kind as taxable but when it comes to allowable expenses under s15, some expenses in kind, which are valid business expenses are not allowable deductions. For example, only cash donations to charities are allowable; donations in kind, e.g. if a farmer donates livestock to a tax exempt school, are not allowable. Other contradictions arise from the legislation affecting specific sectors. The Ninth Schedule to the ITA provides for specific rules applicable to the upstream oil and gas sector. The general rules in the ITA apply to the oil and gas sector where relevant, but the provisions of the Ninth Schedule prevail where there is a conflict. For example, the ITA requires oil and gas companies to withhold tax at a rate of 10% on dividends paid. However, this provision appears to conflict with the provisions of the ninth schedule which provide that all income taxes including that on dividends are carved out of the government's share of production.

Simplicity of rulings, and whether the rulings were made in accordance with Kenyan laws, were also found to significantly influence legal complexity. The other measures of legal complexity offer significantly smaller contributions to the definition of legal complexity of the income tax system in Kenya. The Kenyan Income Tax Act (ITA) is quite outdated. The ITA became effective in 1974 but has undergone several amendments through the various Finance Acts making it complicated over time. For example, in the last five years from 2012 to 2016, there has been several amendments to the ITA each year. This is an indication that the current

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<sup>16</sup> Measures that were not found to be reliable include those that capture consistency of income tax legislation with international law & practice, whether, given the same data, KRA and the taxpayer would agree on the tax liability with certainty, and, the extent to which the volume of directives, laws, regulations, etc., are cumbersome.

ITA legislation is not adequate. However, for corporate tax payer's complexity may not be a very big obstacle given the fact that most compliance issues, such as reporting and payment of taxes, are computerized and can be done from the office.

The construct, Procedural fairness, was represented by six measures covering the following three broad areas: fairness of the decisions of the Tax office, equal treatment of all tax payers and fairness of the dispute resolutions mechanisms. Despite the fact that the overall effect on compliance was not significant, this study noted the differentiated effects of each of the measures on the procedural fairness construct in the measurement model. In particular, we identified consistent and strong influence of procedural fairness, which assess the fairness of the tax office in terms of dealing with disputes. It is clear that a majority of taxpayers find that the tax office's decisions are mainly based on facts and not opinions, and that in a dispute, the tax office would evaluate the businesses' information objectively and fairly. These two dominate the definition of the procedural fairness of the tax system, as evidenced by their relatively large coefficients in the procedural fairness construct. The procedural fairness construct has been found to be a significant variable among individual tax payers: however, it has been difficult to find studies which have examined this variable among corporate tax payers. The insignificant results are surprising, as it was expected that business taxpayers would be dissatisfied with tax authorities given the number of legal disputes that have emerged in recent years between KRA the LMBTs.

### **7.3.2 Influence of firm characteristics on tax compliance**

Research question two hypothesized the influence of business level characteristics, such as business size, sector, legal structure and age of the business, on tax compliance behaviour. Business size was measured by total turnover in a year (indirectly reflects the volume of tax liability). The sector in which a business operates captures the diverse nature of services/products, and thus enables us ascertain whether it matters which sector a business is operating in when analysing compliance behaviour. Business legal structure differentiates the registration of firms, their relative preferential treatments by the government, and the existing structural challenges in the conduct of business in Kenya. Finally, business age reflects how long a firm has been in existence, indirectly capturing the level of understanding of the existing business climate and operations of the tax authority.

Despite the potential influence of the above factors on LMBTs compliance behaviour, we find only firm size as a significant determinant of LMBTs compliance behaviour in Kenya, at the 1% level of significance. Its positive coefficient in all the four models indicates that as a firm gets larger, there is a higher chance that it becomes more tax compliant. This can be attributed to the fact that understanding tax laws (and associated learning / experience in dealing with changes in tax laws), the operational business climate and building a relationship with the tax payer is easily achieved for larger firms. Most of the large business enterprises in Kenya have dedicated tax departments or experts to provide the needed technical expertise in dealing with tax matters. As such, this makes them more compliant. This result is consistent with results by Joulfian (2000), Hanlon et al. (2005) and Sapiei and Kasipillai (2012) who all found business size to be a significant factor in determining compliance.

### **7.3.3 Use of the Theory of Planned Behaviour (TPB) to predict compliance behaviour**

Research question three sought to find the extent to which TPB can be used to predict compliance behaviour among LMBTs in Kenya. The Theory of Planned Behaviour postulates that compliance behaviour is affected by intention, which in turn is influenced by three variables: attitudes, subjective norms and perceived behavioural control. In this study the first two variables were not found to be significant, Perceived Behavioural Control (PBC) was found to be the most significant variable in explaining tax behaviour and it affected the dependent variable directly. PBC was measured using three variables: income subject to third party reporting (PBC1), presence of opportunity not to report/comply (PBC2) and a measure that captures compliance behaviour when financial distress or cash flow problems are experienced (PBC3). Attitude and subjective norms were found to be weak in predicting compliance behaviour but PBC was highly significant in all the models used. This indicates that the lack of obstacles which prevent a tax payer from disobeying the laws is very important in determining whether the tax payer complies or not among LMBTs in Kenya. These measures have been used in studies such as Bobek and Hatfield (2003) and Smart (2012). Control is achieved by having the relevant skills, opportunities, resources and the absence of any obstacles in performing the desired behaviour (Madden et al., 1992). Income subject to third party reporting (income visibility) can exert a significant influence on compliance (Kagan, 1989; Carnes and Englebrecht, 1995). A highly visible income stream would impede or represent an obstacle to any noncompliant intentions. Warneryd and Walerud (1982) suggest that financially distressed individuals and businesses are more likely to engage in tax evasion than those experiencing less or no economic strain.

The strongest predictor of perceived behavioural control was found to be the frequency with which a business encounters financial distress, that would require it to under-report its income, followed by the businesses' opportunity to under report its income if faced with financial distress, and finally, the incidences of receipt of income subject to reporting by other firms. This indicates that when LMBTs are facing financial distress, they will most likely not comply with tax laws; it is more important for them to first meet other financial obligations and default on income tax then face the cost of noncompliance. This points to the possibility that the cost of tax noncompliance is lower than the cost of other financial commitments. For example, if a business does not pay its suppliers, the suppliers may stop supplying which means the business comes to a halt. If employees are not paid, they may stop working. However, if tax is not paid, the only drawbacks the business faces are the penalty and the interest on the unpaid tax. Hence, businesses are more willing to be tax non-compliant rather than face the possibility of being eliminated from the market.

Using theory, it was expected that the presence of third party verification of incomes and expenses would be the most important deterrent to noncompliant behaviour. This very odd occurrence could point to chances of the existence of corrupt practices where tax payers are not worried about being detected by the tax authorities for being noncompliant. In other studies, (Smart, 2012; Trivedi, 2007), this was found to be the most significant deterrent of noncompliance. However, the previous studies had used individual and not corporate tax payers as is the case in the present study. The reasons for non-compliance on the part of individual tax payers may present different results.

The significance of PBC partially supports the Theory of Planned behaviour in explaining compliance behaviour among LMBTs in Kenya. Because the sample used was tax managers filling returns on behalf of their businesses, it was difficult to actually determine the attitude of the businesses directly, but the importance of this result from a behavioural perspective is that perceptions of the businesses are very important. If businesses perceive that that they have control of whether or not to comply, most likely they will not comply with tax laws. Therefore, even if third party reporting of revenue and expenses is in place, the perceived control of business tax payers should be lowered to signal the nonexistence of other options apart from just complying with the law.

### **7.3.4 Applicability of the Procedural Justice Theory (PJT) in explaining compliance behaviour**

Research question four sought to examine the applicability of the procedural justice theory in explaining tax compliance behaviour among LMBTs. Under the Procedural Justice Theory, we measure people's perception or evaluation of whether the procedures and the enactment of procedures by the authorities when making decisions are fair (Thibaut and Walker 1975; Leventhal, 1980; Lind and Tyler 1988).

In this study we analysed three measures of procedural justice as supported by (Thibaut and Walker, 1975; Leventhal, 1980). The first measure (PJ1) captured the number of interactions between businesses and the tax authority on matters of tax, such as payments, dispute resolution, etc. The second measure (PJ2) examined the expectations of businesses on the tax authority to detect noncompliance in terms of tax payment or filing of returns. The third measure (PJ3) represented the severity of penalties imposed by the tax authority in the case of noncompliance. Out of the three measures, only two measures (PJ2 and PJ3) in the measurement model were found to be valid and reliable measures of procedural justice. In this case, only the two measures entered the structural model to ascertain their influence on tax compliance. The results however, indicate that procedural justice measures are not significant determinants of tax compliance behaviour. Despite this, the results have expected negative signs, so that as detection of noncompliance increases, and /or as the severity of penalties for noncompliance increases, compliance should also increase<sup>17</sup>.

The literature on PJT in the tax compliance domain is minimal and is still at the early stages of development and therefore few studies are available for comparison purposes. However, it was expected that penalties would be a deterrent to compliance behaviour. The measures used were not significant and thus more work is required to develop additional measures of procedural justice. The measures used were adopted from other tax jurisdictions and may not have captured the compliance behaviour of Kenyan tax payers.

### **7.4 Research Contributions**

There is a large body of research on taxpayer behaviour and compliance, mostly on individual taxpayers. However due to inconclusive results there is no comprehensive model of tax

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<sup>17</sup> High detection incidences are coded as 1 and low detection incidences coded as 7. Similarly, high severity of penalties for noncompliance coded as 1 as low less severity is coded as 7.

compliance. This study makes a useful contribution to the study of compliance behaviour of large and medium sized tax payers. Research Question One sought to identify the factors that affect compliance behaviour among business tax payers in Kenya and in this regard, the study makes the following contributions:

- (i) Most tax research studies (e.g., James, Hasseldine, Hite & Toumi 2001; Slemrod, 2004; Tran-Nam, 2000) have examined compliance costs separately from compliance decisions. They have not identified the relationship between tax compliance costs and the compliance behaviour of business taxpayers. This study addresses this gap in the literature by providing empirical evidence with regards to the influence of the tax compliance burden on tax compliance behaviour of corporate taxpayers. This study is likely to act as a point of reference for future tax studies, covering both compliance costs and compliance behaviour of business taxpayers.
- (ii) The study also used both economic and behavioural factors to examine compliance behaviour of large and medium business tax payers in Kenya and found that perceived behavioural control is an important factor in determining compliance behaviour and thus paved the way for future research regarding other behavioural factors that can influence compliance behaviour among business tax payers. Most studies examine the influence economic factors have on compliance behaviour but this study has shown that behavioural factors also explain compliance behaviour among business tax payers in Kenya.
- (iii) The few studies available on business tax compliance behaviour (Hanlon et al. 2005; Joulfaian, 2000; Rice, 1992), except that of Abdul-Jabbar (2009), utilised government reported data and were conducted in the US. This study utilized mixed method research collecting data using the survey method of data collection and also interviews to gather the opinion of experts. This approach is not only consistent with gradual development of taxation studies incorporating both quantitative and qualitative orientations as recommended by Loo (2006) and McKerchar (2008), but also as an alternative to the traditional method of tax compliance research, which relies heavily on a single quantitative deductive approach. In many countries it is difficult to access tax data from revenue authorities due to legal issues and therefore the use of alternative methods of data gathering and analysis such as interviewing tax payers will enhance research in this area.

Second, this study of large and medium sized business tax payers examined four demographic factors (age of the business, size of the business, the industry in which the business operates and its legal structure) and found size of the business to be a significant factor affecting compliance. The bigger the organization the more compliant it becomes. Studies on the demographic factors affecting business tax payers have been inclusive. Rice (1992) found no relationship between business size and compliance behaviour; however, Joulfaian (2000), also using US data, found size to be a significant determinant of compliance behaviour. Abdul-Jabbar (2009) used data on SMEs in Malaysia and found size and other demographic variables to be insignificant. This study makes a contribution by identifying the demographic variable, size, as the factor that influences large and medium sized business tax payer behaviour in Kenya and thus makes a step in understanding compliance behaviour of this category of tax payer.

The third objective of the study was to examine the applicability of the Theory of Planned Behaviour (TPB) in predicting tax compliance behaviour among business tax payers. TPB proved to be a strong base theory that was able to predict compliance behaviour and a universal theory that can be applied to other inter-disciplinary research contexts. The model used in this study found perceived behavioural control to be an important determinant of compliance behaviour as used in the TPB model. The TPB was extended to include four other variables: fairness, complexity, compliance cost and international compatibility. Compliance cost was found to be a significant variable in the extended model. This was moderated by size as the significant demographic variable. These findings lay the foundation for a more integrated tax compliance behaviour model. The variable international compatibility which has not been used in other studies to examine business compliance behaviour was introduced in the model. A set of measurements for the new construct and the other three constructs were developed and would be useful for future researchers intending to undertake similar studies on compliance behaviour. This study also confirmed the reliability and validity of the constructs used to test the applicability of the constructs in tax compliance and other related studies.

To better understand tax compliance behaviour requires a variety of approaches, methodologies, and data sources. The Structural Equation Modelling with Partial Least Squares methodology was successfully used to model data with multiple independent constructs. The researcher was able to explain the relationship between the various constructs and compliance behaviour. The PLS path model is also capable of providing information at the indicator level to show which individual measures contributed more towards a particular construct, which is

not easily available in other forms of analysis. In general tax compliance research is plagued by low response rates and non-normal data distribution, which would otherwise invalidate the use of parametric techniques. The use of this methodological approach paves the way for robust analysis in tax compliance studies.

There are very few studies on compliance behaviour of Kenyan tax payers and most Kenyan researchers and practitioners have to rely on research conducted in other tax jurisdictions. The findings of this study will therefore make a positive contribution towards increasing the current level of knowledge. The results will also provide a better understanding of the tax compliance behaviour of large and medium business taxpayers in Kenya, enabling the Kenya Revenue Authority to better target its interventions, which will be enumerated below.

## **7.5 Policy Implications**

The results of this study identified a few important determinants of tax compliance in Kenya, which may have implications for the tax authority (KRA) in particular and policymakers in general.

### **7.5.1 Influence of tax compliance costs on compliance behaviour**

There is a significant negative influence of tax compliance costs on tax compliance behaviour in Kenya. The broader implication for tax the authority, therefore, is to focus on reducing tax compliance costs, especially those related to understanding the complexity of commercial transactions, the complexity of tax rules, dealing with frequent changes in tax rules, managing a large number of different taxes, changes in tax administrative practices and general costs incurred in the process of complying with all the regulatory tax requirements. In particular, there are notably high costs in understanding the existing tax laws, dealing with frequently changing tax rules and the general compliance with tax requirements.

Policies on the management of compliance costs can be undertaken in a number of ways:

- i. The results of this study point to the importance of having an analysis on the impact of changes in the tax law on the compliance burden of taxpayers. There is a need for the periodic assessment of compliance costs as an integral element of the tax policy review. The common procedure of tax authorities in advanced economies, such as the Organisation for Economic Co-operation and Development (OECD) countries, is that all substantial modification to tax legislation must be accompanied by an evaluation report on compliance costs. For example, in its need to improve revenue collection,

KRA has continuously used a system of withholding taxes by agents who then remit the taxes to the government. An assessment of the impact of any changes in tax legislation on compliance costs should be made before the changes are implemented.

- ii. Policy makers should consider preparing a Tax Impact Statement (TIS) when there are any tax reforms or changes, particularly for businesses. Therefore, when Kenya introduces any new taxes they should be accompanied by a TIS on the additional compliance burden imposed on taxpayers. In achieving this objective, engagement with stakeholders by the government in their decision-making process is vital. This policy will ensure that KRA minimises the cost impact of any new regulations on the tax payer.
- iii. High costs of compliance are sometimes the result of a complex tax system. The Kenyan government has embraced technology which has simplified the filing and payment of taxes, where over 80% of income tax transactions can be conducted online. However, the threat of the introduction of additional taxes at the national and county level exists, as evidenced by the number of tax payers who raised this point as a concern. A more comprehensive survey of all businesses affected by these new taxes should be carried out to ascertain the total number of taxes that businesses have to comply with at the two levels of government in order to make appropriate policies. The results of the survey will also harmonize taxes at the county level and national level to avoid any double taxation of businesses.
- iv. KRA can further reduce the cost of compliance by using financial institutions which are closer to the people. For example, agency banking outlets can be used as KRA kiosks where tax payers can file returns and receive advice. Such will reduce the general compliance costs as most Kenyans especially in the small towns do not have full access to computers and may not be able to file returns and make payments on line.

#### **7.5.2 Influence of Perceived Behavioural Control (PBC) on compliance behaviour**

The other significant influence on compliance is drawn from the Theory of Planned Behaviour, i.e. the perceived behavioural control measures that indicate the incentive by businesses to justify underreporting of income during financial distress. When businesses face financial pressure, they tend to under report their income. While the results indicate a positive relationship between these two elements of PBC and tax compliance, the frequency with which

financial distress occurs has a stronger effect on businesses' intentions to underreport their income compared to the other measure of perceived behavioural control. A conducive business environment may also help reduce incidences of push factors to noncompliance. Other measures include:

- i. Within the Income Tax Act, subsidiary legislation dealing with different industries can be enacted. For example, there are companies which would be more comfortable paying corporate taxes on an annual basis and not quarterly because of the way their cash-flows occur. The aim of changing to a single or semi-annual payment is to reduce financial pressure on businesses and to avoid penalties as the result of late payments of tax. This policy has the possibility of initially affecting revenues collected by the government but in the long run, if compliance increases there is a possibility of higher revenue collection.
- ii. Perceptions of tax payers are important. KRA does not have a regulator and therefore its actions are not under scrutiny. KRA employees may feel that they can get away with actions such as colluding with tax payers to divert tax income. Tax payers should be made aware that all dealings they have with KRA are scrutinized by an independent third party; this will reduce perception of control.

### **7.5.3 General policy recommendations**

The dispute resolution mechanism in Kenya is poor: this fact was raised by both business tax payers and external tax agents as an aspect of the tax system which needs to be improved. The tax authority has to “walk softly” while carrying a “big stick”, suggesting that, whilst threats and legal coercion have their place in deterring noncompliance, the tax authority should also apply other persuasive approaches, such as raising tax morale and incorporating procedural justice elements into their legal procedures and processes. In terms of monetary rewards, the authority can offer monetary rewards, for companies seeking to improve compliance; for example, higher rates of capital allowances could be given for computer systems so that manual systems, which are cash based, can be done away with.

In Kenya taxes are paid by only a few businesses who feel unfairly treated especially when they are experiencing financial pressures and still trying to comply with income tax laws. The tax authority should try to achieve success in prosecuting noncompliant taxpayers. This will build confidence and belief in the legitimacy of the tax system. Measures should be put in place to widen the tax base so as to reduce the tax burden on existing tax payers. For example, the

large and medium businesses can be given tax breaks if they use products and services of small businesses. Formalizing small businesses will move them out of the shadow economy.

## **7.6 Limitations**

A number of limitations should be considered when interpreting the results and conclusions of this study to the Kenyan medium and large sized tax paying business population. The study utilized the survey method of data collection, non-response is a common problem in survey analysis. The study targeted to use 250 firms sampled from all the sectors of the economy. Issues of non-response and difficulty in obtaining responses in many cases was witnessed due to the sensitivity of the subject matter. The study managed to get responses from 142 firms, which amounts to 57 percent of the target sample (or a 43percent non-response rate). This good response rate was achieved through encouraging respondents with assurances that the study was meant solely for academic purposes and not any other use. When it was clear that a number of businesses were not interested in partaking in the study, interventions of respective audit firms were used to assure firms of the confidentiality of the information shared. The potential impact of nonresponse bias should thus be kept in mind.

Most of the study questionnaire instruments were delivered to respondents who were expected to take time and to fill them. The danger with this approach is the opportunity that a respondent would have to ensure consistency in information (including untruths in the reporting). While this is noted as a widely accepted limitation for self-reports, attempts were made to minimise the effects of this bias. This bias was reduced by adopting the Dillman (2000) approach that ensures that there is complete anonymity and confidentiality assured to the respondent. Further, data especially on business characteristics and performance obtained from the firms were also confidentially compared with reports available in the public domain on the respective businesses.

As with any statistical tools, PLS modelling has its bias in obtaining parameter estimates. SEM with PLS is known to underestimate the path coefficient between latent constructs in the structural models, while over-estimating the relationships between the indicators and their latent constructs. However, the estimates will be asymptotically correct with a large sample size and a large number of indicators per latent variable (Chin, 1998). The sample used was adequate (between 100 and 200 -(Loehlin, 1992)). For each latent construct a minimum number of three indicators was used.

The questionnaire was filled by the tax manager on behalf of the business tax payers. The danger of bias and personal views of the respondent may affect the results. Self-reported past compliance behaviour was used as a proxy for actual compliance behaviour due to unavailability of actual compliance data. In Kenya, KRA is legally barred from providing this data due to confidentiality issues. The truthfulness of the responses given by the tax managers cannot be verified because tax compliance behaviour is unobservable.

While most of the research limitations outlined are unavoidable in any typical research that uses survey data, the relevance of the study findings is not diminished, as long as care is taken in the application of the study findings to other situations.

### **7.7 Suggestions for Future Research**

There is extensive literature currently available on tax compliance behaviour. However, studies have not been able to generate conclusive evidence that tax authorities would find useful on a practical level. The following suggestions are thus recommended:

This study focused on business taxpayers in Kenya. An application of the SEM approach to individual tax payers and SMEs compliance behaviour would be useful. Developing a broader understanding of tax compliance behaviour is useful to formulate broad-based interventions for enhanced revenue collection. As such, this study suggests the usefulness of a SEM analysis of SMEs and individual tax payers' compliance behaviour.

An additional potential area of research is to use actual data on tax paid and reported to measure behaviour and to compare results with those of this study. Taxpaying behaviour may not be observable and self-reported behaviour or responses may not reflect actual behaviour portrayed. Such a study can potentially increase the validity of the results.

The compliance model developed in this study examined large and medium business taxpayers' compliance behaviour in Kenya. Replication of this model to other developing countries and other parts of the world would enable generalization of the findings. In addition, this would allow a more comprehensive comparison among countries in the future.

The focus of the current study was cross sectional. However, it would be beneficial to examine tax compliance behaviour over time. Longitudinal studies would allow a researcher to examine whether

compliance behaviour changes over time. For example, it would be beneficial to carry out a study into how changes in level of tax knowledge, taxpayers' financial situations and changes to tax laws and regulations potentially affect compliance decisions.

Finally, other determinants which were not tested in this study such as cultural and religious influence on tax payer behaviour could also be explored in the future. The inclusion of different variables could enhance the explanatory power of the model.

## **7.8 Concluding Remarks**

Tax authorities, policymakers and researchers the world over are faced with the challenge of tax compliance by tax payers. In order to establish the reasons why the challenge exists, and furthermore, being aware that only 50% of rightful taxpayers in Kenya pay income tax, this study attempted to apply different theories and the structural equation modelling approach to explore the causes of these facts. In this regard, we believe that the study makes a worthwhile contribution to the knowledge base by shedding more light on the determinants of tax compliance behaviour among large and medium sized tax payers in Kenya.

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## APPENDICES

### Appendix I: Letter of introduction

My name is Farida Abdul, a Phd. Student at Strathmore University, School of Management and Commerce. I'm currently collecting data on tax compliance behaviour of large and medium tax payers in Kenya. Your company has been selected being either a large/medium tax payer as defined by the Kenya Revenue Authority. A stratified random sampling procedure was used to select your company.

**Significance of the study:** Tax revenue is the largest source of finance for the government of Kenya and therefore any research which can enhance this source of funding for the government is useful. The findings of this study will assist the government to devise more appropriate tax policy for the various industry sectors.

**Confidentiality of data:** Data collected in this study will be used purely for academic purposes, i.e., to analyze data for purposes of my Phd. Thesis only. This data will not be shared with anyone else except with my core researcher when analyzing. The questionnaires will be destroyed by burning once the thesis is complete.

**Expected Output:** The findings of this study will be generalized according to the industry sector, for example, reference to manufacturing firms and not a particular company. The identity of the company will be coded at all times and not revealed to any outside party.

**Dessimination of the findings:** Results relating to your particular sector will be communicated to you directly. You will also have access to the final thesis. This information will be uploaded on the university website and a password to open the document will be sent to you on completion of the research.

Once the data has been selected the following procedures will be employed to ensure confidentiality of the data. The information received will be strictly treated with confidentiality and used for academic purposes only. The identity of the company will be concealed and will not be divulged to a third party.

If you wish to participate in this research please sign and use the official stamp below:

Name of participant:

Signature

Date and company stamp

## Appendix II: Tax questionnaire

### A. Background information

1. What is the main activity of the business? *Please tick only one of the following*

Electricity, gas, water supply, waste services	Agriculture, forestry and fishing	
Construction	Mining	
Wholesale trade	Manufacturing	
Transport, postal and warehousing	Retail trade (includes shops)	
Information, media and telecommunications	Accommodation and food services	
Finance, insurance services	Education and training	
Rental, hiring and real estate services	Health care and social assistance	
Professional, scientific and technical services	Art and recreation services	
Administrative and support services	Public administration and safety	

Other (please describe) \_\_\_\_\_

2. What is the legal structure of the business? *Please tick only one of the following*

Sole proprietorship	Partnership	
Private company	Trust	
Public company	Incorporated association	
Un-incorporated association	Other (please describe)	

3. How long has this business been trading? \_\_\_\_\_ Years.

4. What was the approximate turnover (*in Ksh millions*) for your company in the year 2014?

(Between Ksh.350 -550 millions)  (Between Ksh.551 -750 millions)   
 (Between Ksh.751-1,000 millions)  (Over Ksh.1000 millions)

5. How much company **income tax** in total, in relation to the 2014 year of income did the company remit to the Kenya Revenue Authority?

(Nil no tax liability)  (Less than Ksh.29.5millions)   
 (Between Ksh.30 -55millions)  (Between Ksh.55.1 -75millions)   
 (Between Ksh. 75.1-100 millions)  (Over Ksh.100 millions)

6. To what extent did your organisation meet income tax returns requirements in 2014?

Fully  Partially  None

7. In 2014, how many times did your organization make tax payments on time?

Always  4times  3times  2times  Once

8. In which of the following area(s) is your company facing difficulties? **On a scale of 1-7 circle the level of difficulty Strongly disagree (1) and strongly agree (8)**

	Strongly disagree				Strongly agree			
Estimating income tax payable	1	2	3	4	5	6	7	8
Understanding income tax legislation	1	2	3	4	5	6	7	8
Implementing income tax changes	1	2	3	4	5	6	7	8
Frequency with which tax law changes	1	2	3	4	5	6	7	8
Increasing burden of record keeping for tax purpose	1	2	3	4	5	6	7	8
Cash flow position when paying income tax installments	1	2	3	4	5	6	7	8
Short period of time to lodge the tax return	1	2	3	4	5	6	7	8



The compliance and regulatory tax requirements(local authority)	1	2	3	4	5	6	7	8
The compliance and regulatory tax requirements (KRA)	1	2	3	4	5	6	7	8

Other factors, please list:

7. What do you think would be the **single** most effective **reform** to reduce the **Income Tax** compliance burden?
- 

**C. TAX SYSTEM PERCEPTIONS**

- **Fairness perceptions: On a scale of 1-7 rank the following statements: Strongly disagree (1) and strongly agree (7)**

	<b>Strongly Disagree</b>				<b>Strongly Agree</b>		
1. The company gets a fair value for the amount of money paid in terms of benefits received from the government.	1	2	3	4	5	6	7
2. The income taxes that the company pays are unreasonably high considering the benefits provided by the government	1	2	3	4	5	6	7
3. Tax revenues in Kenya are not well utilized and most of it is wasted.	1	2	3	4	5	6	7
4. The tax office's decisions are usually fair.	1	2	3	4	5	6	7
5. The rules and approaches applied by the tax office treat all taxpayers equally.	1	2	3	4	5	6	7
6. The tax office's decisions are mainly based on facts and not on opinions.	1	2	3	4	5	6	7
7. In a dispute, the tax office would evaluate my information objectively and fairly.	1	2	3	4	5	6	7
8. The dispute resolution mechanisms put in place by the tax office are fair	1	2	3	4	5	6	7
9. The decisions of the income tax local committee are generally fair and unbiased.	1	2	3	4	5	6	7
10. The tax office takes the circumstances of each company when making decisions.	1	2	3	4	5	6	7
11. The tax office corresponds with taxpayers in a timely manner.	1	2	3	4	5	6	7
12. The tax office has been given too much power over tax payers	1	2	3	4	5	6	7
13. The tax office is more concerned about making their own job easier than making it easier for taxpayers.	1	2	3	4	5	6	7
14. The tax office consults widely about how they might change things to make it easier for taxpayers to meet their obligations	1	2	3	4	5	6	7
15. It is fair for my company to pay a similar share of income tax compared with other companies earning an equivalent amount of income.	1	2	3	4	5	6	7
16. Two companies which are similar in all aspects should pay similar amount of income tax irrespective of the industry in which they operate.	1	2	3	4	5	6	7
17. It is unfair for all companies to pay the same rate irrespective of income generated. Companies with higher profit margins should pay higher taxes	1	2	3	4	5	6	7

- **Complexity**

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>
1. The terms used in tax publications (e.g. Income Tax Act (ITA), Finance Act) are difficult for businesses like ours to understand.	1 2 3 4	5 6 7
2. The language used in the ITA is difficult and not user friendly	1 2 3 4	5 6 7
3. The rules related to the determination of income tax are not clear	1 2 3 4	5 6 7
4. Changes in income tax compliance rules are too frequent	1 2 3 4	5 6 7
6 KRA changes the income tax rules too frequently.	1 2 3 4	5 6 7
7 Tax legislation and rulings are expressed in plain and simple language	1 2 3 4	5 6 7
8 The rulings and tax laws are consistent	1 2 3 4	5 6 7
9 The various parts of the Income Tax Act and other related legislation are organized in a logical manner.	1 2 3 4	5 6 7
10 The various parts of the ITA do not contradict each other.	1 2 3 4	5 6 7
11 The income tax legislation is inconsistent with international law & practice	1 2 3 4	5 6 7
12 Given the same data, KRA and the tax payer can agree on the tax liability with certainty.	1 2 3 4	5 6 7
13 The volume of directives, laws, regulations, etc. is too cumbersome for the tax payer.	1 2 3 4	5 6 7
14 The frequency of reporting income taxes in Kenya is high.	1 2 3 4	5 6 7
15 The frequency of paying income taxes is also high.	1 2 3 4	5 6 7
16 The administrative costs of complying with income taxes as a proportion of revenues earned is high	1 2 3 4	5 6 7
17 All the income tax payments can be done on line.	1 2 3 4	5 6 7
18 Most of the income tax returns can be submitted on line.	1 2 3 4	5 6 7
18. The number of taxes (state and local) that the business has to comply with are too many.	1 2 3 4	5 6 7

- **International Compatibility**

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>
1. The number of double tax agreements signed by the Kenyan Government are adequate	1 2 3 4	5 6 7
2. Kenyan law restricts the benefits of treaties to Kenyan companies	1 2 3 4	5 6 7
3. Kenyan treaties are prepared according to international standards	1 2 3 4	5 6 7
4. Treaties between Kenya and other countries are reviewed regularly	1 2 3 4	5 6 7
5. Kenyan transfer pricing guidelines are clear	1 2 3 4	5 6 7
6. KRA staff are qualified to handle transfer pricing matters	1 2 3 4	5 6 7

7. There are adequate dispute resolution mechanisms put in place to deal with transfer pricing matters	1	2	3	4	5	6	7
8. Taxes in Kenya are not in line with international best practices	1	2	3	4	5	6	7
9. Kenyan transfer pricing guidelines are drawn in line with International standards e.g OECD guideline	1	2	3	4	5	6	7
10. Tax burden for Kenyan businesses with cross border operations is high	1	2	3	4	5	6	7

What do you think are the most effective **reforms** that can be introduced in Kenya to enhance the fairness, international compatibility and reduce the complexity of income tax.

### TAX COMPLIANCE PERCEPTIONS

Please read the following statements or questions and respond by circling the number that best describes your opinion.

- In the last 12 months how many times have you interacted with KRA on behalf of your company on tax matters (payments, Dispute resolution etc.)  
*None      Once      1-3times      4-6times      7-9imes      More than 10times*
- If you do not file /pay taxes in the next twelve months do you expect KRA to detect this omission within twelve months  
 Likely 1-----2-----3-----4-----5-----6-----7 unlikely  
*Extremely      Quite      Slightly      Neither      Slightly      Quite      Extremely*
- If your organisation does not pay and file its income tax returns in the next twelve months I expect the penalties imposed by KRA to be severe  
 Likely 1-----2-----3-----4-----5-----6-----7 unlikely  
*Extremely      Quite      Slightly      Neither      Slightly      Quite      Extremely*
- How many times has your organisation paid any penalties to KRA in relation to income tax in the last 3 years?  
*None      Once      1-3times      4-6times      7-9imes      More than 10times*  
 What are the possible reasons that have led the company to incur income tax penalties  
 Please indicate:  


---
- How often does your organisation receive income that is not subject to reporting by others (e.g banks, regulators,etc)  
 Frequent 1-----2-----3-----4-----5-----6-----7 Infrequent  
*Very      Somewhat      Slightly      Not sure      Slightly      Somewhat      Very*
- If the organisation underreports its income in the next tax return I expect KRA to audit the said return.  
 Likely 1-----2-----3-----4-----5-----6-----7 unlikely  
*Extremely      Quite      Slightly      Neither      Slightly      Quite      Extremely*
- If my organisation encounters any financial pressure it would be easy for the company to justify under-reporting its income.  
 Agree 1-----2-----3-----4-----5-----6-----7 Disagree  
*Strongly      Somewhat      Slightly      Neither      Slightly      Somewhat      Strongly*
- How often does your organisation encounter financial pressure that would require the firm to Under-report its income?  
 Frequent 1-----2-----3-----4-----5-----6-----7 Infrequent  
*Very      Somewhat      Slightly      Not sure      Slightly      Somewhat      Very*

9. How often has your organisation over paid income tax in the last 3 years?

**Infrequent** 1-----2-----3-----4-----5-----6-----7 **frequent**  
*None Once Twice 3times 4times 5times More than 5times*

10. What are the possible reasons given by your company for over payment of its income tax liabilities?

1	
2	
3	

*When answering the next five questions please think of the business associates who matter most to the organisation and whose opinion your business values most (e.g. peers in the same business, regulators, auditors etc.)*

11. Most business associates who are important to our organisation think that our organisation should report all its income in its next tax return.

Agree 1-----2-----3-----4-----5-----6-----7 **Disagree**  
*Strongly Somewhat Slightly Neither Slightly Somewhat Strongly*

12. Most business associates who are important to my organisation may not include all their income in their next tax return.

Agree 1-----2-----3-----4-----5-----6-----7 **Disagree**  
*Strongly Somewhat Slightly Neither Slightly Somewhat Strongly*

13. Most business associates who are important to the organisation would not respect our firm if it Under-reports its income in the next tax return.

Agree 1-----2-----3-----4-----5-----6-----7 **Disagree**  
*Strongly Somewhat Slightly Neither Slightly Somewhat Strongly*

14. My organisation would be deterred from underreporting its income if management believes that the firm will lose the respect of most of its business associates who are important to the firm

Agree 1-----2-----3-----4-----5-----6-----7 **Disagree**  
*Strongly Somewhat Slightly Neither Slightly Somewhat Strongly*

15. Generally the organisation would be deterred from underreporting its income if management believes that the firm will lose the respect of its most important business associates.

Agree 1-----2-----3-----4-----5-----6-----7 **Disagree**  
*Strongly Somewhat Slightly Neither Slightly Somewhat Strong*

Designation of the respondent .....  
 External Tax adviser .....

**Appendix III: Descriptive statistics for all the variables (measures)**

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
admincomp_1	142	1	7	3.74	2.01	4.04	0.14	0.20	-1.31	0.40
admincomp_2	142	1	7	3.80	2.00	4.01	0.07	0.20	-1.31	0.40
admincomp_3	141	1	7	4.01	1.92	3.69	0.06	0.20	-1.20	0.41
admincomp_4	142	1	7	6.20	1.24	1.54	-1.93	0.20	4.02	0.40
admincomp_5	142	1	7	6.34	1.25	1.57	-2.63	0.20	7.36	0.40
admincomp_6	142	1	7	5.45	1.78	3.17	-1.16	0.20	0.42	0.40
age	142	2	115	25.04	21.85	477.36	1.98	0.20	4.68	0.40
BEHV1	142	1	6	3.56	1.80	3.24	0.13	0.20	-1.41	0.40
BEHV2	142	1	2	1.11	0.32	0.10	2.48	0.20	4.19	0.40
BEHV3	142	1	5	4.77	0.65	0.42	-3.92	0.20	17.86	0.40
BEHV4	140	1	7	1.75	1.22	1.50	2.23	0.21	5.90	0.41
BI1	142	1	3	2.21	0.96	0.92	-0.44	0.20	-1.79	0.40
BI2	139	1	2	1.26	0.44	0.19	1.11	0.21	-0.77	0.41
BI3	139	2	6	2.70	1.08	1.17	1.64	0.21	2.02	0.41
BI3	141	1	6	2.40	1.20	1.44	0.63	0.20	0.10	0.41

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BI4	116	1	8	3.55	2.51	6.28	0.43	0.23	-1.30	0.45
cost_1	141	1	8	4.48	2.47	6.08	-0.25	0.20	-1.31	0.41
cost_2	141	1	8	4.80	2.45	6.00	-0.38	0.20	-1.21	0.41
cost_3	141	1	8	4.38	2.44	5.95	-0.08	0.20	-1.37	0.41
cost_4	141	1	8	4.13	2.31	5.31	0.13	0.20	-1.26	0.41
cost_5	141	1	8	5.57	2.17	4.70	-0.82	0.20	-0.39	0.41
cost_6	141	1	8	4.28	2.29	5.25	-0.08	0.20	-1.22	0.41
cost_7	141	1	8	4.42	2.35	5.53	-0.18	0.20	-1.31	0.41
cost_8	141	1	8	4.29	2.64	6.95	-0.04	0.20	-1.52	0.41
	142	1	7	EF_1	1.95	3.81	-0.49	0.20	-0.90	0.40
EF_2	142	1	7	4.76	2.01	4.06	-0.43	0.20	-1.02	0.40
EF_3	142	1	7	5.13	2.17	4.73	-0.87	0.20	-0.67	0.40
HF_1	142	1	7	5.25	1.70	2.90	-0.76	0.20	-0.05	0.40
HF_2	142	1	7	4.54	2.24	5.02	-0.37	0.20	-1.30	0.40
HF_3	142	1	7	3.68	2.52	6.35	0.23	0.20	-1.64	0.40
Intcomp_1	117	1	7	3.00	1.95	3.79	0.39	0.22	-1.20	0.44
Intcomp_10	116	1	7	5.48	1.41	1.99	-1.17	0.23	1.14	0.45

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Intcomp_2	117	1	7	4.21	1.73	2.99	-0.04	0.22	-0.75	0.44
Intcomp_3	117	1	7	5.33	1.28	1.64	-0.95	0.22	1.77	0.44
Intcomp_4	117	1	7	3.01	1.91	3.66	0.52	0.22	-0.93	0.44
Intcomp_5	116	1	7	3.66	1.78	3.17	0.15	0.23	-0.98	0.45
Intcomp_6	115	1	7	4.43	1.72	2.97	-0.43	0.23	-0.67	0.45
Intcomp_7	116	1	7	3.59	1.78	3.18	0.18	0.23	-0.82	0.45
Intcomp_8	116	1	7	3.74	1.88	3.55	0.13	0.23	-0.98	0.45
Intcomp_9	116	1	7	5.13	1.55	2.41	-1.04	0.23	0.63	0.45
legal_structure	142	2	12	2.89	1.96	3.83	2.43	0.20	5.39	0.40
Legalcomp_1	142	1	7	3.78	1.55	2.41	-0.01	0.20	-0.36	0.40
Legalcomp_2	142	1	7	4.25	1.50	2.26	-0.14	0.20	-0.28	0.40
Legalcomp_3	142	1	7	4.39	1.47	2.17	-0.44	0.20	-0.08	0.40
Legalcomp_4	142	1	7	4.46	1.50	2.25	-0.68	0.20	-0.02	0.40
Legalcomp_5	142	1	7	3.78	1.97	3.89	-0.12	0.20	-1.22	0.40
Legalcomp_6	142	1	7	3.55	2.18	4.73	0.08	0.20	-1.46	0.40
Legalcomp_7	142	1	7	4.87	1.72	2.95	-0.62	0.20	-0.32	0.40
PBC_1	141	1	7	5.88	1.65	2.71	-1.19	0.20	0.15	0.41

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PBC_2	141	1	7	5.23	2.19	4.78	-0.70	0.20	-1.15	0.41
PBC_3	141	1	7	5.86	1.82	3.29	-1.40	0.20	0.64	0.41
PENAL_1	142	1	6	1.77	0.95	0.90	1.18	0.20	1.59	0.40
PENAL_2	141	1	7	2.32	1.77	3.15	1.38	0.20	0.86	0.41
PF_1	142	1	7	4.00	1.65	2.71	-0.35	0.20	-0.70	0.40
PF_10	142	1	7	5.50	1.69	2.86	-1.27	0.20	0.85	0.40
PF_11	142	1	7	3.01	1.79	3.20	0.56	0.20	-0.66	0.40
PF_2	142	1	7	3.66	1.79	3.20	-0.04	0.20	-1.03	0.40
PF_3	142	1	7	4.25	1.60	2.56	-0.52	0.20	-0.26	0.40
PF_4	142	1	7	3.97	1.69	2.86	-0.26	0.20	-0.71	0.40
PF_5	142	1	7	4.40	1.60	2.55	-0.47	0.20	-0.12	0.40
PF_6	141	1	7	4.27	1.46	2.13	-0.55	0.20	0.04	0.41
PF_7	142	1	7	3.53	1.65	2.72	-0.15	0.20	-0.95	0.40
PF_8	142	1	7	3.04	1.97	3.88	0.54	0.20	-0.92	0.40
PF_9	142	1	7	5.42	1.68	2.81	-1.05	0.20	0.34	0.40
PJ1	142	1	6	4.06	1.55	2.40	-0.42	0.20	-0.86	0.40
PJ2	142	1	7	1.99	1.72	2.96	1.79	0.20	2.03	0.40

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PJ3	142	1	6	1.56	1.06	1.13	2.48	0.20	6.47	0.40
sector	142	1	19	8.16	4.32	18.66	0.34	0.20	-0.61	0.40
SNORM_1	142	1	7	1.82	1.57	2.48	2.00	0.20	3.09	0.40
SNORM_2	141	1	7	3.20	2.26	5.09	0.44	0.20	-1.38	0.41
SNORM_3	141	1	7	1.81	1.50	2.24	2.25	0.20	4.69	0.41
SNORM_4	141	1	7	1.85	1.64	2.70	2.00	0.20	2.99	0.41
SNORM_5	142	1	7	1.73	1.53	2.33	2.22	0.20	3.99	0.40
statcom_1	142	1	7	3.49	2.01	4.05	0.13	0.20	-1.33	0.40
statcom_2	142	1	7	3.75	1.98	3.92	-0.01	0.20	-1.18	0.40
statcom_3	142	1	7	3.64	1.76	3.11	-0.10	0.20	-1.08	0.40
statcom_4	142	1	7	3.63	1.82	3.33	-0.06	0.20	-0.98	0.40
statcom_5	142	1	7	3.49	1.92	3.70	0.09	0.20	-1.18	0.40
tax_agent_reas on_2	116	1	8	3.72	2.43	5.92	0.28	0.23	-1.38	0.45
tax_agent_reas on_3	116	1	8	2.98	2.34	5.48	0.88	0.23	-0.55	0.45
tax_agent_reas on_4	116	1	8	5.04	2.52	6.34	-0.41	0.23	-1.21	0.45

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
tax_agent_reason_5	116	1	8	6.32	2.08	4.31	-1.36	0.23	0.83	0.45
tax_agent_reason_6	116	1	8	6.72	1.92	3.68	-1.91	0.23	2.88	0.45
taxdifficulty_1	141	1	8	2.02	1.65	2.74	1.72	0.20	2.18	0.41
taxdifficulty_10	142	1	8	2.92	2.60	6.78	0.99	0.20	-0.59	0.40
taxdifficulty_2	142	1	8	2.47	2.04	4.17	1.24	0.20	0.32	0.40
taxdifficulty_3	142	1	8	2.89	2.17	4.71	0.83	0.20	-0.59	0.40
taxdifficulty_4	142	1	8	3.65	2.37	5.61	0.40	0.20	-1.17	0.40
taxdifficulty_5	142	1	8	3.77	2.40	5.74	0.26	0.20	-1.36	0.40
taxdifficulty_6	142	1	8	3.54	2.41	5.81	0.44	0.20	-1.14	0.40
taxdifficulty_7	142	1	8	2.91	2.22	4.94	0.92	0.20	-0.39	0.40
taxdifficulty_8	142	1	8	3.86	2.32	5.38	0.28	0.20	-1.13	0.40
taxdifficulty_9	142	1	8	2.69	2.06	4.23	0.95	0.20	-0.29	0.40
Turnover	142	1	4	2.74	1.39	1.93	-0.33	0.20	-1.78	0.40

### Appendix IV: Extreme value analysis

Variable	Code	Arithmetic Mean	Trimmed Arithmetic Mean (Excl. 5 % Extreme Values)	Difference (arithmetic- trimmed)
Sector	sector	8.16	8.10	0.07
Legal Structure	Legal_structure	2.89	2.75	0.14
Age	age	25.04	23.67	1.37
Total Turnover	turnover	2.74	2.75	-0.01
Firm Size	BEHV1	3.56	3.56	0.00
Compliance Measures	BEHV2	2.89	2.90	-0.02
	BEHV3	4.77	4.85	-0.07
	BEHV4	1.75	1.65	0.10
Exchange Fairness Measures	EF_1	4.92	4.96	-0.04
	EF_2	4.76	4.79	-0.03
	EF_3	5.13	5.18	-0.05
Procedural Fairness Measures	PF_1	4.00	4.00	0.00
	PF_2	3.66	3.65	0.01
	PF_3	4.25	4.26	-0.01
	PF_4	3.97	3.97	0.00
	PF_5	4.40	4.42	-0.02
	PF_6	4.27	4.28	-0.01
	PF_7	3.53	3.51	0.02
	PF_8	3.04	2.99	0.04
	PF_9	5.42	5.48	-0.06
	PF_10	5.50	5.57	-0.07
	PF_11	3.01	2.96	0.04
Horizontal Fairness	HF_1	5.25	5.30	-0.05
	HF_2	4.54	4.57	-0.02
	HF_3	3.68	3.67	0.01
Behavioural Intent Measures	BI1	2.21	2.22	-0.01
	BI2	1.26	1.25	0.01
	BI3	2.70	2.64	0.06
	BI4	3.55	3.52	0.03
Compliance Cost Measures	cost_1	4.48	4.47	0.00
	cost_2	4.80	4.81	-0.01
	cost_3	4.38	4.37	0.01
	cost_4	4.13	4.11	0.02
	cost_5	5.57	5.61	-0.05
	cost_6	4.28	4.27	0.01
	cost_7	4.42	4.41	0.00

Variable	Code	Arithmetic Mean	Trimmed Arithmetic Mean (Excl. 5 % Extreme Values)	Difference (arithmetic- trimmed)
	cost_8	4.29	4.28	0.01
Statutory Complexity Measures	statcom_1	3.49	3.46	0.02
	statcom_2	3.75	3.74	0.01
	statcom_3	3.64	3.63	0.02
	statcom_4	3.63	3.61	0.02
	statcom_5	3.49	3.47	0.02
Legal Complexity Measures	Legalcomp_1	3.78	3.77	0.01
	Legalcomp_2	4.25	4.26	-0.01
	Legalcomp_3	4.39	4.40	-0.02
	Legalcomp_4	4.46	4.49	-0.02
	Legalcomp_5	3.78	3.77	0.01
	Legalcomp_6	3.55	3.53	0.02
	Legalcomp_7	4.87	4.90	-0.04
Administrative Complexity Measures	admincomp_1	3.74	3.73	0.01
	admincomp_2	3.80	3.79	0.01
	admincomp_3	4.01	4.01	0.00
	admincomp_4	6.20	6.29	-0.09
	admincomp_5	6.34	6.44	-0.10
	admincomp_6	5.45	5.51	-0.06
Procedural Justice Measures	PJ1	4.06	4.09	-0.02
	PJ2	1.99	1.90	0.09
	PJ3	1.56	1.47	0.09
Perceived Behavioural Control Measures	PBC_1	5.88	5.96	-0.08
	PBC_2	5.23	5.28	-0.05
	PBC_3	5.86	5.94	-0.08
Subjective Norm Measures	SNORM_1	1.82	1.72	0.10
	SNORM_2	3.20	3.16	0.04
	SNORM_3	1.81	1.71	0.10
	SNORM_4	1.85	1.76	0.10
	SNORM_5	1.73	1.63	0.10
International Compatibility Measures	Intcomp_1	3.00	2.96	0.04
	Intcomp_2	4.21	4.21	-0.01
	Intcomp_3	5.33	5.38	-0.05
	Intcomp_4	3.01	2.97	0.04
	Intcomp_5	3.66	3.64	0.01
	Intcomp_6	4.43	4.45	-0.02
	Intcomp_7	3.59	3.57	0.01

<b>Variable</b>	<b>Code</b>	<b>Arithmetic Mean</b>	<b>Trimmed Arithmetic Mean (Excl. 5 % Extreme Values)</b>	<b>Difference (arithmetic- trimmed)</b>
	Intcomp_8	3.74	3.73	0.01
	Intcomp_9	5.13	5.17	-0.04
	Intcomp_10	5.48	5.54	-0.05

## Appendix V: Frequency Tables for Firm characteristics

### a) Firm age

age	Freq.	Percent	Cum.
2	2	1.41	1.41
3	2	1.41	2.82
4	2	1.41	4.23
5	8	5.63	9.86
5.5	1	0.70	10.56
6	7	4.93	15.49
7	1	0.70	16.20
8	6	4.23	20.42
9	2	1.41	21.83
10	12	8.45	30.28
11	1	0.70	30.99
12	4	2.82	33.80
13	1	0.70	34.51
14	1	0.70	35.21
15	10	7.04	42.25
16	2	1.41	43.66
17	3	2.11	45.77
18	2	1.41	47.18
20	17	11.97	59.15
21	1	0.70	59.86
24	2	1.41	61.27
25	2	1.41	62.68
26	1	0.70	63.38
27	1	0.70	64.08
28	1	0.70	64.79
30	17	11.97	76.76
31	1	0.70	77.46
35	1	0.70	78.17
36	2	1.41	79.58
37	1	0.70	80.28
38	1	0.70	80.99
40	6	4.23	85.21
45	2	1.41	86.62
48	1	0.70	87.32
49	1	0.70	88.03
50	7	4.93	92.96
57	1	0.70	93.66
62	1	0.70	94.37
70	1	0.70	95.07
79	1	0.70	95.77
80	1	0.70	96.48
85	1	0.70	97.18
100	2	1.41	98.59
114	1	0.70	99.30
115	1	0.70	100.00
Total	142	100.00	

### b) Firm Size

#### Firm Turnover (measure of size)

turnover	Freq.	Percent	Cum.
1	50	35.21	35.21
2	9	6.34	41.55
3	11	7.75	49.30
4	72	50.70	100.00
Total	142	100.00	

**c) Firm Income Tax Liability**

BEHVI	Freq.	Percent	Cum.
1	19	13.38	13.38
2	35	24.65	38.03
3	19	13.38	51.41
4	22	15.49	66.90
5	11	7.75	74.65
6	36	25.35	100.00
<b>Total</b>	<b>142</b>	<b>100.00</b>	

**d) Firm Sector**

Sector	Code	Freq.	Percent	Cum.
Electricity, gas, water supply, waste services	1	10	7.04	7.04
Construction	2	4	2.82	9.86
Wholesale trade	3	4	2.82	12.68
Transport , postal and warehousing	4	8	5.63	18.31
Information, media and telecommunications	5	8	5.63	23.94
Finance, insurance services	6	31	21.83	45.77
Rental, hiring and real estate services	7	8	5.63	51.41
Professional, scientific and technical services	8	14	9.86	61.27
Administrative and support services	9	3	2.11	63.38
Agriculture, forestry and fishing	10	10	7.04	70.42
Mining	11	3	2.11	72.54
Manufacturing	12	11	7.75	80.28
Retail trade (includes shops)	13	8	5.63	85.92
Accommodation and food services	14	6	4.23	90.14
Education and training	15	8	5.63	95.77
Health care and social assistance	16	3	2.11	97.89
Art and recreation services	17	1	0.7	98.59
Public administration and safety	19	2	1.41	100
<b>Total</b>	<b>142</b>	<b>142</b>	<b>100</b>	

**e) Firm Legal Structure**

Legal Structure	Code	Freq.	Percent	Cum.
Sole proprietorship	1	0	0	0
Private company	2	104	73.24	73.24
Public company	3	16	11.27	84.51
Un-incorporated association	4	2	1.41	85.92

Partnership	5	3	2.11	88.03
Trust	6	3	2.11	90.14
Incorporated association	7	5	3.52	93.66
Parastatal	8	6	4.23	97.89
State Corporation	9	1	0.7	98.59
Sacco	10	1	0.7	99.3
Charter	12	1	0.7	100
	Total	142	100	

**a) Firm Difficulties in dealing with tax issues**

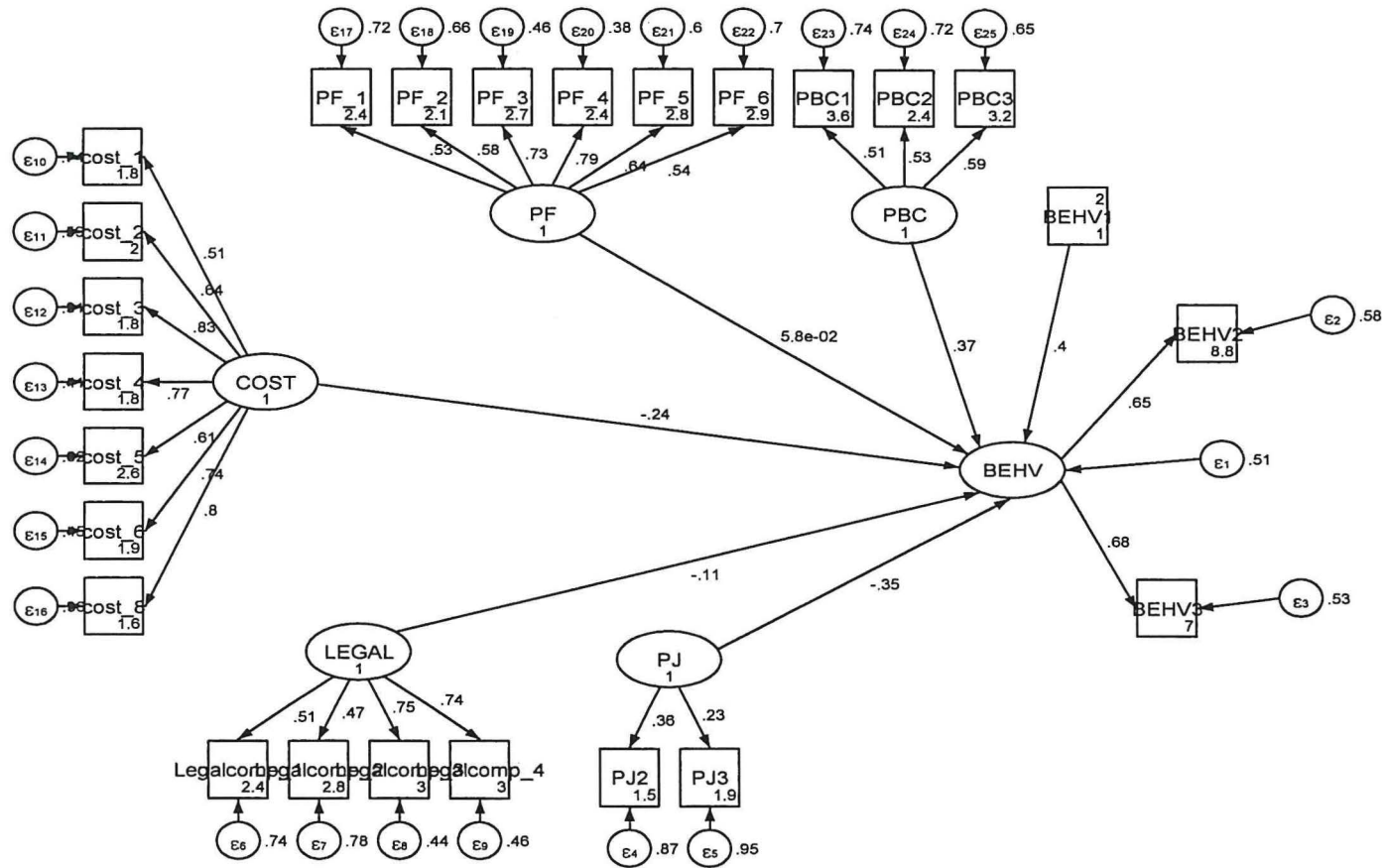
		Strongly Disagree				Strongly Agree			
		1	2	3	4	5	6	7	8
Estimating Income Tax Payable	<i>Frequency</i>	86	21	7	13	6	3	4	1
	<i>Percent</i>	60.99	14.89	4.96	9.22	4.26	2.13	2.84	0.71
Understanding Income Tax Legislation	<i>Frequency</i>	76	18	9	15	6	7	8	3
	<i>Percent</i>	53.52	12.68	6.34	10.56	4.23	4.93	5.63	2.11
Implementing Income tax Changes	<i>Frequency</i>	63	15	14	15	13	8	10	4
	<i>Percent</i>	44.37	10.56	9.86	10.56	9.15	5.63	7.04	2.82
Frequency with which tax laws change	<i>Frequency</i>	41	16	18	16	14	12	15	10
	<i>Percent</i>	28.87	11.27	12.68	11.27	9.86	8.45	10.56	7.04
Increasing burden of record keeping for tax purpose	<i>Frequency</i>	40	16	15	14	14	16	19	8
	<i>Percent</i>	28.17	11.27	10.56	9.86	9.86	11.27	13.38	5.63
Cash flow position when paying income tax installments	<i>Frequency</i>	50	11	11	22	12	15	9	12
	<i>Percent</i>	35.21	7.75	7.75	15.49	8.45	10.56	6.34	8.45
Short period of time to lodge tax return	<i>Frequency</i>	60	23	8	15	15	7	6	8
	<i>Percent</i>	42.25	16.2	5.63	10.56	10.56	4.93	4.23	5.63
Dealing with the tax authority	<i>Frequency</i>	36	10	21	21	17	10	16	11
	<i>Percent</i>	25.35	7.04	14.79	14.79	11.97	7.04	11.27	7.75
Dealing with external advisers/agents	<i>Frequency</i>	68	15	13	16	12	8	7	3
	<i>Percent</i>	47.89	10.56	9.15	11.27	8.45	5.63	4.93	2.11
Corruption within KRA	<i>Frequency</i>	79	7	10	10	6	6	6	18
	<i>Percent</i>	55.63	4.93	7.04	7.04	4.23	4.23	4.23	12.68

## Appendix VI: Loadings and Cross Loadings

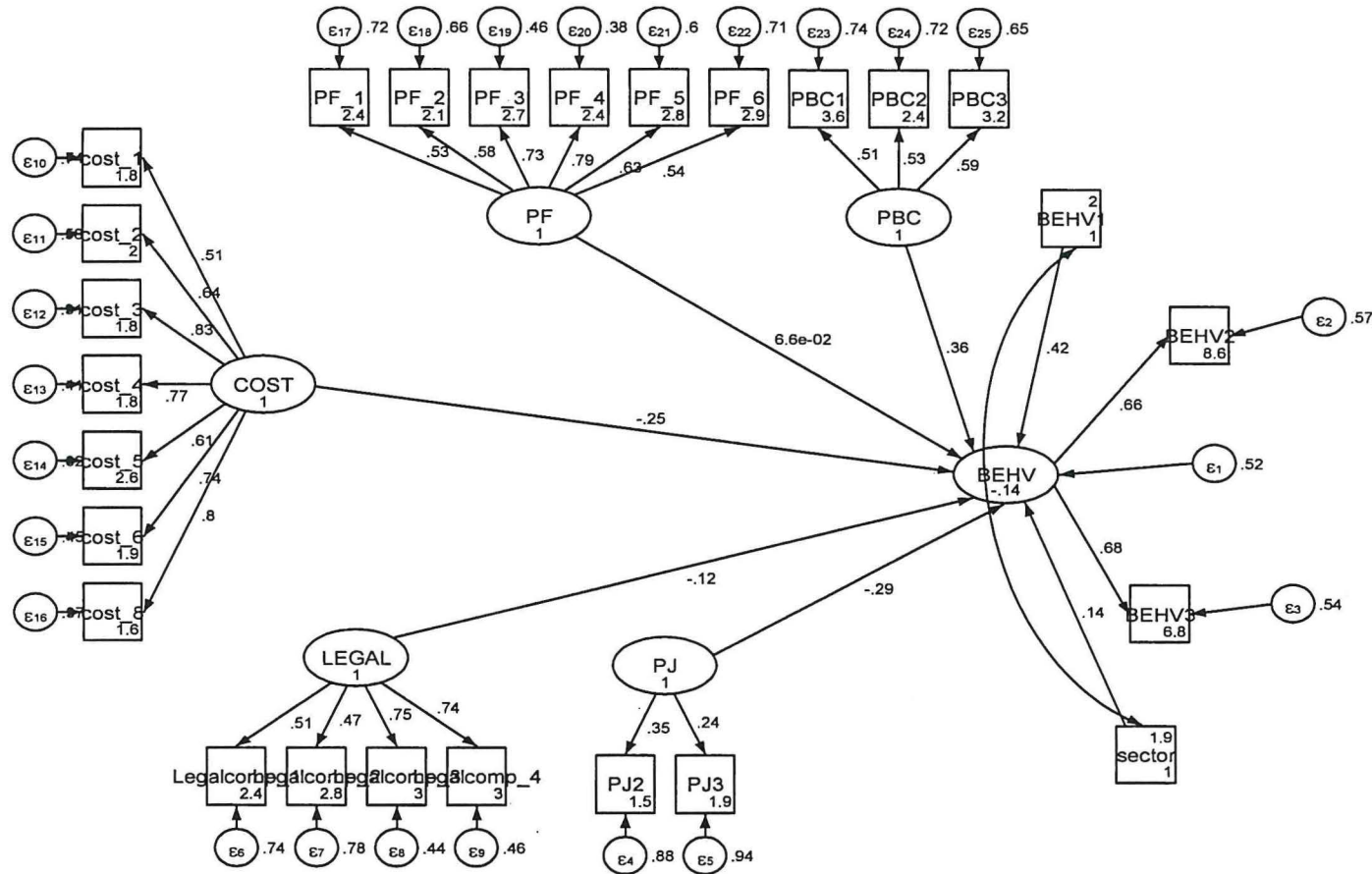
		Subjective Norms			Perceived Behavioural Control			Procedural Justice		International Compatibility					Statutory Complexity					Legal Complexity				Administrative Complexity			Exchange Fairness						Procedural Fairness		Horizontal Fairness				
		percep13	percep14	percep15	percep15	percep17	percep18	percep12	percep13	Intcomp_3	Intcomp_5	Intcomp_6	Intcomp_7	Intcomp_9	Complex1	Complex2	Complex3	Complex4	Complex5	Complex6	Complex7	Complex8	Complex9	Complex13	Complex14	Complex15	Fairness_2	Fairness_3	Fairness_4	Fairness_5	Fairness_6	Fairness_7	Fairness_8	Fairness_9	Fairness_15	Fairness_16			
		-13	-14	-15	-5	-7	-8	-2	-3	3	5	6	7	9	1	2	3	4	5	6	7	8	9	13	14	15	2	3	4	5	6	7	8	9	15	16			
Subjective Norms	percep13	1.000																																					
	percep14	0.350	1.000																																				
	percep15	0.217	0.637	1.000																																			
Perceived Behavioural Control	percep15	-0.144	-0.137	-0.147	1.000																																		
	percep17	-0.269	-0.288	-0.161	0.265	1.000																																	
	percep18	-0.158	-0.134	-0.136	0.430	0.264	1.000																																
Procedural Justice	percep12	0.060	0.093	0.081	-0.235	-0.014	-0.103	1.000																															
	percep13	0.160	0.162	0.199	-0.506	-0.210	-0.202	0.499	1.000																														
	percep17	-0.059	-0.009	-0.018	0.120	-0.028	0.064	-0.335	-0.369	1.000																													
International Compatibility	Intcomp_3	0.061	0.060	0.096	-0.117	-0.066	-0.112	0.146	0.028	0.210	1.000																												
	Intcomp_5	0.205	0.076	0.016	-0.042	-0.072	0.049	-0.024	-0.042	0.451	0.301	1.000																											
	Intcomp_6	0.184	0.206	0.240	-0.339	-0.061	-0.069	0.187	0.187	0.041	0.456	0.299	1.000																										
	Intcomp_7	-0.075	-0.056	-0.047	0.032	0.139	0.070	-0.131	-0.203	0.500	0.416	0.493	0.251	1.000																									
	Intcomp_9	0.052	0.048	0.057	-0.142	-0.122	0.021	-0.013	0.092	0.011	-0.015	0.207	0.141	0.019	1.000																								
Statutory Complexity	Complex1	0.095	0.113	0.086	-0.149	-0.190	-0.077	-0.012	0.021	0.051	-0.071	0.164	0.119	0.023	0.820	1.000																							
	Complex2	0.160	0.002	0.067	-0.225	-0.066	-0.176	0.231	0.218	-0.212	0.102	-0.114	0.281	-0.038	0.275	0.333	1.000																						
	Complex3	0.094	0.005	0.072	-0.194	-0.138	-0.155	0.322	0.269	-0.271	-0.069	-0.210	0.146	-0.260	0.106	0.186	0.417	1.000																					
	Complex4	0.185	0.064	0.046	-0.153	-0.124	-0.165	0.156	0.331	-0.258	-0.033	-0.116	0.051	-0.323	0.186	0.248	0.360	0.749	1.000																				
	Complex5	-0.041	0.110	0.234	-0.269	-0.096	-0.202	0.189	0.095	0.129	0.297	0.089	0.254	0.237	-0.105	-0.182	-0.061	0.004	-0.059	1.000																			
Legal Complexity	Complex6	-0.115	-0.025	0.116	-0.150	-0.006	-0.202	0.183	0.014	0.014	0.185	0.124	0.254	0.090	0.036	-0.002	0.067	0.028	0.007	0.500	1.000																		
	Complex7	0.020	-0.074	0.040	-0.063	0.034	0.026	0.119	-0.069	0.076	0.218	0.235	0.236	0.283	0.107	0.077	0.050	-0.170	-0.132	0.376	0.316	1.000																	
	Complex8	0.067	0.080	0.082	-0.095	-0.066	-0.004	-0.066	-0.056	0.275	0.345	0.347	0.253	0.322	0.095	0.057	-0.018	-0.167	-0.125	0.280	0.299	0.602	1.000																
	Complex9	0.146	0.133	0.042	-0.057	-0.253	-0.133	0.006	0.141	-0.282	-0.157	-0.145	0.123	-0.292	0.197	0.331	0.401	0.409	0.403	-0.203	0.119	-0.075	-0.076	1.000															
Administrative Complexity	Complex13	0.227	0.183	0.126	-0.091	-0.234	-0.019	0.158	0.150	-0.248	-0.112	-0.095	0.171	-0.294	0.218	0.265	0.371	0.422	0.403	-0.176	0.195	-0.076	-0.104	0.849	1.000														
	Complex14	0.104	0.158	0.145	-0.238	-0.218	-0.099	0.217	0.129	-0.229	-0.096	0.015	0.226	-0.116	0.162	0.229	0.339	0.284	0.252	0.079	0.137	0.044	-0.066	0.478	0.452	1.000													
	Complex15	0.181	0.165	0.066	-0.021	-0.148	-0.211	0.064	0.165	-0.229	-0.057	-0.085	0.004	-0.189	-0.006	0.005	0.199	0.379	0.257	-0.156	-0.164	-0.223	-0.048	0.345	0.299	0.282	1.000												
Exchange Fairness	Fairness_2	0.026	-0.053	-0.057	0.079	0.015	0.010	0.196	0.134	-0.184	-0.078	-0.201	-0.125	-0.125	-0.104	-0.036	0.350	0.322	0.096	-0.038	-0.032	0.030	0.002	0.082	0.335	1.000													
	Fairness_3	0.018	0.153	0.208	-0.039	-0.069	-0.093	-0.161	0.055	0.168	0.122	0.068	0.086	0.228	0.013	-0.018	0.065	0.119	0.210	0.242	0.017	0.233	0.185	-0.058	-0.051	0.005	-0.061	-0.047	1.000										
	Fairness_4	0.058	-0.066	-0.010	-0.037	0.002	-0.180	0.025	0.047	0.009	0.028	0.064	-0.064	0.068	-0.225	-0.285	0.057	-0.025	0.019	0.367	0.195	0.205	0.159	-0.082	-0.112	0.012	-0.055	0.091	0.238	1.000									
Procedural Fairness	Fairness_5	0.010	0.061	0.116	-0.156	-0.119	-0.054	0.046	0.031	0.140	0.005	0.124	0.078	0.141	-0.022	0.066	0.136	0.112	0.166	0.435	0.277	0.211	0.041	-0.003	0.011	0.197	-0.093	0.041	0.368	0.430	1.000								
	Fairness_6	0.096	0.135	0.169	-0.169	-0.151	-0.214	-0.084	0.027	0.131	0.006	0.085	0.142	0.067	0.054	0.094	0.047	0.013	0.091	0.285	0.263	0.181	0.119	0.069	0.060	0.194	-0.196	-0.178	0.437	0.390	0.656	1.000							
	Fairness_7	-0.092	-0.223	-0.121	-0.014	-0.009	-0.077	-0.061	-0.115	0.265	-0.031	0.256	0.111	0.270	-0.034	-0.055	0.031	-0.115	-0.160	0.229	0.178	0.157	0.069	-0.179	-0.213	0.003	-0.108	-0.004	0.195	0.328	0.361	0.409	1.000						
	Fairness_8	-0.126	-0.187	-0.094	-0.066	-0.013	-0.099	-0.060	-0.142	0.234	-0.015	0.254	0.114	0.309	-0.077	-0.079	-0.066	-0.201	-0.203	0.248	0.263	0.238	0.061	-0.100	-0.103	0.056	-0.186	-0.065	0.230	0.347	0.271	0.291	0.749	1.000					
	Fairness_9	-0.161	-0.267	-0.247	0.184	0.198	0.156	-0.109	-0.178	0.250	0.030	0.024	-0.047	0.085	0.022	0.028	-0.074	-0.085	-0.102	0.000	-0.011	-0.141	-0.097	-0.077	-0.159	-0.107	-0.115	-0.060	-0.152	-0.060	-0.023	-0.060	0.151	0.162	1.000				
Horizontal Fairness	Fairness_15	-0.128	-0.228	-0.196	0.112	0.222	0.100	-0.181	-0.148	0.212	0.104	0.153	0.015	0.166	0.220	0.240	-0.139	-0.228	-0.063	-0.035	0.150	0.044	0.066	-0.057	-0.147	-0.135	-0.232	-0.124	0.031	-0.008	0.044	0.071	0.086	0.178	0.368	1.000			

## Appendix VII: Structural Business Taxpayer Compliance Models

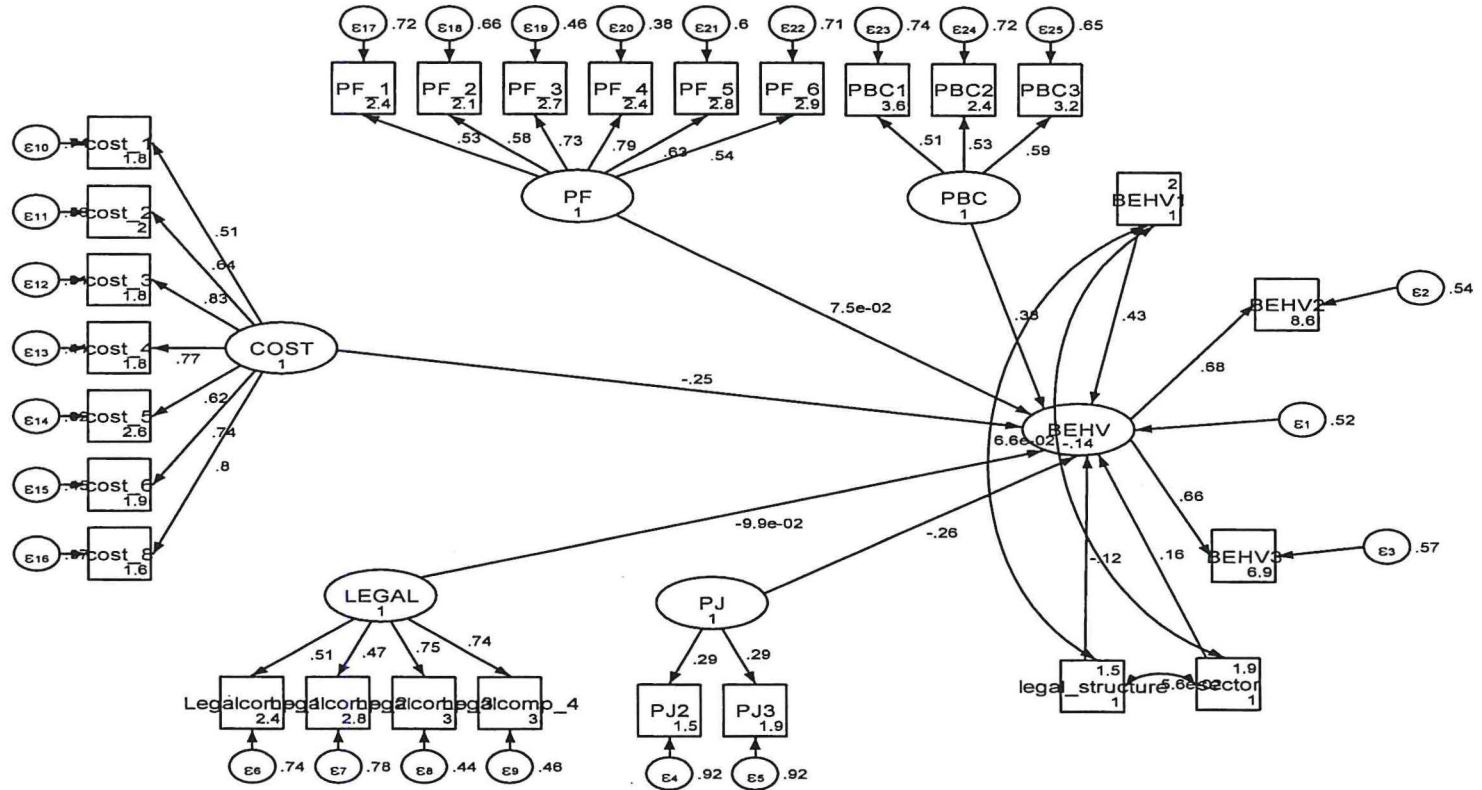
### Model I: Standardized estimates controlling for Firm Size



Model II: Standardized estimates controlling for Firm Size and Business sector



Model III: Standardized estimates controlling for Firm Size, Sector & Legal Structure





## Appendix VIII: Ethics Approval Letter



**Strathmore**  
UNIVERSITY

REF: SU-IRB 0020/15

8<sup>th</sup> February 2016

Farida Abdul  
P.O Box 74503-00200  
Nairobi, Kenya.

Email: [wabutl@yahoo.com](mailto:wabutl@yahoo.com)

Dear Farida,

**REF: SU-IRB 0020/15 PROPOSAL "TAX COMPLIANCE BEHAVIOUR OF BUSINESS TAX PAYERS IN KENYA"**

I make reference to your email dated 29<sup>th</sup> January 2016, where you responded to concerns raised by the Strathmore University Institutional Review Board (SU-IRB).

The SU-IRB acknowledges receipt of the following resubmitted documents:

- a) Study protocol version dated 29<sup>th</sup> January 2016
- b) Consent form document version dated 29<sup>th</sup> January 2016
- c) Delegation letter
- d) Budget
- e) Cover letter

The committee has reviewed your application and concluded that the issues raised have been adequately addressed.

The study has been granted Approval for implementation effective on 8<sup>th</sup> Day of February 2016. Please note that authorization to conduct this study will automatically expire on 7<sup>th</sup> February 2017.

If the study extends beyond the stated (one) year, you are required to seek an *Extension Approval* from the Ethics committee prior to its expiry. You are required to submit any proposed changes to this protocol to SU-IRB for review and approval prior to implementation of changes.

Thank you

Sincerely,

  
Amina Sallim  
Regulatory Affairs Fellow



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