TAX NON-COMPLIANCE AMONG SMALL CORPORATE TAXPAYERS IN NIGERIA: THE INFLUENCE OF TAX TRIBUNAL AND TAX COMPLIANCE COSTS

SULAIMAN UMAR MUSA

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By

SULAIMAN UMAR MUSA

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Nama Pelajar (Name of Student) : **Musa Sulaiman Umar**

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Tandatangan

Nama Penyelia/Penyelia-penyelia (*Name of Supervisor/Supervisors*) : **Dr. Idawati Ibrahim**

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ABSTRACT

This study investigates the determinants of small corporate taxpayers' tax non-compliance in Nigeria. This study develops a model of small corporate taxpayers' non-compliance, which is underpinned by the theories of deterrence and social exchange. The model contains both economic (audit, complexity, penalty and tax compliance costs) and non-economic (bribery, fairness perception, public goods supply, perception of the tax tribunal and tax rate perception) determinants of tax non-compliance. This study extends the current literature by investigating the direct effect of perception of the tax tribunal and incorporating the mediating effect of tax compliance costs. The study administered questionnaires to a sample of 450 small corporate taxpayers operating in Kano state of Nigeria. PLS-SEM was used to test the hypotheses. This study found that audit, complexity, fairness perception, perception of the tax tribunal, tax compliance costs and tax rate perception have significant direct effects on tax non-compliance. Tax compliance costs are found to mediate the influence of audit, complexity, perception of the tax tribunal and tax rate perception on tax non-compliance. The findings of this study provide important insights to the tax authority, policy-makers and future researchers in understanding the tax non-compliance of small corporate taxpayers. To curtail tax non-compliance in Nigeria, the tax authority should widen its audit net and make the information about detecting tax evaders public to serve as a warning to potential evaders. The tax system should be fully automated to reduce the complexity and high compliance costs borne by the taxpayers. The tax authority should make the procedures of the tax tribunal available to the public through the mass media to increase positive perceptions about the tribunal and reduce non-compliance accordingly. The current tax rate structure should be made fairer by giving a lower rate to small corporate taxpayers to eliminate the perception of unfair tax burden.

Keywords: corporate taxpayers, perception of tax tribunal, tax non-compliance, tax compliance costs, Nigeria

ABSTRAK

Kajian ini menyelidik faktor penentu gelagat ketidakpatuhan cukai dalam kalangan pembayar cukai korporat kecil di Nigeria. Berdasarkan ulasan literatur, kajian ini membangunkan model gelagat ketidakpatuhan pembayar cukai korporat kecil yang didokong oleh teori pencegahan dan teori pertukaran sosial. Model ini terdiri daripada faktor ekonomi (audit, kompleksiti, penalti dan kos pematuhan cukai) dan faktor bukan ekonomi (kompleksiti, perkhidmatan awam, persepsi kadar cukai, persepsi keadilan, rasuah, dan persepsi peranan tribunal cukai). Kajian ini memperluaskan lagi literatur semasa dengan menyiasat kesan langsung peranan tribunal cukai dan kesan gabungan pengantara kos pematuhan cukai. Borang soal selidik telah diedarkan kepada 450 orang pembayar cukai korporat kecil yang beroperasi di Kano, Nigeria. Pendekatan PLS-SEM digunakan untuk menganalisa hipotesis kajian. Hasilnya, kajian ini mendapati bahawa audit, kompleksiti, persepsi keadilan, persepsi peranan tribunal cukai, kos pematuhan cukai dan persepsi kadar cukai mempunyai kesan langsung yang ketara ke atas gelagat ketidakpatuhan cukai. Sementara itu, kos pematuhan didapati menjadi pengantara bagi audit persepsi peranan tribunal cukai dan persepsi kadar cukai ke atas gelagat ketidakpatuhan cukai. Hasil kajian ini memberikan maklumat penting kepada pihak berkuasa cukai, pembuat dasar dan bagi kajian masa depan dalam memahami tingkah laku ketidakpatuhan pembayar cukai korporat. Dalam usaha untuk mengekang ketidakpatuhan cukai di Nigeria, pihak berkuasa cukai perlu meluaskan skop audit dan menyebarluaskan maklumat mengenai pengelak cukai yang telah dikesan, sebagai amaran kepada pengelak cukai yang berpotensi. Sistem cukai perlu diautomasikan sepenuhnya untuk mengurangkan kompleksiti dan kos pematuhan yang tinggi yang ditanggung oleh pembayar cukai. Di samping itu, sistem cukai hendaklah dibuat secara lebih mudah supaya proses pematuhan dapat ditingkatkan dan persepsi ketidakadilan dalam kalangan syarikat kecil dapat dihapuskan. Pihak berkuasa cukai perlu menyebarluaskan prosedur cukai tribunal awam melalui media massa untuk meningkatkan persepsi positif mengenai tribunal dan mengurangkan gelagat ketidakpatuhan.

Kata kunci: pembayar cukai korporat, tribunal cukai, gelagat ketidakpatuhan cukai dan kos pematuhan cukai, Nigeria

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[1] Quran (96:4)

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BEEPS	Business Environment and Enterprise Performance Survey
CAC	Corporate Affairs Commission
CAMA	Company and Allied Matters Act
CBN	Central Bank of Nigeria
CITA	Companies Income Tax Act
FBIR	Federal Board of Inland Revenue
FIRS	Federal Inland Revenue Service
GDP	Gross Domestic Product
ICRG	International Country Risk Guide
ITMA	Income Tax Management Act
JSRC	Joint State Revenue Committee
JTB	Joint Tax Board
LGRC	Local Government Revenue Committee
NBS	National Bureau of Statistics
NEEDS	National Economic Empowering Development Strategies
NRP	National Research Program
OPEC	Organization of Petroleum Exporting Countries
PLS-SEM	Partial Least Squares Structural Equation Modelling
PITA	Personal Income Tax Act
PPT	Petroleum Profit Tax
RTT	Role of Tax Tribunal
SAS	Self-Assessment System
SBIR	State Board of Internal Revenue
SMEDAN	Small and Medium Enterprises Development Agency
SPSS	Statistical Package for the Social Sciences
TAT	Tax Appeal Tribunal
TCMP	Taxpayer Compliance Measurement Program
UK	United Kingdom
US	United States of America
VAT	Value Added Tax
WES	World Enterprise Survey

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Ensuring a stable flow of revenue is necessary for the proper functioning of every government, be it one in a developed or a developing nation. Taxation is one of the primary sources of income for governments and has been among the oldest and most sustainable sources of revenue for financing development plans. In this respect, Ndiaye and Korsu (2014) recommended a minimum tax revenue to Gross Domestic Products (GDP) ratio of 20% for West African States (ECOWAS) like Nigeria. The Tax to GDP ratio is tax collected compared to the GDP and thus, an indicator of tax performance (EPS PEAKS, 2013).

Table 1.1 shows the tax performance of Nigeria using tax to GDP ratios for Nigeria compared to some other relevant countries. In the case of Nigeria, the ratio is very low and has declined from 5.11% in 2009, to 2.27% in 2010, to 1.80% in 2011, to 1.56% in 2012 and 1.48 in 2013. Atuanya and Augie (2014) emphasized that the ratio compared to those of some African countries of similar economic size as Nigeria, is one of the lowest. In fact, the tax revenue to GDP ratio of Nigeria is far below the recommended 20% for ECOWAS member countries.

Table 1.1
Tax Performance Comparison Based on Tax to GDP Ratios

Country	2009	2010	2011	2012	2013	Average (2009-2013)
Australia	25.39	25.39	25.55	26.05	26.53	25.78
Kenya	15.55	15.73	15.95	15.88	15.48	15.72
Nigeria	5.11	2.27	1.80	1.56	1.48	2.44
South Africa	24.40	25.04	25.18	25.59	26.05	25.25
UK	24.34	25.45	26.07	25.35	25.31	25.30

Source: Extracted from World Bank Indicators, 2017

Moreover, Table 1.1 reveals that in developing countries of similar economic size to Nigeria, such as South Africa and Kenya, the tax to GDP ratios are at higher level. The ratios were 25.25% and 15.72% on average for South Africa and Kenya, respectively for the period of 2009 to 2013. In the United Kingdom, a developed country, the ratio for the period of 2009 to 2013 was on average 25.30% and, in Australia, the average ratio was 25.78% for the same period. The comparison of this ratio reveals that Nigeria is generating low tax revenue and is an undertaxed society (International Monetary Fund, 2015).

One of the major reasons for the low tax revenue to GDP ratio is tax non-compliance as the tax authorities rarely scrutinize non-compliant taxpayers and consequently the problem of non-compliance exacerbate (Deloitte Nigeria, 2017). The federal government has been losing a lot of revenue due to corporate tax non-compliance practices in Nigeria (Gwangdi & Garba, 2015; Otusanya, 2011). Thus, tax non-compliance lowers the contribution of tax revenue and makes it discouraging (Worlu & Nkoro, 2012). More specifically, the former Minister of Finance (Ngozi Okonjo-Iweala) has declared that most small companies evade taxes (Embu, 2013).

More recently, the current Minister of Finance (Kemi Adeosun) also lamented the low contribution of tax revenue and emphasized the need for enhancing tax revenue collection as a is a key solution to the current financial difficulty facing Nigeria (Rumney, 2016). The Minister further conceded that the tax revenue collection is far lower than what ought to be collected. Consequently, enhancing tax revenue collection by curtailing the high tax non-compliance among corporate taxpayers may increase government revenue from taxation. Therefore, the situation needs careful examination to increase voluntary compliance to generate more tax revenue to cover the gap. Hence, there is need for investigation into all necessary economic and non-economic determinants of tax non-compliance to develop proper policies that can reduce the high tax non-compliance and increase government revenue generation from taxation.

The low revenue generation of Nigeria is worsened by sharp declines in oil prices and the oil production capacity due to high dependence on oil revenue, averaging 73% (from 2011 to 2015) of the Nigerian total federal revenue (Central Bank of Nigeria, 2015). Table 1.2 reveals the trend of oil prices and Nigerian oil export capacity from 2011 to 2015. The oil prices were relatively stable from 2011 to 2013. After 2013, a huge decline year over year occurred from USD 105.87 to 96.29 (2013 to 2014) and from 96.29 to 49.49 (2014 to 2015). Similarly, the export values were relatively stable until 2013. However, the values exhibited a sharp decline from 2014 to 2015 as 77.49 to 41.82. The recent sharp decline is associated with the Niger Delta militants attacking the oil facilities in oil exploration areas (Mohammed, 2017). Therefore, both the twin decline in the oil prices and export values were reflected in lower government revenue. Hence, this further indicates a clear need for increasing tax collection.

Table 1.2
Oil Prices and Nigerian Oil Export Capacity

Item	**2011**	**2012**	**2013**	**2014**	**2015**
Price in USD	107.46	109.45	105.87	96.29	49.49
Export in Million Barrel Per Day	88.45	95.13	89.93	77.49	41.82

Source: OPEC Annual Statistical Bulleting, 2016

Various variables may be relevant in designing policies to reduce the tax non-compliance among this class of corporate taxpayers. The tax structure variables (audit, compliance costs, penalty, and tax rate perception), which include enforcement mechanisms have been of utmost importance to both tax non-compliance theory and policy. Several classical theoretical models of tax non-compliance (Allingham & Sandmo, 1972; Srinivasan, 1973) are based on these variables, and the variables have been the focus of many tax non-compliance studies (Alm, Bahl, & Murray, 1990; Fischer, Wartick, & Mark, 1992; Joulfaian, 2000). However, the assertion has been made that these important aspects of the tax system have not received proper policy attention in Nigeria (Micah, Ebere & Umobong, 2012). For example, the Nigerian Company Income Tax rate is considered as one of the highest in the world (Odusola, 2006); the audit function has been considered weak (Micah et al., 2012) and the Nigerian corporate income tax law has been identified as complex (Umar & Saad, 2015).

Moreover, other non-economic factors that induce voluntary compliance and those relate to institutions are also critical to the tax non-compliance behaviour of small corporate taxpayers. In this regard, a country's particular institutional influence may drive taxpayers to engage in tax non-compliance and see such non-compliance as ethical (Alon & Hageman, 2013). For instance, the fairness perception of a tax system is important in ensuring voluntary compliance (Bordignon, 1993; Gerbing, 1988; Saad, 2009). In the Nigerian environment, smaller companies may be seen as being disfavoured by the tax environment as they struggle to survive under the same laws as larger companies (Atawodi & Ojeka, 2012).

In Nigeria, tax-related bribery is another important institutional factor that influences tax non-compliance. The occurrences of bribery and corruption among government officials (including tax officials) increased from 20% in 2011 to 24% in 2012 (Centre for Law Enforcement Education, 2012). This problem is associated with the inadequate enforcement of the tax laws to deter non-compliance (Gwangdi & Garba, 2015).

Furthermore, the literature indicated that several factors such as high tax compliance costs (Coolidge, 2012) can influence tax non-compliance. In the same vein, Tyler (1990) indicate that there is strong connection between injustice and non-compliance which implies that ineffective role of tax tribunal can also discourage compliance. All these factors appear to be relevant to tax non-compliance decisions, particularly in the Nigerian context, and need empirical investigation to find their influence on tax non-compliance. The above two main factors are explained below because they are central to this study.

The role of the tax tribunal is another important non-economic institutional factor, which may influence tax non-compliance. The tax tribunal is a quasi-court that handles tax disputes. It has been established that the perceptions of citizens of justice and injustice influence tax non-compliance (Tyler, 1990). In the Nigerian context, the tax tribunal was established to reduce the delays in judgment on tax matters in the ordinary court system and hence improve the taxpayers' confidence in the tax system. If the tax tribunal would handle its role with great effectiveness, the taxpayers might be encouraged to comply. Conversely, if the tax tribunal is ineffective in handling its role, the taxpayers may lose confidence in the system and tend to evade taxes.

Second, in relationship to high tax compliance costs, the World Bank conducted a survey of tax compliance costs measured by the ease of paying taxes in sub-Saharan Africa. Across all of sub-Saharan Africa the average paying tax ranking of was 126; however, the survey ranked Nigeria as 170th of the 189 countries surveyed, in terms of ease of paying taxes, which explains the tax compliance costs (World Bank & International Finance Corporation, 2014). In addition, the survey indicates that in Nigeria, a small company on average spends about 956 hours dealing with its tax affairs and makes 47 tax payments in a year, whereas on average, sub-Saharan African countries have a tax compliance time of 319 hours and the average number of tax payments is 38 times in a year. Moreover, Umar and Saad (2015) found that the complexity of the company income tax law was one of the sources of high tax compliance costs.

In Nigeria, the returns of the corporate taxpayers must be certified by a tax consultant before the tax authority accepts them. Hence, companies must hire the services of tax consultants to check their process in filing tax return. The charges of the tax consultant are among the explanations of the high tax compliance costs, especially among small corporate taxpayers in Nigeria. Given this contextual fact, dealing with tax consultants may discourage tax non-compliance (Yesegat, 2009). However, Coolidge (2012) argued that high cost of compliance may be the reason for non-compliance of some taxpayers as it discourages tax compliance of small companies. Hence, the complex nature of the tax laws in Nigeria may also pave the way for taxpayers to look for ways to evade taxes (Micah et al., 2012). Therefore, investigating if the tax compliance costs offer any explanation of the tax non-compliance is important.

Therefore, investigating the alarming non-payment of taxes is necessary to have a better understanding of the factors leading to tax non-compliance of this class of taxpayers. Ensuring a high level of compliance would guarantee a stable flow of revenue to finance government activities. This is also critical for the achievement of all development plans, such as the Vision 2020. Curtailing tax non-compliance will ensure a stable revenue flow necessary for financing development programs of the plan. The appropriate economic and non-economic factors that influence tax non-compliance should be empirically investigated.

1.2 Problem Statement

This study identifies the practical problems relating to the Nigerian corporate income tax. Nigeria's tax revenue to GDP ratio has decreased from 5.11 to 1.48 from 2009 to 2013

(World Bank, 2017). This is below the required 20% for the ECOWAS member countries (Ndiaye & Korsu, 2014). The low tax revenue to GDP ratio implies low compliance among taxpayers. Specifically, the level of tax non-compliance among corporate taxpayers has been high (Gwangdi & Garba, 2015; Otusanya, 2011). It is reported that the small corporate taxpayers level of non-compliance has reached 75% (Embu, 2013). More recently, the Federal Inland Revenue Service (FIRS) reported that of the 450,000 registered companies 325,000 engage in tax non-compliance, and most companies engaging in tax non-compliance are small ones (Augusto & Co., 2016). Thus, increasing compliance of this class of taxpayers can yield more revenue to help in arresting the declining revenue problem.

Also, theoretical problems were identified based on the existing literature of tax non-compliance. In the literature, non-compliance has received extensive attention from researchers (Alabede, Ariffin, & Idris, 2012; Allingham & Sandmo, 1972; Alm et al., 1990; Fischer et al., 1992; Joulfaian, 2009; Kirchler, Hoelzl, & Wahl, 2008; Palil & Mustapha, 2011b; Torgler, 2007). Several factors from the economic, social and psychological perspectives have been found to influence tax non-compliance in the literature. Kirchler (2007) and Palil and Mustapha (2011b) identified tax rate, detection probability, perception of government spending (economic perspective), detection probability, role of tax authority, simplicity of compliance (institutional perspective), fairness perception, ethics and attitudes, political affiliation, changes in government policies, reference group (social perspective), personal financial constraint, awareness of offences and penalties (individual perspective), and age, gender, education, income level (demographic factors) as factors influencing tax non-compliance. Moreover, several empirical studies have investigated the influence of these factors on tax non-compliance (Abdul Jabbar, 2009; Alabede, 2012; Fischer et al., 1992; Palil & Mustapha, 2011a). However, most studies have focused on individuals' tax compliance.

Specifically, corporate tax non-compliance has received less attention (Alon & Hageman, 2013; Downs & Stetson, 2014). Focusing on corporate tax non-compliance, several studies have identified numerous factors that influence corporate tax non-compliance. The early studies are based on the Allingham and Sandmo (1972) model and focused more on economic factors. Precisely, these studies have investigated the influence of tax rate perception, detection probability/audit, penalty, public disclosure and profit performance (Joulfaian & Rider, 1998; Kamdar, 1997; Mills, 1996, 1998; Murray, 1993; Rice, 1992). Later studies conducted incorporated firm characteristics, social and institutional factors such as managers' personal income tax compliance, national culture, trust, corruption, fairness of legal system, governance quality, enforcement technology, political incentives and cultural norms (Alon & Hageman, 2013; Hanlon, Mills & Slemrod, 2005; Richardson, 2006, 2008; Slemrod, 2007; Tsakumis, Curatola & Porcano, 2007).

Although several studies have included several different factors to explain corporate tax non-compliance, the literature shows that the relationship between tax non-compliance and its determinants is complex and requires more alternative approaches for a better understanding of the phenomenon (Andreoni, Erard, & Feinstein, 1998; Cummings, Martinez-vazquez, Mckee, & Torgler, 2009; Murphy, 2010; Swistak, 2016; Torgler, 2007). Similarly, it is implied in the literature that other factors may well be relevant in determining this complex behaviour (Alm, 1999; Jackson & Milliron, 1986; Trang, Nga, & Quang, 2015). In a review study on theoretical, experimental and empirical studies of tax non-compliance, Alm (2012) said much had been learned from previous studies, but nonetheless, important gaps exist in the understanding of tax non-compliance. He further asserted that many basic questions on explaining tax non-compliance in relation to societal institutions and social processes that affect tax non-compliance and corporate income taxes (among other taxes) require much additional investigation.

Moreover, in the contemporary world of growing globalized competitiveness, various factors may influence tax non-compliance that differ from one country to another (Porcano, 1988; Trang et al., 2015). The factors influencing corporate tax compliance decision may be wider encompassing and differ from those influencing an individual taxpayer. Hence, Tedds (2010) confirmed that corporate compliance decisions are broader as their decisions may not only be determined in economic models rather with regard to encompass tax systems and the economy as whole. Therefore, to have a better understanding of tax non-compliance behaviour of corporate taxpayers, the factors influencing tax non-compliance should be examined in complementary ways (Swistak, 2016). Therefore, this study extends the literature by investigating the direct influence of perception of tax tribunal in Nigeria and the indirect effect of tax compliance costs.

The role of tax tribunal is one possible non-economic and institutional factor that may influence tax non-compliance; yet, it has not received much attention from previous studies. The connection between the perception of tax tribunal and tax non-compliance can be explained by social exchange theory. The theory posits that social relationships are built based on reciprocity. In line with social exchange theory, where the tribunal performs its roles effectively by being fair and without unnecessary delays in its judgments, the taxpayer may have confidence in the system and reciprocate by complying with the tax laws. Also, investigating the perception of tax tribunal on tax non-compliance answers the call for more research on the role of institutional factors on corporate tax non-compliance (Alon &

Hageman, 2013). Thus, this study tests the direct impact of the perception of tax tribunal on tax non-compliance in the Nigerian context.

Tax compliance costs is another key factor that can explain the relationship between non-compliance and its determinants under the Nigerian tax system. Based on deterrence theory, tax compliance costs stand to be a deterring factor to non-compliance among corporate taxpayers in Nigeria. This is because of the legal requirements for the corporate returns to be certified by tax consultants as provided by s. 55 of the Company Income Tax Act (CITA) 2007. This makes it necessary for corporate taxpayers to engage the services of the tax consultants, which helps in ensuring compliance but leads to high costs. Thus, hiring the services of a tax consultant and additional record keeping come with extra costs, which may induce compliance. Therefore, this study investigates the mediating role of tax compliance costs.

To the best knowledge of the researcher, there is lack of evidence on the direct influence of the perception of tax tribunal on corporate tax non-compliance. Also, the literature shows a lack of studies on the mediating effect of tax compliance costs between non-compliance and its determinants. The incorporation of the indirect variable expands the understanding of the tax non-compliance. Also, this aligns with the submission that the mediating variable can specify why or under what conditions independent variables influence a dependent variable (Baron & Kenny, 1986; Hayes, 2013). More specifically, incorporation of compliance costs as mediator may shed more light on the relationship between small corporate tax non-compliance and its determinants, given the inconclusive findings and the need for more understanding of this complex behaviour.

Furthermore, the literature pays less attention to the African continent, particularly Nigeria. Most corporate tax non-compliance studies have been conducted in the United States (Alm, Blackwell & Mckee, 2004; DeBacker, Heim & Tran, 2012; Joulfaian & Rider, 1998; Joulfaian, 2000; Kamdar, 1997; Murray, 1993); and in Asia and Australia (Abdul Jabbar, 2009; Chan & Mo, 2000; Evans, Carlon & Massey, 2005; Saad, 2011; Sapiei & Kasipillai, 2013a). Hence, corporate tax non-compliance behaviour deserves further investigation in Nigeria because the findings of the previous studies may not be generalizable to the Nigerian context given the cultural and contextual differences.

Precisely, this study attempts to fill two main gaps in predicting small companies' tax non-compliance: 1) investigating the direct effect of perception of tax tribunal on small companies' tax non-compliance in Nigeria; 2) investigating the mediating effect of tax compliance costs on the relationship between tax non-compliance and its determinants. Currently, to the best knowledge of the researcher, the perception of tax tribunal and mediating effect of tax compliance costs have not received due attention of research in the literature.

1.3 Research Questions

Based on the problems raised above and insights from the previous literature, the major research question that this study answers is what are the determinants of small companies' tax non-compliance in Nigeria are. The specific questions are:

1. Do audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal, tax compliance costs and tax rate perception influence small companies' tax non-compliance?

2. Do tax compliance costs mediate the relationships between small companies' tax non-compliance and its determinants?

1.4 Research Objectives

Tax non-compliance behaviour has been identified as complex behaviour that requires alternative approaches of research (Cummings et al., 2009; Murphy, 2010; Torgler, 2007) in order to have better understanding for effective practical and theoretical benefits. Moreover, Alm (2012) emphasized that despite the extensive research on tax non-compliance behaviour, important gaps exist in the understanding of tax non-compliance behaviour. Hence, additional research is required especially with regards to societal institutions and social processes that affect tax non-compliance and corporate income taxes.

Small corporate taxpayers are the focus of this study and are an integral part of the corporate taxpayers in Nigeria. Accordingly, economic or structural factors, such as the tax audit and penalty are important deterrence factors used by the tax authority in Nigerian tax system as in the case of many other countries. Other non-economic factors can also encourage voluntary tax compliance such as fairness perception and public goods supply. Factors that encourage voluntary tax compliance are important components of good tax regimes and thus, these factors can play key role in enhancing compliance especially where the enforcement is weak (Bodea & LeBas, 2016). Also, under the non-economic factors, there are institutional factors that have become established in in the Nigerian tax system such as the tax tribunal. Perceptions of the small corporate taxpayers about the economic and non-economic determinants of tax non-compliance can provide important insights about their non-compliance. Furthermore, for wider insights into the non-compliance behaviour of corporate taxpayers and more extensive important theoretical and practical benefits, this study investigates the indirect effect of tax compliance costs.

Therefore, this study has the primary purpose of investigating the direct and indirect determinants of small companies' tax non-compliance in Nigeria. The specific objectives are:

1. To investigate the direct influence of audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal, tax compliance costs and tax rate perception on small companies' tax non-compliance.

2. To examine whether tax compliance cost mediates the relationship between small companies' tax non-compliance and its determinants.

1.5 Significance of the Study

This study offers more understanding of the complex behaviour of corporate tax non-compliance. Specifically, this study introduces the direct influence of the perception of tax tribunal on corporate tax non-compliance. Also, the study offers clarity on the mediating role of tax compliance costs on the relationship between tax non-compliance and its determinants.

Previous studies have identified tax non-compliance as complex and thus a comprehensive approach is required in investigating this behaviour (Alm, 2012; Murphy, 2010; Swistak, 2016; Tedds, 2010; Trang et al., 2015). Hence, this study investigates economic and non-economic determinants of tax non-compliance together. This study contributes by empirically testing the impacts of economic and non-economic variables on tax non-compliance.

Moreover, the literature on tax non-compliance is biased in favour of individual taxpayers, giving little attention to corporate taxpayers (Alon & Hageman, 2013; Atanassov & Liu, 2015; Joulfaian, 2000). In addition, most of the few corporate tax compliance studies were not conducted in the developing world. In this regard, the current study provides new evidence by focusing on small companies' tax non-compliance in a developing economy, namely that of Nigeria. Andreoni, Erard and Feinstein (1998) emphasized the need for more empirical and institutional studies outside the United States especially in developing countries, where the tax non-compliance problem has become critical. Consequently, this study answers this call for more studies on tax non-compliance (Alon & Hageman, 2013; Andreoni et al., 1998). It is also among the few studies using a questionnaire to collect data. Using a questionnaire has the advantage of being unbiased in sample selection over the studies using tax authority data (audit data). The sample of the studies that have used audit data only considered taxpayers selected for the audit.

From the practical perspective, this study also hopes to make a significant contribution to tax policy formulation and the FIRS on the issue of tax non-compliance of small companies. In the first place, this study would help to improve tax administration by providing empirical evidence on the influence of factors from economic and non-economic perspectives that determine tax non-compliance. This study may be of great significance for achieving strategies to close the gap in the government revenue resulting from low performance of taxation. Curtailing tax non-compliance is one of the important measures to increasing government revenue. Hence, the findings of this study provide insights on how to curtail the high non-compliance among small corporate taxpayers.

1.6 Scope of the Study

The current study investigates the determinants of small companies' tax non-compliance in Nigeria. The study examines the direct effect of audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal, tax compliance costs and tax rate perception on non-compliance. Equally, the study tests the mediating role of tax compliance costs on the relationship between the non-compliance and its determinants.

This study focuses on small corporate taxpayers. In Nigeria, the FIRS has categorized corporate taxpayers into three classes of companies. The first category comprises micro and small companies (henceforth small companies/corporations); the second type includes medium companies; and the last one includes large companies. While there are three categories of corporate taxpayers in Nigeria (small, medium and large companies), the problem of tax non-compliance highlighted, as previously mentioned, has more to do with the small corporate taxpayers. Hence, this study focuses on this class of corporate taxpayers. Moreover, this study chose this class of corporate taxpayers given their considerable number and importance to the economy.

In Nigeria, small companies are the backbone of the economy operating in the different sectors of the economy and contributing about 60% to the GDP of the economic activities (National Bureau of Statistics & Small and Medium Enterprises Development Agency of Nigeria, 2010). Also, the first National Implementation Plan of Vision 20:2020 identified small companies as a critical area in achieving Vision 20:2020 because of their potential to contributing significantly to employment generation, wealth creation, poverty reduction and economic growth and development.

More specifically, this study focuses on the small corporate taxpayers in Kano State of Nigeria. The choice of Kano state is motivated by the fact that the state is the centre of commerce in Nigeria and has a high number of small companies operating in different sectors of the Nigerian economy (National Bureau of Statistics & Small & Medium Enterprises Development Agency of Nigeria, 2010). Additionally, given the FIRS classification of this class of companies all over the country as homogeneous group of taxpayers on the bases of their annual turnover, this class of companies from Kano can be a good representative of Nigerian small corporate taxpayers. Therefore, given the commercial status of Kano state in Nigeria with large number of small companies operating in the state; and FIRS classification of small corporate taxpayers of similar characteristics all over the country, this study uses small corporate taxpayers to represent small corporate taxpayers in Nigeria.

In the same vein, Kamdar (1997) emphasized that the non-compliance behaviour of different classes of corporate taxpayers (small, medium and large companies) should be studied separately given their different characteristics. Thus, the current study is based on the quantitative method and collects data via a questionnaire instrument. The study focuses on corporate income tax. Hence, the information collected on non-compliance behaviour and the tax compliance costs were restricted to only corporate income tax. The estimation of the tax compliance costs covered only external and internal monetary costs for the period of 2014.

1.7 Organization of the Thesis

This study is organized into six chapters. In Chapter 1, the background, the problem statement, the research questions, the objectives, significance, the scope, and the organization of the study are discussed. Chapter 2 gives a background of the Nigerian tax system, focusing on corporate income tax. Chapter 3 reviews the previous theoretical and empirical studies of tax non-compliance behaviour. The methodology and the source of data used are described in Chapter 4. Chapter 5 presents data analyses and the findings of the study. Finally, Chapter 6 provides discussions of the findings, contributions of the study and conclusion.

CHAPTER TWO

OVERVIEW OF NIGERIAN COMPANY INCOME TAX

2.1 Introduction

This chapter provides an overview of the history of Nigerian tax system, with an emphasis on company income tax. The chapter further highlights some related factors such as provisions of laws on income tax of small corporate taxpayers, the system of tax operates by small corporate taxpayers (i.e. SAS) and establishment of tax tribunal. The chapter further discusses the performance of the company income tax in Nigeria.

2.2 History of Nigerian Company Income Tax

In old Nigeria before the amalgamation of the four distinct groups that became Nigeria as it is today, the leaders (Emirs, Obas, Ezes etc.) of various kingdoms, ethnic groups and tribes imposed taxes on their subjects. However, the origin of initial legal backing to taxation in Nigeria dates to the period of colonialism, when Sir Fredrick Lugard introduced the Native Revenue Proclamation of 1904 in Northern Nigeria. The introduction of the Native Revenue Proclamation took place before the amalgamation that formed Nigeria as one country. In 1917 and 1928, the proclamation was implemented in the Western and Eastern regions, respectively as the Native Revenue Ordinance. This was done to ensure that the people in the Western and Eastern regions paid taxes as their Northern counterparts did. However, the extension faced resistance from some parts, which led to social unrest. The government persisted with the implementation of the new tax and solved the problem after some time.

Following the success of the government in tacking the above problem, the government introduced the direct tax system, which covered the whole country. The new direct tax system led to a significant amendment by the incorporation of the Direct Taxation

Ordinance No. 4 of 1940. In 1943, various tax ordinances were consolidated and enacted as Income Tax Ordinance No. 29 of 1943. This ordinance then became the Income Tax Ordinance Chapter 92 of 1948, which included various amendments. The Governor General who handled the administration of the income tax was appointed as the Commissioner of Tax. Similarly, in 1958, a momentous change occurred in the administration of the income tax with the establishment of a new tax administration. The new administration, Federal Board of Inland Revenue (FBIR) was established in 1958 and given the responsibility of carrying out the administration of income tax. The Board started operations in the following year (1959).

In 1961, based on the recommendation of the Raisman Fiscal Commission of 1958, income tax was separated into company income tax and personal income tax. This led to the abolition of the Income Tax Ordinance of 1948, which was replaced by the CITA 1961, Income Tax Management Act (ITMA) 1961 and Personal Income Tax Act (PITA) 1961. The FBIR was given the responsibility of administering the CITA. After the above separation of the taxes into company and personal income tax, the need for uniform tax administration arose. The JTB was established as provided in ITMA. The Board was charged with the main responsibility of facilitating uniform tax administration in Nigeria. The ITMA was repealed by the PITA in 1993.

The above discussion shows that the tax system in Nigeria has transformed over time. This can be attributed to the expansion of economic activities and the need for more revenue by the government to finance its activities. Also, over time, taxation has received more recognition in government policies as an important potential source of revenue. For instance, the National Economic Empowering Development Strategies (NEEDS) of 2003 recognized the importance of taxation in achieving its goals. In this regard, a study group on the Nigerian tax system was constituted under the leadership of Professor Dotun Philip. The recommendation of this group led to the enactment of the FIRS (Establishment) Act of 2007. This gave the FIRS the power of administrative autonomy. The FIRS is responsible for assessment, collection, and remittance of company income tax in Nigeria as prescribed by CITA 2007. All companies registered with the Corporate Affairs Commission (CAC) as a corporate entity, pay their income tax to the FIRS as required by the law. Thus, the small companies, which are the focus of this study, pay their tax to FIRS and are governed under the CITA.

2.3 Nigerian Tax Structure

The theory of public finance testifies the relationship between tax structure and economic growth (Alabede, 2012). The Nigerian tax system comprises three main components, i.e., tax policy, tax laws and tax administration. The national tax policy determines the principal objectives of the Nigerian tax system. Hence, as in many other countries, the tax system is established not only to generate sufficient tax revenue for the government to finance the provision of public goods and services, but also to serve as an economic management tool to stabilize the economy. As an overall objective, the tax system should help in achieving economic growth and development.

In Nigeria, all the principal taxes, such as Petroleum Profit Tax (PPT), CIT and VAT are under the jurisdiction of the federal government. The taxes of individuals (other than those under the jurisdiction of the federal government) and unincorporated enterprises are under the jurisdiction of the state governments. The local governments in the states are authorized to collect some rates and levies. However, the local governments do not have substantive legislative powers of taxation. The current study focuses on the corporate income tax.

2.4 Corporate Income Tax in Nigeria

Under the Nigerian tax system, FBIR administers taxes in the jurisdiction of the federal government which includes corporate income taxes. The FIRB is the main body in charge of providing the general policy that guides the functions of the FIRS. The FIRS as operating arm of the FIRB, is the main body that administers both corporate income taxes. The Board also manages and supervises the policies of FIRS on matters relating to the administration of tax assessment, collection, and accounting systems. The Board also has another arm that is the Technical Committee.

The Technical Committee of Federal Inland Revenue Service Board (FIRSB) was established in 1993 because of the recommendation of the study group on the Nigerian tax system. FIRSB comprises the executive chairman of FIRS, who is also the chairman of the Committee and other members who are experts and have experience in taxation. The Committee is given primary responsibility for considering any tax matters that require technical expertise that may arise and to make recommendations to the Board. Pertinent to this study, three foundations in the administration of company income tax in Nigeria are important to this study. These foundations comprise the CITA, SAS and the tax tribunal. Hence, the next sub-section reviews some relevant provisions from the CITA. The second sub-section provides discussion on SAS as the tax system under which the small corporate taxpayers operate in Nigeria. Finally, the last sub-section highlights the establishment of tax tribunal in Nigeria.

2.4.1 Selected Provisions on Corporate Income Tax

Some sections of the CITA 2007 make provisions for the assessment, collection, and remittance of company income tax in Nigeria. In addition, CAMA 2007 provides for the establishment of the CAC and its responsibilities.

According to s. 1 of CITA 2007, profit or gain of any company accruing in, derived from, brought into, earned in, or received in Nigeria for any trade or business activity, are subjected to tax. The company income tax rate has been 30% up to the time this thesis is written, and it is applicable to the total profit or chargeable profit of the company. However, s. 40 (6) of CITA 2007 provided for an exemption of small company with a tax rate of 20%. The 20% rate only related to manufacturing companies and companies engaged entirely in export. This is applicable within the initial five years of operation, and where the turnover does not exceed NGN1 million (USD3,274.93[2]).

In cases in which all sources of a company's profit result in a loss, the company is required to pay a minimum tax. Thus, s. 33 (1) provides that if the turnover is below NGN500,000 (USD1,637.47[1]) and the company has been in business for at least four calendar years, the company will pay a minimum tax. The minimum tax is whichever is the highest of the following four amounts: 0.5% of the gross profit; 0.5% of the net assets; 0.25% of paid-up capital; or 0.25% of the turnover of the year under consideration.

Also, s. 1 of the CAMA 2007 provides for the establishment of the CAC, which is charged with the responsibilities of regulating and supervising the formation, incorporation, registration, management and winding-up of companies, as provided by s. 7 of CAMA

[2] At the official exchange rate of the Nigerian Central Bank (USD1 @ NGN305.35) for November 2017.

2007. Therefore, the small companies, which are the focus of this study, are required by the law to register with CAC and pay their income tax to the FIRS. This class of companies are subjected to the same tax laws (CITA) as are medium and large companies.

2.4.2 Self-assessment System in Nigeria

Moreover, corporate taxpayers in Nigeria pay income tax based on the SAS. Implementation of SAS in Nigeria has its legal backing in s. 24 of the Constitution of the Federal Republic of Nigeria 1999. The Section provided that it is a responsibility of every citizen to honestly declare his income to the relevant tax authority for tax purposes. More specifically, s. 52 (2) and 53 of Company Income Tax Act 2007 guides the implementation of SAS with regards to corporate taxpayers in Nigeria.

In accordance with the CITA 2007, corporate taxpayers are required to accurately compute their tax liability and pay the tax due through one of the designated banks. After making the payment, the taxpayers are then required to file the SAS return within the stipulated date. On the side of the tax authority, the returns are subjected to audit to ensure compliance with the laws. The audit starts with the spot audit which is a preliminary check that ensures correctness of the returns submitted to the tax authority. The spot audit is applicable to all returns filed using SAS. After the spot audit, some returns are then selected for a risk-based audit to detect any act of non-compliance.

In line with many other countries that have implemented SAS, in Nigeria, SAS was implemented mainly to improve voluntary tax compliance. It is asserted that SAS has achieved some positive impacts in the Nigeria's tax administration by reducing the time spent on the issuance of assessment notices, human errors associated with misplacement of files and the delays in servicing assessment notice (Mas'ud, 2013) However, the new system has imposed additional costs of compliance on the taxpayers as corporate taxpayers file their return with the help of tax consultants to ensure the correct filing and to avoid penalty charges (Umar & Saad, 2015).

2.4.3 Establishment of Tax Tribunal

Establishment of the Tax Appeal Tribunal (TAT) is backed by s. 59 (1) of the FIRS (Establishment) Act 2007. The TAT replaced the former Body of Appeal Commissioners (BAC) and Value Added Tax (VAT) Tribunals. TAT Order of 2009 and the TAT Rules of 2010 guide the appeal process between the taxpayer and the relevant tax authority. The TAT is given the jurisdiction to resolve disputes arising from the operation of all the federal taxes. However, the TAT is not given criminal jurisdiction in cases in which evidence of a criminal act is discovered. In such instances, the information is forwarded to the Office of the Attorney General of State or relevant law enforcement agency.

The TAT has been established to reduce the incidence of tax evasion and ensure fairness and transparency of the tax system. More importantly, the TAT is expected to reduce delays in judgments of tax matters in the ordinary court system and hence improve the taxpayers' confidence in the tax system without compromising the principle of fairness and equity. This is reflected in the motto of the tribunal as "Building confidence in Nigeria's tax system."

In his conceptual review on assessing the TAT, Obayemi (2015) characterized the tribunal as having a perceived lack of fairness. Obayemi further recommended improving the procedural rules, which should be more adaptable and flexible. It is, therefore, important to empirically investigate the influence of the role of the tribunal on the non-compliance decisions of the taxpayers.

2.5 The Incentives

In Nigeria, most of the tax incentives are enjoyed by large companies. For instance, in most cases, tax incentives for local fabricators and tax relief for pioneer industries are given to large-scale investors. However, small companies in manufacturing business benefit from incentives such as low rate of 20% for companies with a turnover of less than NGN1 million (3,274.93[3]) in first five years of operation. Additionally, small companies that meet the minimum level of local raw material sourcing and utilization can enjoy a tax credit of 20% for five years. The minimum levels of local raw materials sourcing and utilization by sectors are: Agro-allied (70%), Engineering (60%), Chemicals (60%) and Petrochemicals (70%).

Nonetheless, small companies want more tax incentives such as exemptions from import duties for companies importing ICT equipment solely to build their capacity and capability which are not for onward sale (Augusto & Co., 2016). Further, some operators have also suggested entrepreneurial incentive programs across different sectors, which should be provided at the local, state, and federal levels. In addition, a dedicated personnel or agency should be established to identify the necessary tax incentives and help entrepreneurs navigate through the process of applying.

2.6 Performance of Nigerian Tax System

Nigerian tax revenue was mainly from agricultural taxes before the advent of petroleum tax in the 1970s (Odusola, 2006). Later oil taxes dominated. The total tax revenue comprises oil

[3] At the official exchange rate of the Nigerian Central Bank (USD1 @ NGN305.35) for November 2017.

and non-oil revenue. Figure 2.1 below shows the proportion of the oil and non-oil tax revenue for the period from 2011 to 2015. From 2011 to 2014, oil revenue dominated the tax revenue. In 2015, there was a decline in both oil and non-oil revenue. The decline in the oil revenue is associated with a decrease oil price and production capacity. This also indicates the uncertainty of oil revenue, and the need to enhance non-oil revenue sources.

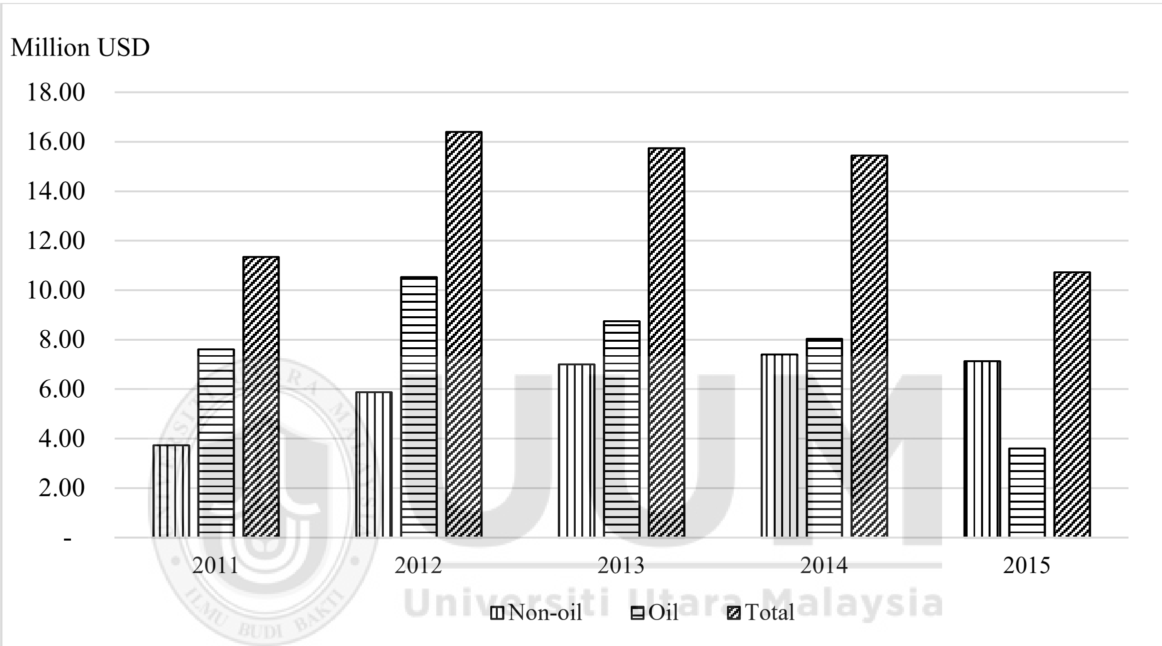

Figure 2.1
Oil and Non-Oil Annual Tax Revenue Collection in Billion Naira
Source: Extracted from FIRS tax collection statistics, 2015

As shown by the FIRS collection records of non-oil tax revenue, CIT was the highest contributor followed by VAT (Federal Inland Revenue Service, 2015). Figure 2.2 shows the proportion of the CIT, VAT, and other non-oil tax revenues. Therefore, this indicates the potential of the CIT among the non-oil tax revenue sources. Also, the figure shows a decline in tax revenue from previous year, which may be the result of tax non-compliance particularly in the case of CIT.

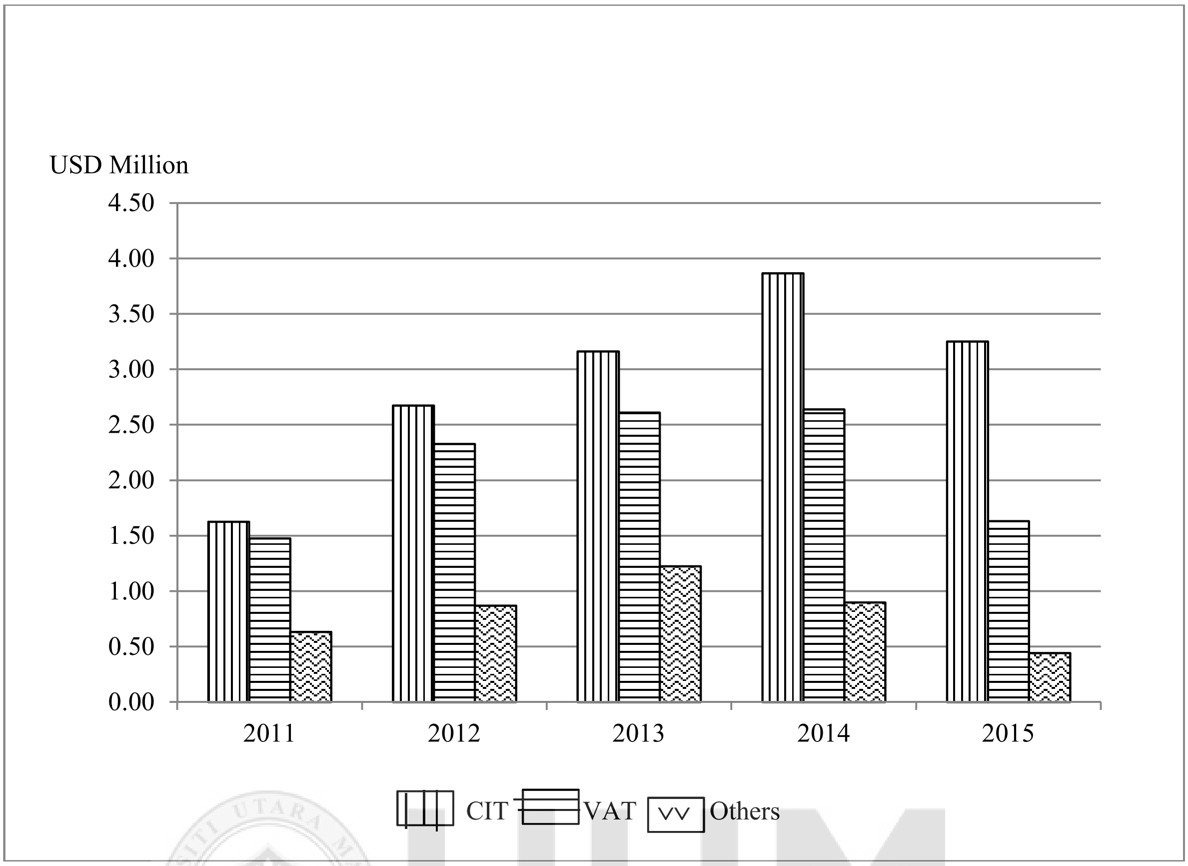

Figure 2. 2
CIT, VAT and Other Non-Oil Taxes
Source: Extracted from FIRS tax collection statistics, 2011-2015

For the contribution of small companies, Figure 2.3 shows that large, small and medium companies contributed 71%, 27% and 2%, respectively (Adigun, 2012). The above information is from the only publicly available data and covers only the first quarter of 2012 of FIRS collection statistics. The available data also show that small companies contributed NGN91.52 (USD299.72 million[4]) billion while the medium companies contributed only NGN7 billion (USD22.92 million[1]) for the same period. The contribution of small companies is significant both in absolute terms and in relationship to the contributions of medium companies. This higher contribution also shows the higher potential and contribution of small firms compared to the medium ones. Given the higher contribution

[4] At the official exchange rate of the Nigerian Central Bank (USD1 @ NGN305.35) for November 2017.

and potentiality, the current study focuses on smaller companies. Therefore, given the performance of CIT and that of the small companies, this study focuses on this tax and this category of companies.

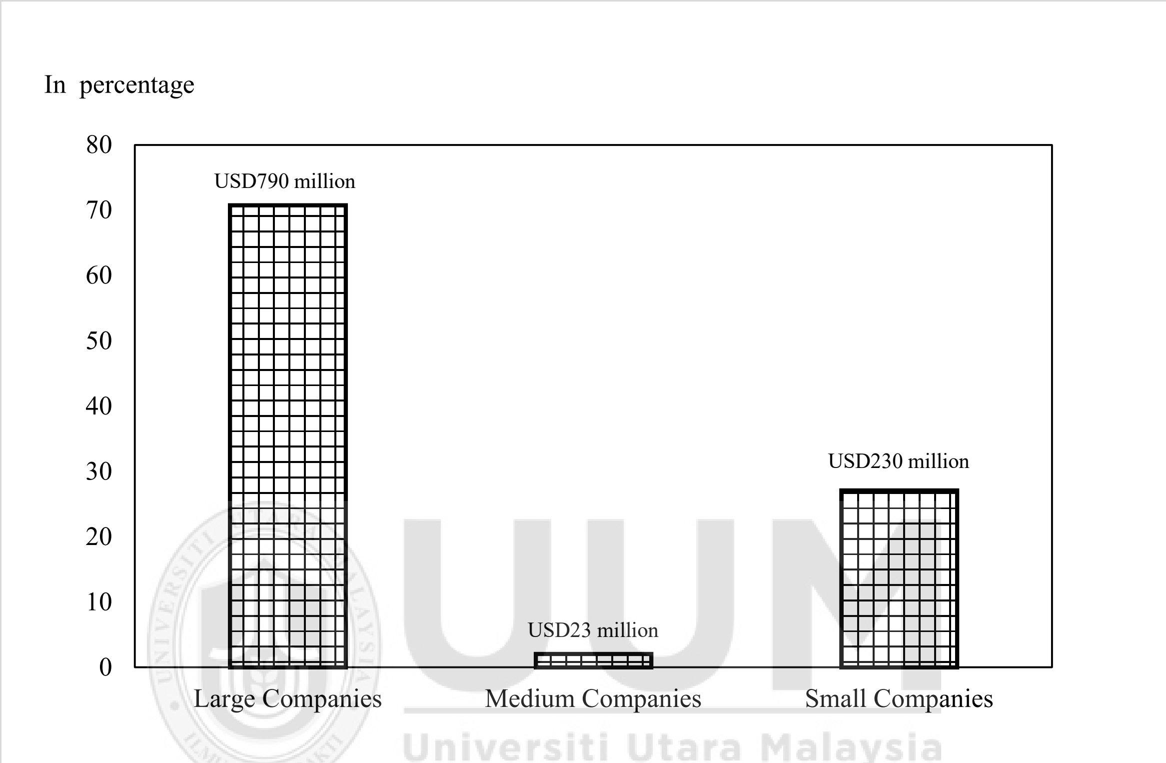

Figure 2.3
Proportion of Tax Contribution by Categories of Companies
Source: Extracted from Adigun (2012)

2.7 Summary of the Chapter

The chapter discusses the background of the Nigerian CIT. The chapter reveals that CIT had its roots in the old Nigerian tax system when the leaders of the different communities imposed taxes on their subjects. Later, the old tax system was transformed into the modern tax system with legal backing. The modern tax system of Nigeria is divided into two, namely, oil and non-oil taxes. CIT remains the major contributor of non-oil taxes. The chapter further shows that administration of CIT is the responsibility of the FIRS. Finally, small companies are part of the company taxpayers who pay their CIT to the FIRS.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

After the discussion about the background of the Nigerian tax system, the current chapter discusses the theories used in this study. The chapter further discusses the concept of tax non-compliance and its measurement. A literature review about the relationship between the influencing variables and the dependent variable is provided. The literature review is based on studies in both developed and developing countries. The primary aim of the review is to see what previous studies have done in helping to develop the framework for the current study and its hypotheses.

3.2 Theories of Tax Non-compliance

Generally, various theories economic and socio-psychological background have been used to explain the connection between tax non-compliance and its determinants. Allingham and Sandmo (1972) proposed the classical model of tax non-compliance based on the deterrence theory of Becker (1968), which focused on only financial consideration in determining tax non-compliance. Allingham and Sandmo (1972) based their analysis of tax non-compliance by considering the benefit of successful non-compliance against the expected costs of detection and punishment. Several studies have extended the Allingham and Sandmo model within the basic economics-of-crime approach by considering labour supply, endogenous probability of detection and other uncertainties (Cowell, 1990; Reinganum & Wilde, 1985; Sandmo, 1981; Srinivasan, 1973; Yitzhaki, 1974). Usually, these studies see financial considerations and enforcement as the major factors that drive tax non-compliance behaviour. Deterrence theory is one of the widely known theories related to tax non-compliance (Devos, 2014; Sapiei, Kasipillai, & Eze, 2014). The literature suggested that deterrence factors remain important in determining tax non-compliance behaviour (Devos, 2014).

Given the fact that tax non-compliance behaviour encompasses not only financial considerations (Jackson & Milliron, 1986), relevant theories from sociology and psychology were proposed into the investigation of tax non-compliance. The theories include, for instance, the theory of planned behaviour (Ajzen, 1991), the social exchange theory (Blau, 1964) and the social influence theory (Bandura, 1977). Several studies have investigated the influence of the psychological and sociological factors that determine tax non-compliance behaviour (e.g. Alm et al., 2012; Alon & Hageman, 2013; Forest & Sheffrin, 2002; Kirchler, Kogler, & Muehlbacher, 2014; Saad, 2011; Torgler, 2003; Wenzel, 2002). Sociological and psychological factors involve personal perceptions, judgements and social considerations that influence tax non-compliance decisions. The current study underpinned its model with deterrence and social exchange theories. Hence, next sub-sections provide an overview of the underpinning theories.

3.2.1 Deterrence Theory

Becker (1968) developed the deterrence theory based on the economics of crime approach. According to Piquero, Paternoster, Pogarsky, and Loughran (2011), prior to Becker the classical work of Beccaria and Bentham provided the philosophical foundation of deterrence in preventing criminal activity. This classical work basically focused on pain and pleasure based on the certainty of detection, swiftness and severity of the punishment. Becker integrated the utility idea in the deterrence theory. The basic idea of the Becker's deterrence theory is that individuals choose to engage in the activities that have the maximum rewards with minimized costs. According to Becker (1968), detection probability and punishment determine criminal activity based on rational consideration. For example, an individual will not perform a criminal act if the sanctions are probable enough and the costs are severe enough to outweigh the rewards of the act. Becker's approach generally treated criminal activity as a rational individual decision that depends upon probabilities of detection and conviction and levels of punishment (Graetz, Reinganum, & Wilde, 1986). Deterrence theory was utilized as a basis to investigate various types of criminal behaviour including tax non-compliance (Cuccia, 1994).

The classical work of Becker (1968) published in the paper titled *Crime and Punishment: An Economic Approach* focused on two major facets to provide an analysis of criminal behaviour. These were: 1) the economic approach to criminal behaviour, and 2) the Welfarist approach to determine the optimum law enforcement policy. Based on the economic approach, an individual commits a crime if the anticipated utility to him surpasses the utility he could obtain by using his resources at other acts. Hence, some individuals become criminals basically because of the benefits and costs. Although the analysis starts on individual basis, Becker's theory concerns aggregate behaviour because his study is a policy oriented. On average, the anticipated net return from criminal acts has a negative relationship with the probability of detection and the severity of punishment, assuming all other potentially pertinent variables such as moral values, opportunities and legal incomes. Therefore, Becker estimates that the aggregate number of crimes is negatively affected by the probability of detection and the severity of punishment.

The second facets of the theory are concerned with how much resources and punishment should be input to enforce different kinds of legislation. In this aspect, Becker employs the welfare economics approach to determine a measure that gives due importance to the various costs and benefits of all the citizens involved such as the offenders, victims, taxpayers and the entire population in general. The analysis further formulated a measure of the social loss of the offenses on one hand and the expenditures in law enforcement on the other hand and then in finding a policy that minimizes that social loss. The motivation for why the offenses are outlawed lies in the fact that they provide some net benefits to the offenders, and these same offenses most likely impaired other citizens.

In conclusion, Becker recommended that determining the optimal detection probability and the severity of penalty is much easy using fines. Hence, it is optimal to set fines to the highest practically possible level and, at the same time, lowering the probability of conviction to save on conviction costs. Becker noted that this is because fines do not consume public resources. Also, social welfare is increased if fines are used whenever feasible. However, offenders may not always have sufficient resources to pay fines. So, prison terms can be used to supplement fines to deter offenses. Since imprisonment costs more than fines, the social loss from crime and punishment is reduced by a policy of leniency toward persons who are imprisoned because they cannot pay fines. The optimum value of the probability and severity of punishment are determined based on the cruelty of the offenses. For instance, rape and murder should be solved more swiftly and punished more severely than petty stealing. Furthermore, offenders of a young age may be less deterred through increases in the probability and severity; hence, they should be deterred with relatively short prison terms and subject to rehabilitation.

The theory is concerned with the influence of sanctions and the threats of sanction on criminal behaviour. There are three important qualities, namely certainty, swiftness and severity of detection and punishment emphasized in the literature. Certainty involves the probability of detection and consequent punishment, swiftness relates to the speed in executing the sanction after the crime and subsequent detection, and severity involves the magnitude of the penalty (Piquero et al., 2011). Therefore, sanctions are supposed to deter future criminal acts to the extent that punishment is certain, swift, and severe enough to dominate the return gained from committing the crime.

Based on this theory, tax non-compliance is considered a criminal act because it is against the law and a punishable crime. The theory suggests that, in deciding to commit a crime, individuals act in a rational way by comparing the potential benefits of the criminal activity against the potential costs of the crime (inform of detection and penalty). In this regard, taxpayers are considered as rational when they seek to maximize utility and evade tax when they expect a gain that exceeds the cost (Devos, 2014). Hence, deterrence theory explains why taxpayers either may or may not comply with the tax laws. Therefore, by increasing the level of detection probability and punishment, criminal activities are expected to decrease. In other words, increasing the level of detection probability and penalty will reduce tax non-compliance. Most economic approaches of tax non-compliance investigations are based on deterrence theory (Sapiei et al., 2014).

Deterrence is divided into general and specific deterrence (Alabede, 2012). The former involves the deterrent effect of potential sanctions while the latter involves the deterrent impact of the actual punishment imposed on the tax evader. Many studies on tax non-compliance behaviour have used general deterrence (Jackson & Milliron, 1986). The seminal work of Allingham and Sandmo (1972) was the first to apply the deterrence theory in taxation (Abdul Jabbar, 2009). They developed the deterrence model of taxpayers' non-compliance behaviour. The model analyses a taxpayer's decision to evade taxes through intentional underreporting. Thus, the taxpayer considers the expected costs of detection and punishment with the benefits of evading tax. Although the model has been criticized for being simple and considering only economic factors, it provides a foundation for tax compliance research. The model has been used by other tax non-compliance studies (Abdul Jabbar, 2009; Alabede, 2012; Fischer et al., 1992).

One important conclusion from the prior research of deterrence is that threats and punishments have varying effects across the sanctioned population. Individuals seem to respond to sanction and punishments in different ways such that an average effect of sanctions on crime at the individual level may lead to more complication than to the clarification of our knowledge regarding the deterrence process and the effect of sanctions to deter crime and ensure compliance (Piquero et al., 2011).

Despite the established foundation of the deterrence theory in the tax non-compliance research, some limitations were associated with the theory. From the early stage of the development of the theory, Becker (1968) admitted that in some situations enforcement can be uneconomical and lead to social loss. Graetz, Reinganum and Wilde (1986) emphasized that the economic deterrence model was an inadequate theory of tax collection. Thus, Cuccia (1994) noted that deterrence models of tax non-compliance overlook the differences in the perceived and actual detection probability and penalty parameters in the taxpayers' evasion decisions and assumed that the taxpayers have perfect knowledge. Also, the deterrence model ignores an important fact of why people pay taxes and considers only why they evade them (Alm, 1999). This is termed as the puzzle of tax compliance. Moreover, the model has been greatly criticized for its failure to incorporate behavioural determinants of tax non-compliance such as judgments, perceptions and attitudes, moral judgments and social contexts (Andreoni et al., 1998; Weigel, Hessing, & Elffers, 1987).

Based on these shortcomings of the deterrence approach, theories from psychology and sociology were incorporated to support tax non-compliance investigations. As James and

Edwards (2008) noted, adopting a wider context in making policy relevant proposals is important; thus, this study investigates corporate tax non-compliance based on the deterrence and social exchange theories. Specifically, deterrence theory is used in this study as the underpinning theory to explain the relationships between tax non-compliance as the dependent variable and audit, penalty, and tax compliance costs as independent variables. Also, the theory underpinned the mediating effect of tax compliance costs in the model of this study. Therefore, audit, penalty and tax compliance costs are considered as coercive measures that curtails tax non-compliance.

3.2.2 Social Exchange Theory

Utility maximization is not the only factor that guides individuals' choices. Attitudes and beliefs play a vital role in social interactions. Hence, social psychology models inductively examine the attitudes and beliefs in human interactions (Devos, 2014). Blau (1964) developed the social exchange theory based on the work of George Casper Homans. The theory posits that social change and stability have to do with a process of exchange among parties. This exchange involves subjective costs and benefits. Subjective costs and benefits analysis guide all human relationships in social set-ups and the consideration of the reward and cost alternatives associated with those relationships. Thus, an individual tends to undertake an action if benefits are greater than costs for conducting such an action.

Blau's work, a book, titled *Exchange and Power in Social Life is a* major reference for social exchange theory. The book consists of twelve chapters, generally focusing on identifying the basic elements of social association which are imbedded in social exchange as the basis. Blau started with the analysis of interpersonal relations to ascend to the complex structure of associations among people. At the interpersonal level, if a person does a favour to another, it is expected that the receiver would express gratitude and reciprocate a service when the occasion arises. At higher level of social relations, the joint products lead to quality of a society. The current study is concerned more with chapters four and six of the book, which focused on social exchange and expectations respectively.

In chapter four, Blau presents the process of social exchange. According to the chapter, exchange in social relationships cuts across various social conducts. The basic principles that guide the exchange start when some individual offers something of value to another party. He offers with the expectation of getting something in return. Where both parties value what they offer, they are prone to supply more and avoid becoming indebted. Hence, the need to reciprocate for benefit received is the starting mechanism of social interaction. It is a necessary condition of exchange that an individual is interested in continuing to receive needed services for the services having been received in the past. Unlike economic exchange, social exchange involves favours that creates an unspecified future obligation. This brings in the element of trust as there is no assurance of return. The acceptance of an offer and the reciprocation of a benefit for what has been received tend to become a root point for a friendly relationship. A stable social relationship requires the parties in the relation to start and maintain an investment and a commitment to secure it.

In chapter six, Blau focused on expectation essential element in the social exchange. Expectation governs the satisfaction and then the reactions to social exchange. Initially, the association depends on the expectations that an individual has in the relationship and then on the actual benefits. Disappointment in the social association depends on the level of expectation. A high expectation comes with big disappointment and vice versa. Hence, outstanding rewards increases attraction and dependence with long run-expectation.

With regards to tax non-compliance, taxpayers may not comply if they do not receive more benefits from paying their taxes, for example, in the form of quality governance. Second, the stimuli proposition suggests that the more an individual is rewarded, the more that person will undertake an action. This includes, for instance, consistent improvement in simplifying the tax system, fair treatment, satisfaction with supply of public goods and control of corruption will encourage compliance and vice versa. Finally, the value proposition suggests that the more valuable the rewards of an action, the more an individual will engage in such an act. For example, if the more taxpayers perceive the benefits they receive from the government are valuable, the more they will be willing to comply and vice versa.

In the case of taxation, taxpayers can be readier to comply if they perceive the tax system as being fair or that good governance provides quality public goods and services. As Cropanzano and Mitchell (2005) argued, the exchanges are not restricted to material goods but also include symbolic value such as support and respect. Thus, a customer-oriented tax authority is important in shaping taxpayer compliance behaviour. According to Blau (1964), social exchange can lead to either extrinsic or intrinsic rewards. He further argues that social exchange differs from economic exchange as social exchange brings social integration by creating trust among people, enforcing conformity to group norms and encouraging differentiation.

Several studies have used this theory to explain tax non-compliance behaviour (e.g. Alabede, 2012; Spicer, 1974). More specifically, Spicer (1974) focused on the view of exchange equity. Spicer emphasized that the provision of public goods and services is connected to the perceived inequity for taxes paid. Alabede (2012) showed that the theory indicates the exchange of the value forms the basis of the relationship between the government and taxpayers. The taxpayer pays taxes in expectation of returns in the form of public goods and services, participatory democracy, accountability, and control of corruption (quality governance).

The theory has been used in both individual and firm tax non-compliance studies. Although, the theory is fundamentally concerned with individual behaviour, individuals and firms are subject to cultural norms that may affect their intrinsic motivation to pay taxes (Alm & McClellan, 2012). Moreover, firms' compliance decisions are made by individuals who manage the affairs of firms. Thus, factors that influence individuals' decisions are likely to filter down to those of the firms (Alm et al., 2012). In the context of this study, the social exchange theory involves the rest of the variables of the study, namely, bribery, complexity, fairness perception, public goods supply, perception of tax tribunal and tax rate perception. Generally, when the tax system is made to be uncorrupted, simple, fair, with efficient spending of tax money and just procedures, the taxpayer reciprocates with compliance.

Despite the widely acceptance of the theory, it has been criticised in some ways. For instance, Zafirovski (2005) criticized social exchange theory in two ways. The first critique relates to dealing with human behaviour as an exchange. Second is the reduction of social interaction to economic transaction. Moreover, a possible fundamental issue that divides exchange theorists is the compatibility of economic with the sociological analyses of the norms leading exchange, as most of which norms have a base in customs and traditions, which seem, superficially at least, to be inexplicable in economic terms.

3.3 Tax Non-compliance Concepts and Measurement

This section focuses on discussion of the concept of tax non-compliance and its measurement. The section identifies the definitions of tax non-compliance regarding its forms in the literature. The section further discusses the different approaches used by previous studies to measure tax non-compliance.

3.3.1 Definition and Forms of Tax Non-compliance

A discussion of the concept of tax non-compliance should begin by clarifying the terminologies use in the literature interchangeably with tax non-compliance. These terminologies include tax evasion, tax avoidance and tax compliance. Tax evasion is defined as any illegal or intentional actions taken by the taxpayer to decrease the legally due tax liability (Alm, 2012), while, tax avoidance is referred to engaging in acts of minimizing the tax due within the law (Slemrod & Yitzhaki, 2002; Weigel et al., 1987). Tax evasion can take the form of overstating a deduction, underreporting an income, misrepresenting the nature of a transaction or a failure to a file tax return. Whereas, tax avoidance takes the form of deducting all allowable deductions to reduce the tax liability, as enshrined in the tax law, for example in CITA 2007, deducting donations to charity, provision of doubtful debts of a certain nature and rent of employees not exceeding basic salary (as provided by the law). It can also include changing the name of a consumer loan to a home equity loan and the splitting of income. Hence, the legality of the act to reduce the tax liability is the difference between the two terminologies.

In the modern age of information technology (IT), tax non-compliance may relate to the IT process such as VAT non-compliance, which can only be simply detected if receipts are issued and the transaction is recorded in the seller's information system. Many countries, including developing ones, have adopted an electronic tax system to tackle non-compliance. An Ethiopian study found that an electronic tax system significantly enhanced compliance (Ali, Shifa, Shimeles & Woldeyes, 2015). However, Immordino and Russo (in press) focused on a sort of tax evasion in which a seller offers a price discount to the buyer in exchange for a cash payment without issuing a receipt which allows the seller to hide such transactions from the tax authority. They referred to this sort of tax evasion as interactive tax evasion as it involves conniving between the seller and the buyer. Bank secrecy is another factor that facilitates tax non-compliance, especially in the global scale; but with adoption of international tax standards on exchanging information by many countries, the problem of bank secrecy may be tackled among many countries (Kemme, Parikh & Steigner, 2017).

The literature shows that there is no consistent definition of tax compliance. Nevertheless, several studies such as those of Engström and Hagen (2017), Fischer, Wartick and Mark (1992) and Saad, Udin and Derashid (2014) have adopted the definition of Roth, Scholz, and Witte (1989). Roth et al. (1989) defined tax compliance as filing all due tax returns with accurate reported tax liability at the appropriate time and in accordance with the tax laws, regulations, and court pronouncements applicable at the time of filing the return. Similarly, Alm (1991) defined tax compliance as reporting all incomes and paying all due taxes based on the provisions of laws.

On the other hand, tax non-compliance is referred to as either the intentional or unintentional failure to meet the tax obligation as provided by tax laws (Weigel et al., 1987). It is understood that tax non-compliance is a wider term by including both intentional and unintentional failure whereas, tax evasion is associated with an intentional failure to comply. Therefore, this study focuses on tax non-compliance, and the following section reviews the conceptualization and measurement of the non-compliance from relevant sources in the literature.

3.3.2 Underreporting Income

A review of the literature shows that the concept of tax non-compliance has been described by the previous studies in three main different forms. First, underreporting of income[5] (Allingham & Sandmo, 1972; Hanlon et al., 2005; Joulfaian, 2000, 2009; Joulfaian & Rider, 1998; Sapiei & Kasipillai, 2013a; Srinivasan, 1973; Yusof et al., 2014). The classical studies of tax non-compliance have focused on the underreporting of income as non-compliance (Allingham & Sandmo, 1972; Yitzhaki, 1974). Given the theoretical analysis of the classical studies that considered a taxpayer as rational being who struggled to evade tax if he or she found doing so profitable, the conclusion can be made that these studies considered non-compliance to be an intentional underreporting of income. Similarly, most subsequent studies investigated this form of non-compliance as intentional underreporting (Joulfaian & Rider, 1998; Kamdar, 1997; Rice, 1992).

3.3.3 Overstating Expenses

The second form of tax non-compliance is overstating expenses (Abdul Jabbar, 2009; Ariel, 2012; Sapiei et al., 2014; Sapiei & Kasipillai, 2013a). Most of the studies investigated this form of non-compliance have combined it with understating incomes. Taking overstating expenses as a separate form of non-compliance, Sapiei and Kasipillai (2013a) found it to be a significant dependent variable at the 1% level in their model. In the case of Abdul Jabbar (2009), it was found to be significant at 5%. Moreover, Weigel et al. (1987), in their theoretical model, recognized overstating expenses as a form of tax non-compliance.

[5] In this concern, this study considers underreporting of income to include overstating expenses. This is because the aim of overstating expenses is to result in reducing the taxable income. However, the two forms of non-compliance are separated in some studies (such as Sapiei & Kasipillai, 2013a).

3.3.4 Non-filing

The last form of tax non-compliance is non-filing of tax return that is also known as "ghosting" (Eberhartinger, Lang, & Sausgruber, 2015; Erard & Ho, 2001). This form of non-compliance has received little recognition among researchers (Eberhartinger et al., 2015). The lack of attention may not be unconnected with the fact that it is difficult to investigate because of its sensitive nature. However, the law (in many countries) recognizes non-filing as a criminal act of non-compliance. For instance, in the United States income tax system, non-filing or late filing can lead to imposing a fine, summoning the taxpayer to court or even issuing a warrant for arrest. Similarly, in the Malaysia income tax law, intentional failure to file tax return form and late tax payment can attract a monetary fine or even imprisonment for repeated crimes under s. 112 (1) and s. 112 (3) of Income Tax Act 1967 as amended. In the case of Nigeria, under the SAS as taxpayers are expected to assess themselves, file tax returns and make the tax payment simultaneously as stipulated in the law, and any breach in the form of non-filing or late payment can be liable to penalties and interest as provided under s. 61 of the FIRS (Establishment) Act 2007.

However, some studies have given attention to estimating the non-filing form of non-compliance at a macro-level, i.e., country level in an indirect approach. For instance, in Jamaica, Alm et al. (1991) estimated the amount of tax non-compliance from the non-filing of income tax returns. The study compiled a master list of about 30,000 names elicited from third-party sources such as trade association lists and telephone directories of which the study selected a sample of 12,336 names. The study compared the sample names with the records of the Jamaican tax authority to determine if these names had filed a return. The study found that only 11% filed a return.

Therefore, tax non-compliance appears to be a multi-faceted term. Taking several forms, which are mostly intentional in nature. However, overstatement of expenses and understatement of income appear to be the most common forms of tax non-compliance. These forms of tax non-compliance have been investigated by corporate tax non-compliance studies (Abdul Jabbar, 2009; Sapiei et al., 2014; Sapiei & Kasipillai, 2013a). In line with Abdul Jabbar (2009) and Sapiei and Kasipillai (2013a) this study used understatement of income and overstatement of expense as tax non-compliance.

3.4 Measuring Tax Non-Compliance

The need for appropriate data to measure tax non-compliance is of paramount importance to academic research (as well as policy formulation) to understand this complex phenomenon and its consequences (Schneider, White, & Paul, 1998; Weigel et al., 1987). The literature has shown that tax non-compliance behaviour has been measured by previous studies via three major methods, namely, secondary data (tax audit data and data from household income survey), experiments and self-reports (Alm, 2012; Borrego, Lopes, & Ferreira, 2013).

The classical studies of tax non-compliance (Allingham & Sandmo, 1972; Srinivasan, 1973) and some latter studies (Fischer, 1993; Kirchler et al., 2008; Weigel et al., 1987) explained tax non-compliance based on theoretical models. Numerous studies tested the models with real tax audit data, experiments and self-reported data (Abdul Jabbar, 2009; Ariel, 2012; Feinstein, 1991; Joulfaian, 2000; Kamdar, 1997; Rice, 1992; Saad, 2009; Sapiei & Kasipillai, 2013a; Spicer & Thomas, 1982).

3.4.1 Secondary Data

Secondary data is one of the techniques used in measuring tax non-compliance behaviour. This technique can be categorized into two. The first category is the audit data based on the audited tax returns of sampled taxpayers. For instance, the United States Taxpayer Compliance Measurement Program (TCMP) is one of the prominent sources of secondary data of tax information. This source provided a documented rigorous line-by-line audit data of samples of about 50,000 taxpayers' tax returns from 1965 to 1988. The TCMP data gave the estimates of the true income of the audited taxpayers, which can be compared with the reported income to estimate the tax non-compliance. Later, the National Research Program (NRP) replaced the TCMP. Similarly, the NRP collects data of filing, reporting and payment of taxes that can be used to measure tax non-compliance. In 2001, for instance, the NRP documented data of 46,000 examined sample of tax returns (Alm, 2012).

Several studies have measured tax non-compliance using the TCMP and NRP (e.g., Clotfelter, 1983; Feinstein, 1991; Joulfaian & Rider, 1998). Moreover, similar data from other countries were used to measure tax non-compliance in Estonia (Paulus, 2015), in Greece (Matsaganis & Flevotomou, 2010), and in Italy (Fiorio & D'Amuri, 2006). Most of the studies that used tax authority data to measure non-compliance by estimating the difference between reported income and actual income (as established on the basis of an audit) (Paulus, 2015).

The second category of the secondary data is data from previous surveys of household income and expenditure from which the incidence and the degree of tax evasion can be inferred either directly or indirectly. For example, the Household Budget Survey of Greece contains comprehensive information on the personal expenditure and incomes and demographic characteristics used by Fiorio and D'Amuri (2006) and Matsaganis and

Flevotomou (2010) to measure tax non-compliance in Greece. Similarly, Hurst, Li, and Pugsley (2014) utilized the Consumer Expenditure Survey (CE) to estimate tax non-compliance in their study of the United States. Engström and Hagen (2017) used consumption data of the Swedish Household Budget Survey as recorded by the Statistics Sweden.

Despite the widespread use of this approach in measuring tax non-compliance, several limitations are linked with this approach in the literature (Alm, 2012; Paulus, 2015). These limitations are summarized as follow: The audit data is inconclusive as it is unlikely to detect all income 1) non-filers who are integral part of the taxpayers are not included; 2) the approach cannot identify unintentional non-compliance (from errors); 3) the final audit modifications are not involved; 4) inconsistent judgments exist from one auditor to another; and 5) conducting audits are highly expensive (Alm, 2012; Ariel, 2012; Clotfelter, 1983; Erard & Ho, 2001; Feinstein, 1991; Hallsworth, 2014).

3.4.2 Experiments

Experiment is another approach used in the literature to measure tax non-compliance. Under this approach, tax non-compliance is determined in laboratory methods, which allow various factors proposed by theory to be subjected to experimental settings (Mascagni, 2016). An experiment generates specific data on non-compliance decisions, upon which further calculations and conclusion can be drawn. The early studies of tax experiment (Friedland, Maital, & Rutenberg, 1978; Spicer & Thomas, 1982) maintained that non-compliance could be determined in a lab setting where the environment and independent variables can be controlled better than in survey-based research and real-life. They further argued that the artificial nature of the lab permitted them to avoid the problem of getting bias response about deviant behaviour by employing the hypothetical settings.

A lab experiment study of tax non-compliance usually involves a group of students who are asked to decide on how much income to report based on given influencing factors such as the detection probability, tax rate and sanctions (Mascagni, 2016). In this case, the artificial nature of the lab setting allows the investigator to change these factors and make observations on how the participants change their decisions in response. Hence, the investigator determines the non-compliance. Given a critique that lab experiments limit tax non-compliance behaviour to students who are not the actual taxpayers, the tax experiment studies advanced to the field tax experiments. A typical field experiment involves a comparison of randomly selected two groups: treatment and control groups (Alm, 2012). However, the basic design of most compliance experiments is similar (Alm, 2012). In their study, Alm, Bloomquist, and McKee (2015) found no significant differences between the students and non-student experiments.

Several tax experiment studies were conducted in different contexts to determine tax non-compliance. For instance, in Israel (Ariel, 2012; Nehemiah Friedland et al., 1978), the United States (Alm, Jackson, & Mckee, 1992; Blumenthal, Christian, Slemrod, & Smith, 2001; Spicer & Thomas, 1982), Australia (Wenzel & Taylor, 2004), in the United Kingdom (Hallsworth, List, Metcalfe, & Vlaev, 2017; Hasseldine, Hite, James, & Toumi, 2007) and Switzerland (Torgler, 2004). Hallsworth (2014) provided a comprehensive summary of natural field experiment studies.

As in the case of the previous approach, several shortcomings also associated with the experimental approach. A frequent criticism in the literature of this approach is that the findings do not apply to real-world the tax non-compliance behaviour as the tasks in experiments are different from the real-world tax non-compliance (Alm, 2012; Hallsworth, 2014). Other limitations are summarized as follows: the environment of the experiment may also lack reliability; the approach does not allow for direct observation of non-compliance; experiments usually rely on small samples (usually a small number of students in repeated rounds); the individuals involved obviously know that they are part of a study and they may behave differently than they would under the pressures of real life; and the subjects choose voluntarily to participate, thereby introducing potential bias (Alm, 2012; Mascagni, 2016). Another common criticism is that it is not possible to control for many relevant factors in the laboratory. If such factors cannot be controlled in the laboratory where the experimenter establishes the institutions, the rules, and the reward structure, then researchers cannot hope to control for these factors in the naturally occurring world.

Nevertheless, the field experimental studies of tax non-compliance overcome some of the above limitations of lab experiments. In this regard, field experiments use population-wide data that have national representativeness. Moreover, field experiments can directly assess options for actual policy concerns, which can be proven effective and easily scaled for a national concern. However, there is now much evidence that the experimental responses of students are seldom different from the responses of other subject pools (Alm, 2012).

3.4.3 Self-Report

Finally, self-report is another approach used in the literature to measure tax non-compliance. Self-report is the use of a research instrument via a quantitative (e.g., questionnaire survey) method that elicits information directly from the taxpayer to measure their tax non-compliance behaviour. This approach collects first-hand information directly from the actual taxpayers by asking them questions that can reveal their perceptions about tax non-compliance behaviour. Most studies that have used the self-report approach have focused on perceptions of tax compliance by asking indirect questions such as "Do you think most people believe they should honestly declare income on their tax return?" (Alm, 2012). Studies in different contexts such as Malaysia (Abdul Jabbar, 2009; Sapiei & Kasipillai, 2013b), Nigeria (Alabede, Ariffin, & Idris, 2011b; Ayuba Saad, & Ariffin, 2015), and the United States (Vogel, 1974) have used this approach to measure tax non-compliance behaviour.

However, the self-report approach has been questioned for the possibility of receiving biased answers from the respondents regarding deviant behaviour (Gerxhani, 2007; Korndörfer, Krumpal, & Schmukle, 2014). Several studies overcame this challenge by framing the questions to be indirect and less sensitive. Moreover, Korndörfer et al., (2014) conducted a survey using direct questions and the randomized response technique (RRT) to compare the results of the two types of questions. The RRT which advocates anonymity of the respondents yielded a more valid estimate.

The self-report approach has been used in the tax non-compliance literature (Abdul Jabbar, 2009; Fischer et al., 1992; Sapiei & Kasipillai, 2013a). This approach is associated with the fact that it is inexpensive, relatively simple, with fewer ethical concerns, and, most importantly, the best available practical option for most researchers (Abdul Jabbar, 2009; Alm, 2012; Weigel et al., 1987) giving the confidentiality associated with the tax authority data. In addition, a self-report is the best available approach especially when the goal of a research is to gain specific and insider information as it provides detailed information on the dynamics behind non-compliance (Gerxhani, 2007). Due to high confidentiality requirements associated with corporate tax records and the advantages of self-report mentioned above, the current research utilized the self-report approach to measure tax non-compliance.

3.5 Determinants of Tax Non-compliance

This section discusses the determinants of tax non-compliance based on the variables in the model of this study. The discussion focused on their connection with tax non-compliance. The determinants include variables from economic (audit, complexity, penalty, and tax compliance costs) and non-economic (bribery, fairness perception, perception of tax tribunal, public goods supply and tax rate perception) perspectives. The literature review in the following sub-sections reported the dependent variable as either tax compliance or non-compliance as used in the previous studies. As tax compliance denotes the opposite of non-compliance, a positive relationship between tax compliance and its determinants means that the relationship is negative with non-compliance and vice versa.

3.5.1 Audit and Tax Non-compliance

Audit stands to be an important enforcement mechanism of tax structure in tax policy (Fischer, 1993; Kirchler, Kogler, & Muehlbacher, 2014; Torgler, 2002). The importance of the audit variable is understood as it has received much attention in both economic and social-psychological models of tax non-compliance (Fischer, 1993). Song and Yarbrough (1978) stated that tax authorities conduct audits to increase tax collection and encourage tax compliance. This assumes that the taxpayers might be encouraged to pay their taxes if there is a possibility that their tax return may be subjected to audit. A survey on tax ethics and taxpayers attitudes in the United States, revealed that 82% of the respondents disagreed with the question that the "main thing is not getting caught" (Song & Yarbrough, 1978). This shows the importance of an audit from the perspective of the taxpayers, and the ability to conduct an audit is one of the few variables that the tax authority has more control over.

A tax audit is an examination of taxpayer's tax return, accounts, and financial information to ensure that information is correctly reported in accordance with the tax laws and to verify that the amount of tax reported is correct. Audit has been proxied in the literature as audit probability, perceived detection probability, audit rates and previous audit experience and audit frequency (Ariel, 2012; Dubin, Graetz, & Wilde, 1990; Fischer, 1993; Nehemiah Friedland et al., 1978; Kamdar, 1997; Slemrod, Blumenthal, & Christian, 2001; Spicer & Thomas, 1982; Spicer & Hero, 1985). Literature has shown that studies have viewed audit from these different perspectives depending on their scope and the method of the study. For instance, studies using secondary data can easily estimate the audit rate while survey studies may prefer to focus on the perception of detection probability. In any case, an audit involves the exercise use by the tax authorities to detect tax non-compliance and the taxpayers' evaluation of the possibility of being detected. Hence, in line with Christensen and Hite (1997) and Abdul Jabbar (2009), this current study considered audit as perception of the taxpayer about probability of the audit to take place and its probability to detect any discrepancy.

Several studies of individual and corporate tax non-compliance in the literature investigated the connection between audit and tax non-compliance using theoretical analysis, survey, experiment and secondary data (econometric methods) (Allingham & Sandmo, 1972; Alm et al., 1992; Blumenthal et al., 2001; Debacker, Heim, Tran, & Yuskavage, 2015; Dubin et al., 1990; Grasmick & Scott, 1982; Kirchler et al., 2008; Song & Yarbrough, 1978; Spicer & Thomas, 1982; Spicer & Hero, 1985; Vogel, 1974; Weigel et al., 1987; Worsham, 1996). The theoretical analyses of the influence of audit on tax non-compliance has suggested that audit has a negative and significant influence on tax non-compliance (Allingham & Sandmo, 1972; Kirchler et al., 2008; Weigel et al., 1987). Several studies have tested this relationship empirically using different methods and have reported mixed findings although most studies have supported the theories.

Survey studies provided support for the significant and negative effect of audit with one study contradicting the negative effect. Specifically, Vogel (1974) conducted a survey of a sample of 1,796 Swedish taxpayers (predominantly self-employed) to investigate their attitudes and perceptions towards tax evasion. The survey found that a significant number of the respondents admitted tax evasion due to a belief in a low level of apprehension and punishment. Another survey of the Oregon (in United States) taxpayers supported the finding of Vogel (Mason & Calvin, 1978). Similarly, in Australia, the findings of a survey of tax evasion confirmed the significant and negative influence of the perception of detection on tax evasion (Wenzel, 2004).

More recently, two survey studies conducted in Malaysia provided evidence about the influence of audit on corporate taxpayers (Abdul Jabbar, 2009; Sapiei & Kasipillai, 2013a). Abdul Jabbar (2009) focused on the determinants of corporate SMEs tax non-compliance behaviour. He found a significant and negative impact of audit on tax non-compliance. These findings are in line with the Allingham and Sandmo (1972) theoretical analysis that, if the taxpayers perceived detection as being low they can rationally choose to engage in tax evasion. Conversely, Sapiei and Kasipillai (2013a), based on the survey of tax consultants' perceptions in Malaysia, found an insignificant impact. This contrary finding may be explained by different sample selections in the two studies. Tax consultants are in a better position to understand the probability of an audit. Hence, if they perceive it to be low they can under estimate its impact.

Using the experimental method, mixed findings were reported on the influence of audit on non-compliance. Spicer and Thomas (1982) examined the relationship between audit probabilities and tax evasion using a laboratory experiment in the United States. The study used 54 students of University of Colorado at Colorado Springs. Based on a three-round tax game with eight taxable income periods, the participants were required to decide the amount to report as income and pay the tax due at the end of each income period. All the participants were given clear information on the tax due, audit and penalty. One group of the participants was given precise information that the audit probability would occur in round 1, 2 and 3 would be 5%, 25% and 15% respectively.

A second group of the participants were given imprecise information that the audit probabilities would be low, medium and high for the three rounds. The rest (third group) of the participants received no further information about the audit. They were told that a random audit would be conducted; where taxes paid were less than the due amount, a penalty of equivalent of seven times of the evaded tax would be imposed. The study found that the higher the audit probabilities the lower the tax evasion. This finding is consistent with economic theoretical models of tax compliance (Allingham & Sandmo, 1972).

In another laboratory experiment study in the United States, Spicer and Hero (1985) focused on previous audit experience. The study found that previous audit experience had a negative significant effect on tax evasion. Hence, the findings of the study suggested that the previous audit experience reduces non-compliance even if the possibility of an audit is entirely random. Thus, random audits may be a good deterrence mechanism for curbing non-compliance among taxpayers that were previously audited.

Using a field experiment, Slemrod, Blumenthal, and Christian (2001) provided evidence that supported the findings of Spicer and Thomas (1982) on the significant influence of precise audit information. The study focused on the taxpayers paying tax to the Minnesota state tax authority, in the United States. In the experiment, the treatment group of randomly selected taxpayers were sent letters by the tax authority that the returns they were about to file would be "closely examined." On the other hand, members of the control group did not receive any letter. The study found that tax payments from low- and middle-income earners increased compared to the previous year (after receiving the letter).

Conversely, the tax payments from high income earners decreased (after receiving the letter). The study assumed that the letter received by the high-income earners might have induced them to engage more assistance of tax professionals. This finding supported the significant and negative influence of audit probability on tax non-compliance on one hand. On the other hand, the threat of an audit significantly reduced the reported income of high-income earners. In Venezuela, a field experiment by Ortega and Sanguitti (2013) supported the finding of Slemrod et al. (2001). The study focused on perceived detection probability on the tax compliance behaviour of 6,100 firms and found that perceived detection probability had a significant effect on compliance.

Conversely, Friedland et al. (1978) reported an insignificant effect of an audit on tax evasion. The study used a lab experiment focusing on the frequency of audit defined as the fraction of returns audited out of the total returns in Israel. Similarly, in a more recent field experiment of corporate taxpayers in Israel, Ariel (2012) investigated the perceived probability of detection together with apprehension. The deterrence letter sent to the participants informed them that "the tax authority now uses new methods of auditing taxpayers" (p. 15). This was designed to increase the perceived probability of the participants. The study reported an insignificant effect of audit on tax compliance. Also, Forest and Sheffrin (2002) found an insignificant effect of probability of an audit on tax evasion. A possible explanation of the contrary finding is that increased enforcement can lead to a perverse indirect increase of tax evasion in the future where the enforcement mechanism discloses to the affected taxpayer that it is quite easy to get away with non-compliance.

From another point of view, Gërxhani and Schram (2006) conducted a cross-country experimental study on two countries (Albania and the Netherlands) and also provided opposing evidence (between the countries) on the influence of audit. The regression results revealed that increased audit probability had no significant effect on tax compliance among Albanians, whereas, it had a significant effect on Dutch subjects. The opposing results were explained based on the institutional differences between the two countries one of which was developed and the other of which is in transition. In Albania, as in many other transition countries, the tax collecting institutions and the enforcement mechanisms are ineffective (Torgler, 2003).

Using secondary data, all the studies reviewed supported the negative and significant effect of audit. Hence, Klepper, and Nagin (1989) investigated the influence of detection risk (based on line items) on tax non-compliance in the United States. Based on the analysis of the TCMP data, the study found that non-compliance for some line items were more likely to be detected by an audit than others. This finding suggests that perceptions of detection probabilities is positively related with income reporting (and true detection probabilities). The study expected the perceived likelihood that a line item would be subjected to audit to have positive effect on non-compliance of the item.

Dubin et al. (1990) investigated the effect of the audit rate on tax compliance using time series data at the state-level. The study found that audit has significant and positive effect on reported tax per return. However, the study did not establish a direct measure of tax non-compliance. Rather, reported tax per return (together with returns filed per capita) was used as inverse measure of non-compliance. Hence, the finding suggested a strong negative effect of audit on non-compliance.

More recently, Debacker et al. (2015) investigated the “after-effects of audits” on corporate tax evasion in the United States. The study used Business Return Transactions File (BRTF) of the IRS database (c-corporation audits data from 1996 to 2012). The findings of the study revealed that after audits corporations pay less in taxes. This finding may be due to an informed response to audit risk and a strategic updating process. Also, this finding suggested that corporations become increasingly non-compliant for some few years after the audits and later continue to be compliant before they are re-audited. Moreover, the definition of non-compliance in the study includes tax avoidance. This finding is also similar to that of Ariel (2012), a corporate tax experiment, which may be explained by increased engagement of tax professionals to reduce tax liability. Related to this finding, Ayers, Seidman, and Towery (2015) found a significant effect of audit certainty on tax evasion. However, Ayers et al. focused on corporations with a 100% audit risk. Hence, Ayers et al. extended these previous studies of Debacker et al. and Ariel, whose findings suggested that tax evasion reduces with an increase in audit certainty.

Several other studies investigated the connection between audit and tax non-compliance using secondary data (Alm et al., 2004; Kamdar, 1997; Nur-tegin, 2008). The studies provided evidence on the negative and significant influence of audit on tax non-compliance. The results of these studies suggested that an audit is an effective deterrence factor that can help in mitigating corporate tax non-compliance.

In summary, previous studies have provided strong evidence on the impact of audit on tax non-compliance. Although the findings are mixed, most studies evidenced a significant and negative influence of audit on tax non-compliance. This is in line with previous reviews of determinants of tax non-compliance (Jackson & Milliron, 1986; Murphy, 2010). Audit stands to be an important deterrence mechanism that can potentially reduce tax non-compliance. However, audits are costly in practice. Hence, increasing the perceptions of a subjective audit may be an important policy consideration especially for developing country like Nigeria.

3.5.2 Bribery and Tax Non-compliance

Corruption stands to be one of the major problems that hampers development in many developing countries (Marjit, Seidel, & Thum, 2017; Treisman, 2000). Corruption comes in different forms. Purohit (1992) broadly categorized corruption into five: grand corruption, petty corruption, political corruption, administrative corruption, patronage and being a "team player." This study focused on corruption in tax administration. This involves giving bribes to tax authority staff to reduce tax liability. Corruption of the tax authority staff can have a negative effect on tax revenue generation as shown by empirical evidence (Bilotkach, 2006; Joulfaian, 2009; Nur-tegin, 2008). Thus, corrupt tax administrations are likely to generate lower tax revenues than their non-corrupt counterparts as taxpayers (businesses and individuals) give bribes to tax officials to reduce tax liability, instead of paying their taxes (Aiko & Logan, 2014).

Opportunities for corruption in tax administration may start by offers from taxpayers (companies or individuals) for corrupt acts and the immoral tax officials provide the corrupt acts. However, the literature has shown that various factors facilitate persistence of corrupt practices in tax administration (Besley & Mclaren, 1993; Purohit, 2007). These factors include low pay for tax officials, a lack of professional ethics, legal loopholes, conflicts of interest, immorality of tax officials and bureaucratic red tape. Thus, tax officials are more inclined to engage in corrupt acts where the tax officers are not satisfied with their salary scales, equity of career development and financial incentive schemes. Hence, these situations increase the incentive to accept bribes that go to the tax officials' pockets instead of collecting taxes that go the government. In this regard, the suggestion has been made that wages of tax officials should be increased to discourage corruption among them (Besley & Mclaren, 1993).

Other factors that facilitate corruption of tax administration included high complexity in the tax systems and procedures, a high degree of discretion for tax officials, a lack of proper supervision and monitoring, a lack of commitment of political leaders, and overall public sector environment (Aiko & Logan, 2014; Imam & Jacobs, 2014). These factors are prevalent in the tax and customs administrations in many developing countries, including most sub-Saharan African countries (Imam & Jacobs, 2014). Indeed, these factors facilitate corruption and, in turn, reduce tax revenue collection.

In Nigeria, Ifueko Omoigui, the former Chairman of the FIRS, described the lack of effective monitoring of the tax officials as one reason for administrative corruption in the tax system (Otusanya, Arowomole, & Adeyeye, 2013). Thus, corruption of tax inspectors should be given important consideration in the broader social context of less developed countries (Besley & Mclaren, 1993). In a survey on taxpayers' commitment to tax in a countries (including Nigeria), 35 % of the respondents confirmed that most or all of the tax officials are corrupt (Aiko & Logan, 2014). The survey further shows that perceived corruption among tax officials weakens the commitment to the integrity of the tax system. Hence, mistrust of tax officials reduce compliance with tax obligations. It is stated that businesses in Nigeria choose to negotiate with corrupt staff in return for bribes and pay less than what they are supposed to pay as tax (Gwangdi & Garba, 2015).

The perception of the legitimacy of authorities is essential to voluntary compliance (Tyler, 1997). Thus, corruption is a major institutional factor that can make corporations under-report their profits to evade tax (Alon & Hageman, 2013). A firm may engage in corruption by bribing tax officials to reduce tax payment. Thus, firms give bribes in a way that the marginal bribe rate is less than the official marginal tax rate, thus reducing the effective tax rates (Olken & Pande, 2012).

From a theoretical perspective, the social exchange theory posits that social stability involves a process of exchanging subjective costs and benefits between the parties involved. In this regard, if corruption reigns, the taxpayers can give bribes to the tax authority to reduce their tax liability, thereby getting a benefit by reducing the tax liability. Therefore, corruption and tax non-compliance are sometimes highly correlated (Litina & Palivos, 2016)

Several studies have investigated the connection between corruption and tax non-compliance from different perspectives. Some studies have specifically focused on corruption in the tax administration in various contexts (Bilotkach, 2006; Debacker et al., 2015; Imam & Jacobs, 2014; Joulfaian, 2009; Nur-tegin, 2008). These studies are more relevant to the current study. Other studies consider corruption from a wider scope (Alon & Hageman, 2013; Litina & Palivos, 2016; Tedds, 2010). For instance, general corruption perception that involves corruption in the public and private sector and others has focused on corruption of the political class and their influence on tax non-compliance behaviour. The next paragraphs of this section provide a review of these studies starting with those that are more relevant to this study.

Most the studies reviewed here supported the positive and significant effect of corruption with exception of one study. Specifically, Bilotkach (2006) examined the relationship between tax evasion and bribes to tax authority staff in the Ukraine. The study used an experimental method based on Nash equilibrium in a game setting between tax officials and some businessmen. The study found that giving bribes to evade tax become aggressive when the business taxpayers realized that most tax officials are ready to accept bribes. A similar finding was reported by DeBacker et al. (2015). The study found a positive influence of corruption on tax evasion in the United States, among owners of corporations from countries with high corruption norms.

Consistently, perceived tax administration corruption was found to be one of the determinants of filing behaviour with a negative and significant effect in a survey in Pakistan (Gangly. The study focused on non-fillers and compared them with another sample of registered self-employed taxpayers to investigate the determinants of filing behaviour. The study measured the perceived corruption based on a single question relating to tax authority staff levels: “The level of corruption has changed in the last few years in the following areas of taxation: (a) higher level administration, (b) medium level administration, (c) lower level administration” (p. 11).

Also, Aiko, and Logan (2014) conducted a survey of sub-Saharan African countries, which includes Nigeria, on the influence of perception of corruption among taxpayers. The study reported that more than 35% of the respondents (one-third) agreed that “most” or “all” of tax officials are corrupt. Another 39% of the respondents saw that “at least” some of the tax officials are corrupt. These findings suggested that, when taxpayers perceived tax officials to be corrupt; the perception weakens their commitment to the integrity of the tax system and, in turn, tax compliance. Moreover, corruption in the conduct of tax officials increases reported non-compliance with tax obligations.

Likewise, other studies provided evidence on the effects of bribes relating to tax officials on firms' tax compliance behaviour in transition countries (Joulfaian, 2009; Nur-tegin, 2008). Specifically, Nur-tegin used a final sample of 4,538 firms in 23 transitional economies drawn from the 2002 Business Environment and Enterprise Performance Survey (BEEPS II) gathered by the World Bank. The results of the study showed that general and tax related corruption have a significant influence on tax evasion. Consistently, Joulfaian (2009) found that business non-compliance rises with the frequency of tax-related bribes. The study used the same data with the former one. However, Joulfaian (2009) focused on only private firms.

More recently, Alm, Martinez-Vazquez, and McClellan (2016) also reported the significant effect of corruption on tax evasion among corporate taxpayers. The study focused on the potential effect of tax official's bribery on firm's tax non-compliance. Based on firm-level data obtained from the World Enterprise Survey (WES) and BEEPS, the study found that corruption of tax officials has a significant influence on tax non-compliance.

Conversely, Imam and Jacobs (2014) found that overall corruption has no significant influence on total tax revenues. The most relevant finding of this study is that direct taxes affecting corporations and individuals have a weak effect on tax revenue generation. The study focused on Middle Eastern countries. The study investigated the influence of corruption (among other variables) on tax revenue generation (of different types of taxes). Corruption was measured based on the International Country Risk Guide (ICRG) Corruption Index. The findings of the study indicate that all taxes involving frequent interactions with tax authorities, e.g., trade taxes were most influenced by corruption. This is because of the involvement of physical checks, which provide incentives for bribing tax collectors.

Viewing corruption from a general perspective as discussed previously, Tedds (2010) investigated the influence of government corruption (among other variables) on corporate non-compliance among firms around the world. The study used World Business Environment Survey (WBES) data from the World Bank. The study found that government corruption has a significant influence on non-compliance. Although, the study focused on general corruption, it includes additional payments to government officials, which allows those to tax authorities to gain unlawful benefits. Similar findings were reported by Alon and Hageman (2013). However, this study focused on firms from transitional economies of the former Soviet Bloc. Specifically, the study found that greater levels of corruption are linked with lower levels of tax compliance.

Nevertheless, Akdede (2006) provided theoretical analysis of the relationship between corruption and tax evasion. The study focused on bribery among government official. The study established that bribery has negative effect on tax evasion which implies that when the size of bribery is large, taxpayers would choose paying taxes voluntarily over corruption. Similarly, Litina and Palivos (2016) provided a theoretical explanation between political corruption and tax evasion. Contrary to Akdede finding, the study argued that corrupt practices of one group justifies that of others. Hence, when a government official expects other officials to engage in corruption, they find it optimal to engage in corruption. The study found that formulating policies that would enforce a strong moral cost on corrupt politicians and tax evaders can lead to a unique equilibrium.

In conclusion, several studies have investigated the influence of corruption related to tax administration on tax non-compliance behaviour (Bilotkach, 2006; DeBacker et al., 2015; Imam & Jacobs, 2014; Joulfaian, 2009; Nur-tegin, 2008). Although, the findings are mixed, most studies reported a positive and significant influence of corruption on tax non-compliance.

3.5.3 Complexity and Tax Non-compliance

Complexity has become one of the major issues of concern among taxpayers, tax authorities and policy makers (Burton & Karlinsky, 2016; Tran-Nam & Evans, 2014). The expectation is that taxpayers may comply if the tax system is made easy and simple to comply with. Conversely, a complex tax system can make compliance difficult and encourage intentional and unintentionally non-compliance. More importantly, the issue of tax complexity becomes more crucial under the SAS. This is because most compliance tasks conducted by the tax authority were shifted to the taxpayer under this system. Hence, simplifying the tax system becomes a key success factor in cultivating compliance under the SAS (Isa, 2014).

Tax complexity becomes more important because of impact on tax compliance, and, in turn, government revenue and the economy in general. Specifically, the literature shows that complexity is associated with the following four important factors in the economy (Aiko & Logan, 2014; Bilotkach, 2006). First, complexity may result in a distortion in the economy and, hence, a loss in GDP. Second, complexity may lead to either un-intentional or intentional tax non-compliance by providing opportunities for tax avoidance and unfairness. Complexity imposes a high level of tax compliance costs on both taxpayers and tax authority. Third, compliance costs in some countries are a sizable proportion of the total tax revenue or GDP. Fourth, complexity leads to legal uncertainty when taxpayers do not fully understand their tax liability; and they are unsure on the treatment of some transactions or the basis used by the tax authority to arrive at different conclusion.

Despite the above adverse effects of complexity, it is generally agreed that some degree of complexity in the tax system is inevitable due to the complex nature of the modern economic system that comes with more sophisticated business dealings and globalized markets; the rise of more complex and advanced mechanisms of tax non-compliance; and the passage of new laws in response to changes (Borrego, 2014; Isa, 2014; Tran-Nam & Evans, 2014; Ulph, 2014). Therefore, the level of complexity in the tax system should be kept at the minimum possible level.

Tax complexity can mean different things depending on the perspectives and backgrounds of the people looking at it. For instance, a tax lawyer considers tax complexity as the difficulty associated with understanding and applying the tax laws; a tax accountant explains tax complexity with reference to the time needed to prepare a tax return and time to offer tax advice; and a business owner sees this as the amount of money it costs to comply with the tax laws. Similarly, the literature shows that complexity appeared not to have clear cut definition (Milliron, 1985; Tran-Nam & Evans, 2014). But, it has been confirmed to be a multidimensional variable (Isa, 2014; Milliron, 1985; Tran-Nam & Evans, 2014; Ulph, 2014). Hence, several studies have described complexity in various forms (Long & Swingen, 1987; Saad et al., 2014; Slemrod, 1989; Smith & Richardson, 1999; Ulph, 2014; Umar & Saad, 2015). Some these studies are discussed below.

Long and Swingen (1987) identified six dimensions of complexity, namely, ambiguity, calculations, changes, detail, forms, and record keeping, based on professional judgments. Similarly, Slemrod (1989) provided a comprehensive description based on fundamental properties of tax complexity. Slemrod categorized tax system complexity into four facets. The first two are predictability and enforceability, which are related to the tax law. The last two are difficulty and manipulability, which are related to taxpayers' response to the tax laws.

Moreover, Ulph (2014) asserted that by associating complexity with tax system, the components of the tax system come into play. Hence, Ulph provided a categorization like that of Slemrod that is based on two major categories. First, there is design complexity in relationship to the laws that govern the tax system. This relates to the number of items/commodities that are taxed and their tax rates. For instance, SMEs and corporate taxpayers may be subjected to different tax rates based on the nature of the taxpayers. Second, there is operational complexity involving the set of procedures that the taxpayers must go through in complying with the laws. Specifically, this involves what it costs an honest taxpayer to comply with all the obligations of the tax system. In the same vein, several studies have demonstrated similar efforts of reporting the multidimensional nature of this variable (Borrego, 2014; Isa, 2014). However, their categorizations are not far from one another. Also, these studies measured complexity based on the perceptions of taxpayers or tax experts.

Other studies have described complexity based on the readability of tax laws and other tax materials, such as tax instructions, tax schedules, etc. (Richardson & Smith, 2002; Saad et al., 2014; Saw & Sawyer, 2010; Smith & Richardson, 1999; Umar & Saad, 2015; Urbancic & Hsu, 2007). This dimension of tax complexity is concerned with the reading difficulty, i.e., how simple these materials are to be read and understood by the taxpayer. In other words, this involves the ease by which tax laws and the other materials can be read and understood. This group of studies measured complexity based on readability indices such as Flesch Reading Ease Score (FRES) and Flesch Kincaid Grade Level (F-KGL).

Having discussed complexity in isolation, the next discussion focuses on studies that have investigated the connection between complexity and tax non-compliance. Hence, several studies provided evidence to that effect in different contexts (Abdul Jabbar, 2009; Isa, 2014; McKerchar, 2003, 2005, 2007; Milliron, 1985; Richardson, 2006; Saad, 2011, 2014; Sapiei & Kasipillai, 2013a; Strader & Fogliasso, 1989) with most of the studies supporting the positive influence of complexity on non-compliance.

Starting with the studies that have reported positive influence, Milliron (1985) found four dimensions in complexity, namely, topic nature, quantitative aspect, weakness of the law to misuse, and readability to have significant influenced on tax-reporting positions. The study pointed out the complexity associated with equity and opportunity for non-compliance. In this regard, complexity was associated with a greater inequity to increased compliance. But, an increase in complexity was associated with a greater opportunity for non-compliance to reduce compliance. Forest and Sheffrin (2002) supported the findings of Milliron using the 1990 Taxpayer Opinion Survey data based on estimated empirical model. The study found that complexity had a positive and significant effect on non-compliance.

The significant effect of complexity is also reported in Malaysian studies. Abdul Jabbar (2009) investigated the influence of complexity on non-compliance among corporate SMEs. The study found that tax complexity has a significant influence on non-compliance behaviour. This finding is consistent with Sapiei and Kasipillai (2013) who also focused on corporate taxpayers in Malaysia. Unlike, Abdul Jabbar who surveyed the taxpayers, Sapiei and Kasipillai's survey focused on the perception of external tax consultants dealing with the corporate taxpayers in Malaysia. Saad (2014) focused on Malaysian individual taxpayers. The analysis of the interview results of the study concluded that the taxpayers perceived the tax system to be complex. The study further noted that tax complexity is associated with intentional and unintentional non-compliance.

Similarly, McKerchar (2003) found that complexity gave rise to unintentional non-compliance and intentional over-compliance among personal taxpayers using a mixed method design (survey of self-lodger-taxpayers and a case study) in Australia. This finding suggested that complexity unfairly favoured the tax authority in terms of tax revenue collections. The study further found that complexity has an indirect effect on compliance through compliance costs (which was found to be high). This is indicated by reliance on tax agents to ensure accurate filing of return.

From a different perspective, McKerchar (2005) focused on Australian tax agents. Based on an electronic survey, the study found that the tax agents also face the problem of complexity. This is indicated by their struggle to keep abreast of the volumes of tax materials (including legislation, rulings, determinations, and practice statements as issued by the tax authority). The study concluded that the Australian tax system needs a simple and integrated tax system with simple and precise regulatory material for the tax agents to have more input into the process. Two years later, McKerracher arrived at similar findings in a study of the consequences of complexity on the Australian Tax Office (ATO) (McKerracher, 2007). However, the later study focused on the effect of tax complexity on taxpayers, tax practitioners and its consequences on the ATO. Similarly, the study used a mixed method design by selecting a large sample population randomly drawn from the ATO taxpayer database and a case study. The study found that complexity gave rise to un-intentional non-compliance and intentional over-compliance.

From a different point of view, some studies have investigated complexity on cross-country bases (Richardson, 2006; Saad, 2011; Strader & Fogliasso, 1989). Strader and Fogliasso (1989) compared the level of tax complexity in seven countries (France, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States). The study found that all the countries have highly complex tax system apart from those of the Netherlands and Sweden who have moderately complex systems. Similarly, Richardson (2006) found complexity to be the most important determinant of tax non-compliance among other variables. The study focused on important determinants of tax non-compliance in 45 countries. Moreover, Saad (2011) compared perceptions of tax complexity among Malaysia and New Zealand taxpayers. Based on the analysis of the interview data, the study concluded that the New Zealand tax system is complex whereas, that of Malaysia is not.

Focusing on the studies reported insignificant effect, Clotfelter (1983) found an insignificant relationship between complexity and tax evasion among business taxpayers based on TCMP data in the United States. Likewise, a more recent Malaysian study by Isa (2014) did not provide support for the positive effect of complexity on non-compliance. The study examined complexity among corporate taxpayers using a mixed method approach by interviewing 60 tax auditors of the Inland Revenue Board of Malaysia (IRBM) and survey of selected corporate taxpayers. In contrast with the previous Malaysian studies (mentioned above), this study did not provide evidence showing the influence of complexity on tax compliance. However, the study found that corporate taxpayers encounter three dimensions of tax complexity, tax ambiguity, tax computations and record keeping, in meeting their compliance obligations under SAS.

In summary, previous studies have shown the importance of complexity in determining tax non-compliance. The variable has different forms, which can be summarized into two aspects in line with Ulph (2014). The first is design complexity relating to, for instance, the number of items that are taxed and their tax rates in the laws. The second is operational complexity involving the set of procedures that the taxpayers must go through in complying with the laws. Moreover, the empirical evidence on the relationship between complexity and tax non-compliance is mixed with most studies finding significant relationships.

3.5.4 Fairness Perception and Tax Non-compliance

In most cases when citizens are asked about what they think about tax system they express their fairness concerns (Hartner, Rechberger, Kirchler, & Wenzel, 2011). A survey of American taxpayers identified fairness as one of the most central objectives of the United States' income tax system (Milliron, Watkins, & Karlinsky, 1989 as cited in Richardson & Sawyer, 2001). Also, voters' preferences on policy instruments strongly depend on their fairness concern about tax compliance (Solano-Garcia, 2017). Hence, giving the costly nature of the deterrence mechanisms such as tax audits, tax policy must give more importance to fairness perception as it induces voluntary tax compliance. In this regard, a favourable taxpayer perception of the fairness of the tax system is surely preferable to a negative perception of fairness. The positive perception of fairness has a positive impact on tax compliance behaviour. On the other hand, where the tax system is perceived to be unfair, taxpayers can rationalize this unfairness as justification for non-compliance with the tax laws (Andreoni et al., 1998; Torgler, 2007). The question of what a fair tax system becomes important in this context.

A fair tax system is described as one that subjects taxpayers to paying taxes according to their ability (Lymer & Oats, 2009). In their comprehensive review of the determinants of tax compliance, Jackson and Milliron (1986) mentioned fairness as one of the essential determinants of tax compliance. Similarly, Andreoni, Erard, and Feinstein (1998) identified taxpayers' perceptions of fairness as an important social factor that determines tax compliance. However, the economic analysis of tax non-compliance behaviour had neglected fairness for a long time (Torgler, 2007). Later, the tax compliance literature demonstrated the role of the perception of fairness on the tax compliance decisions to be a very important policy concern (Bordignon, 1993). Therefore, the main theory in the literature of tax compliance suggests that taxpayers fairness perceptions of the tax system can encourage their trust in government and, hence, effect tax compliance in a positive way (Jimenez & Iyer, 2016).

The literature has indicated that the fairness perception has different dimensions (Braithwaite, 2002; Gerbing, 1988; Jackson & Milliron, 1986). Specifically, the review of Jackson and Milliron (1986) acknowledged two different forms of fairness, which are fairness in terms of the exchange with the government and the fairness in the burden of tax (to a taxpayer) in relationship to other taxpayers. Furthermore, in relationship to the second form of fairness, it has been decomposed into vertical fairness and horizontal fairness (Kirchler, Niemirowski, & Wearing, 2006). Vertical fairness is concerned with lower-income earners who should pay taxes at a rate lower than that of higher-income earners whereas, horizontal fairness relates to fair play in that taxpayers of parallel economic status would pay the same tax (Saad, 2009).

Similarly, the fairness framework guideline of Wenzel (2002) acknowledged three aspects of fairness based on the social psychology. First, procedural fairness refers to the perception of fair procedures (which includes taxpayers input in formulating tax laws and their enforcement); and the process of distributing the services that are provided by the authority. Second, distributive fairness (also referred to as exchange with government) involves fairness in resource exchange that comprise costs and benefits between the taxpayer and government. Third, retributive fairness relates to a taxpayer's perceptions about the appropriate penalty for tax non-compliance.

Moreover, the seminal work of Gerbing (1988) empirically established the four dimensions of fairness. The study was undertaken in the United States and used a mail survey of 225 taxpayers. Using a factor analysis on the fairness measures developed by the study, four dimensions of fairness were identified. They were: 1) general fairness and distribution of the tax burden, 2) exchange with the government, and 3) attitudes towards taxation of the wealthy, and 4) preferred tax rate structure.

Several studies have investigated the influence of fairness on tax non-compliance testing the influence of one or more dimensions of fairness in different contexts and with different approaches (Alm, Cronshaw, & Mckee, 1993; Belay & Viswanadham, 2016; Falkinger, 1995; Moser, Evans III, & Kim, 1995; Porcano, 1988; Song & Yarbrough, 1978; Spicer & Becker, 1980; Wenzel, 2002b). Other studies investigated fairness based on a cross cultural perspective (Gilligan & Richardson, 2005; Richardson, 2006). Most of these studies documented a negative effect of fairness on non-compliance.

In the United States, Spicer and Becker (1980) provided evidence on the impact of fairness on tax evasion. The study used a lab experimental method with 57 students of University of Colorado at Colorado Springs. They found that students who were informed that their tax rates were higher than average exhibited higher tax evasion than those who were informed that their tax rates were lower than average. The fairness in this study related to horizontal equity as the subjects perceived that they are taxed more than others in the same income level. A survey in the United States by Kinsey and Grasmick (1993) focused on vertical fairness. The study found significant effects of vertical fairness on the intention of tax evasion.

Consistently, in another experimental study, Alm et al. (1993) investigated the impact of procedural fairness (based on the fairness on the decision of spending tax revenue) on tax compliance. The study reported that tax compliance was found to be low where the choice was imposed on the subjects rather than based on an apparently fairer majority rule. In line with this finding, Porcano (1988) found that perceived procedural fairness and perception of taxpayer-government exchange fairness have a significant influence on previous tax evasion in a survey of individual taxpayers in the United States. Also, Wenzel (2002b) found a significant and positive relationship between perceived distributive fairness and tax compliance especially for highly identified (as Australians) respondents. The distributive fairness in the study includes vertical fairness as well as taxpayer-government exchange fairness.

Also, Moser, Evans III, and Kim (1995) focused on perceptions of horizontal and exchange fairness in another lab experiment. The study found that, when the subjects had perceptions of horizontal inequity, there was a positive relationship between public exchange and non-compliance. This finding, in line with dimension of distributive fairness, suggests that, when taxpayers considered the exchange with government with tax paid and perceived that the return is equitable, they would be more motivated to voluntary comply. In this regard, the general level of tax compliance would also increase.

Moreover, the negative effect of fairness variables on non-compliance is also supported in the Malaysian context. Faizal and Palil (2015) found procedural fairness to have significant and positive relationship with tax compliance. In line with these findings, Azmi and

Perumal (2008) had recognized the existence fairness in relationship to exchange with the government, distribution of the tax burden and general fairness among Malaysian taxpayers. The study also reported that the taxpayers perceived the tax system to be moderately fair.

Most recently, Belay and Viswanadham (2016) examined tax fairness perception and business income tax compliance in Ethiopia using an interview survey qualitative approach. The analysis of the information collected from the respondents revealed that the participants had concerns about various dimensions of fairness. These dimensions include personal fairness, horizontal fairness, vertical fairness, administrative fairness, retributive fairness, and general fairness. However, their perceptions on the fairness of the income tax system was mixed. The study further noted that the participants generally believed that negative fairness perceptions of the income tax system have partly contributed to tax non-compliance.

An Indonesia study focusing on corporate taxpayers also reported a strong effect of perceptions of fairness on tax compliance (Puspita, Subroto, & Baridwan, 2016). The study investigated the effect of perceptions of the fairness of a tax system on tax compliance with a survey of 136 finance accounting hotel staff. Similarly, Forest and Sheffrin (2002) reported a significant and positive influence of unfairness perception on tax non-compliance. The study used data from the 1990 Taxpayer Opinion Survey and estimated an empirical model on the connections between taxpayer perceptions of the unfairness of the tax system and tax evasion. The results of the study suggested that higher fairness perceptions led to improved tax compliance.

From another point of view, some studies focused on the general fairness of the tax system (Roberts & Hite, 1994; Song & Yarbrough, 1978). Specifically, Song and Yarbrough

(1978), based on an overall rating measure, provided evidence of a significant and negative effect of perceived fairness of the tax system on tax non-compliance. The results of this study revealed evidence on the more importance of the concept of "ability to pay" than the "benefits" concept on tax evasion. Roberts and Hite (1994) supported the findings of Song and Yarbrough by reporting a positive influence of overall fairness on admitted previous non-compliance.

On the cross country studies, Gilligan and Richardson (2005) conducted a survey focusing on all the fairness dimensions of Gerbing (1988). The study investigated the relationships between fairness perceptions and cross-cultural compliance trends in Hong Kong and Australia. Overall, the results revealed a significant difference of fairness perceptions between the two countries. The significant difference was explained by different tax structures of the two countries; Australia's tax system is complex, and Hong Kong's is not. Moreover, the study found a significant correlation between all the dimensions of fairness (investigated in the study) and tax compliance except for exchange with government in Australia. On the other hand, general and exchange with government dimensions have a significant influence on tax compliance in Hong Kong. This cross-country findings suggested that no consensus exists on relationships between the dimensions fairness perceptions and tax compliance (Thomas, 2012).

In another cross-country study focused on 45 countries from both developed and developing worlds, Richardson (2006) investigated the influence of fairness (among other variables) on tax non-compliance based on secondary data. The study found a negative influence of fairness on tax non-compliance. Unlike Gilligan and Richardson (2005) above who measured fairness in wider perspective by using five dimensions, this study measured fairness in a narrow perspective, only in terms of fairness of policy. The finding indicated that, when taxpayers perceive the tax policy to be fair, the level of tax evasion can be reduced.

Conversely, other studies reported an insignificant effect of fairness variables on tax non-compliance in different contexts. Porcano (1988) reported an insignificant effect of vertical fairness in the United States. The different findings on vertical fairness may be explained by the fact that the measures in Porcano were general and possibly less specific (Wenzel, 2002b). In line with Porcano (1988), Wenzel (2002b) found that (overall) perceived procedural fairness had no positive effect on tax compliance for those highly identified (as Australians) respondents. The study investigated the influence of perceived procedural and distributive fairness on tax compliance based on a questionnaire survey. To establish the specific effects of justice and fairness, the study controlled for national identification and outcome considerations.

In another questionnaire survey of Malaysian salaried taxpayers, Saad (2009) focused on various dimensions of fairness by including vertical fairness, horizontal fairness, exchange fairness, retributive fairness, personal fairness, administrative fairness and general fairness, on tax compliance. Except for horizontal fairness, the study found all the other dimensions of fairness to be insignificant. The findings were explained based on the fact that the tax system operates in a highly legal environment in which taxpayers have no choice but to comply regardless of their fairness perceptions. A more recent Malaysian study, Faizal and Palil (2015) found retributive and distributive fairness to have an insignificant effect. The findings are closely related because, if there is fairness in the procedure of distributing the public goods and services, then horizontal fairness is expected to be fair.

In conclusion, the literature has established that fairness has various aspects. Evidence has been documented on the connection between fairness perception and tax non-compliance. However, the evidence has shown that no agreement exists on the influence of fairness on tax non-compliance. More importantly, the studies investigated fairness by one or more dimensions depending on their contexts and the study's objectives.

3.5.5 Penalty and Tax Non-compliance

Penalties are believed to be one of the essential measures of deterring undesirable behaviours. In the case of tax evasion, high penalties deter tax evasion because they render evading taxes more risky to the taxpayers (Kirchler, Kastlunger, & Wahl, 2010). Penalty stands to be another important tax enforcement mechanism, besides audit, that is determined by the tax laws.

Penalty has been operationalized in the literature in two different ways. Some studies considered it as the actual penalty experienced by the taxpayer (Alm et al., 1995; Collins, Milliron, & Toy, 1992; Webley, Robben, Elffers, & Hessing, 1991). Other studies described it as perception, which may come from the experience of other taxpayers in a similar tax group (Milliron & Toy, 1992; Sapiei & Kasipillai, 2013).

The classical studies of economic analysis of tax compliance suggested a negative effect of penalty on tax evasion (Allingham & Sandmo, 1972; Srinivasan, 1973). Similarly, other theoretical frameworks of socio-psychology indicated the negative effect of perceived risk of punishment (Weigel et al., 1987) on tax evasion; also, the slippery slope frame work shows the importance of fines in ensuring tax compliance (Kirchler et al., 2008). Several studies have tested the theoretical suggestions in different contexts and provided empirical evidence on the influence of penalty on tax non-compliance using different methodologies.

Evidence supporting the negative significant effect of penalty on tax non-compliance has been reported by Friedland (1982) and Friedland, Maital, and Rutenberg, (1978). Specifically, the pioneering experimental study of Friedland et al. (1978) found that higher penalties tend to curtail tax evasion more than audits do. Their experiment on Israel subjects was based on a laboratory setting of four rounds. The subjects of the study were allowed to earn a monthly income and pay income tax based on what they reported at the end of the month. An audit was conducted to check for evasion. A penalty in multiples of three or fifteen times any evaded amount was imposed. Consistently, Friedland (1982) found a negative effect of penalty among Israeli subjects using an experimental procedure similar to the above one. In the United States, Alm, Sanchez, and DeJuan (1995) tested the influence of penalty among American and Spanish subjects using an experimental method. The penalty rate was varied from one to two and four times the amount due through the experiment rounds. The study found that compliance varied significantly with the penalty rate. Similarly, Park and Hyun (2003) reported the negative effect of penalty in another experiment among Korean subjects.

Nonetheless, more studies have reported either an insignificant or no effect of penalty on tax non-compliance (Alm et al., 1995; Ariel, 2012; Collins et al., 1992; Webley et al., 1991). In Israel, Ariel (2012) conducted a field experiment of Israeli corporate taxpayers. The study informed the sampled taxpayers via a deterrence letter that filing an untrue report would lead to harsh sanctions. The study reported an insignificant influence of the perceived severity of legal sanctions on tax reporting. In line with Ariel (2012), in the United States, Webley, Robben, Elffers, and Hessing (1991) found no influence of penalty on underreporting. However, this experiment put the penalty at two or six times the evaded tax. Another experiment of subjects in the United States found an insignificant influence of penalty variation on tax aggressiveness (Collins & Plumlee, 1991). Alm et al. (1992)

reported a weak effect of a penalty increase in their experiment. From a different perspective, Robben et al. (1990) conducted a simultaneous experiment of cross-country among the subjects of Belgium, England, The Netherlands, Spain, Sweden and the United States. Overall, the study reported insignificant effects of penalty variation on tax aggressiveness.

In a mail survey of United States' households, Collins, Milliron, and Toy (1992) reported no effect of penalty on tax compliance. Similarly, in a Malaysian study of corporate taxpayers, Sapiei and Kasipillai (2013) focused on the perception of external tax consultants to investigate corporate tax compliance behaviour. The results of the regression analysis show that tax deterrence sanctions had no influence on corporate non-compliance behaviour.

Moreover, based on United States' TCMP data, Klepper and Nagin (1989) investigated the effect of taxpayer perceptions concerning penalties on behaviour using non-compliance. The study reported a negative effect of penalty on tax non-compliance. Also using the United States tax authority data, Kamdar (1997) reported a positive and insignificant effect on corporate tax non-compliance. The study used time series data from 1961 to 1987 extracted from the annual report of the Commissioner of the Internal Revenue. The report contains information such as total number of returns filed and that of returns audited and additional tax and the penalty recommended after the audit.

Interestingly, increasing a penalty was reported to have a "crater-bomb effect" on non-compliance. This means a positive effect on non-compliance. Thus, a survey of individual taxpayers reported this effect in Tanzania (Fjeldstad & Semboja, 2001). They investigated the influence of perception of sanction severity on tax compliance. The study found a negative effect of higher penalties on tax compliance. This finding was explained based on the reciprocity effect. Thus, the tax authority might have treated the taxpayers in an unfair way and, in return, the taxpayers become more aggressive in paying taxes. Similar findings were reported in the United States (Debacker et al., 2015). Debacker et al. (2015) tested the effect of prior penalty experience on corporate tax reporting using Internal Revenue Service data in the United States from 1996 to 2012. The study found that, after firms have been penalized, they become more aggressive. The possible explanation of this finding is that firms learned about the audit process (that led to their detection) and being penalized. Hence, they might have learned that there would be no more audits in the immediate years after the detection and became non-compliant.

In drawing a conclusion on the influence of penalty on tax non-compliance, Kirchler et al. (2010) said that the effect of penalty was weak. Moreover, the effect of penalty reported by assorted studies did not support the theoretical studies. This is indicated by most studies reviewed in this section using experimental (Alm et al., 1992; Ariel, 2012; Julie H Collins & Plumlee, 1991; Robben et al., 1990; Webley et al., 1991), survey (Collins et al., 1992; Sapiei & Kasipillai, 2013) and secondary data (Kamdar, 1997; Klepper & Nagin, 1989) methodologies.

3.5.6 Public Goods Supply and Tax Non-compliance

Taxpayers' appraisal of government expenditure is a key factor that influences tax compliance (Andreoni, et al., 1998). Taxpayers would be more inclined to comply when they perceive that their taxes are spent to provide public goods and services that benefit them (Alm et al., 1992). Hence, people's behaviours are affected by the actual situations such as the provision of public goods and services with a high order of excellence, which is an integral aspect of governance quality (Besançon, 2003).

From another perspective, the reciprocity in the expectation of public goods in return for paying tax is a relevant aspect of equity in the social interaction affecting tax compliance (Finocchiaro Castro & Rizzo, 2014). In this regard, research on equity and tax compliance has shown the importance of the equitable provision of public goods in ensuring tax compliance (Bordignon, 1993; Finocchiaro Castro & Rizzo, 2014; Hartner et al., 2011; Wenzel, 2002a).

More specifically, this study focused on the supply and delivery of public goods and services to the citizens, which is an important aspect of the public governance (Rotberg, 2004). The level of compliance with laws among citizens in many countries may be explained by the political conditions as the political system determines formal and informal economic activities (Torgler & Schneider, 2007). In line with social exchange theory, Spicer and Lundstedt (1976) argued that an exchange relationship exists between the taxpayers and government. Thus, if the taxpayers receive an adequate supply of public goods, then their willingness to pay tax increases. Therefore, several studies have provided evidence mostly in support of this preposition.

Alm, Jackson, and Mckee (1992) conducted a laboratory experiment to investigate the influence of public goods benefit (and deterrence) on tax compliance in the United States. Compliance was found to be greater when taxpayers receive benefits from their tax payments. Alm, McClelland, and Schulze (1992) supported this finding in another experimental study. The authors argued that deterrence alone under explains the reasons why people pay taxes. The study provided evidence that some taxpayers pay taxes because they value the public goods that government provides through the taxes they pay.

Torgler, Schaffner, and Macintyre (2007) used mixed methodologies (experimental, field and survey data) to examine the effect of tax morale on tax non-compliance with an emphasis on governance quality as a determinant of tax morale. Specifically, the study supported the positive and significant effect of public goods supply on tax morale.

A Nigerian study by Alabede, Ariffin, and Idris (2011a) tested the relationship between perceptions of public governance quality and compliance behaviour among personal taxpayers. The study provided evidence of a positive and significant effect of public goods supply on tax compliance behaviour. In Alabede et al. (2011a), the provision of public goods is one dimension of the four dimensions of public governance quality. In line with this finding, D'Souza (2016), in a recent study based on an African context, provided a theoretical analysis that supported the argument that taxpayers use tax non-compliance to compensate for government expenditure patterns that did not provide benefits to them. The analysis showed that tax non-compliance rises with the under provision of public goods. Hence, the taxpayers use non-compliance to shift the allocation of their income away from the government expenditure policies as they do not provide (or provide little) benefit to them.

From another perspective, an experimental study by Alm, Sanchez and DeJuan (1994) provided cross-country results. Unlike, the previous studies, this study investigated the influence of provision of public goods and tax compliance between Spain and the United States. The results showed that in all the experimental sessions where public goods were introduced, compliance marginally increased at a statistically significant rise.

In summary, the literature indicated that paying taxes in expectation of public goods supply appeared to be a relevant aspect of the tax compliance decision. Consistent with social exchange theory, most of the studies reviewed supported the fact that if the taxpayers receive an adequate supply of public goods, then their willingness to pay tax increases. Therefore, several studies using various approaches have provided evidence mostly in support of the significant effect of public goods supply on tax compliance decision.

3.5.7 Perception of Tax Tribunal and Tax Non-compliance

The main objective of legal authorities (such as tax tribunal) is to ensure public compliance with the laws (Tyler & Jackson, 2014). Procedural justice stands to be a critical factor in fostering compliance (Hough & Jackson, 2013). Procedures are just when they possess fair and respectful processes, which are certain strategies to build trust in the authority, and thus compliance with the laws (Tyler, 1997, 1990). In this regard, a tax tribunal as a legal authority must ensure justice in all its procedures to help in ensuring compliance with the tax laws.

A tax tribunal is a quasi-judicial court with the authority to adjudicate on tax disputes. Tax tribunals are part of the judicial system in both developed and developing countries (Ransome, 2008). The judiciary is responsible for administering justice. Thus, the tax tribunal, as part of the judicial system, should also act in the same direction. For instance, when a tax tribunal is effective in settling tax cases and passing fair judgments based on its jurisdiction, this will give confidence to the taxpayers and encourage them to comply with the tax laws. In addition, punishing the guilty through penalties, etc., will send a deterrent message to other taxpayers to comply. Hence, the current study proposed and tested the direct effect of perceptions of tax tribunal on tax non-compliance.

In Nigeria, the tax tribunal has been established with the aim to ensuring fairness and transparency of the tax system to encourage compliance. More importantly, the tax tribunal is established to lessen the delays (of the regular court system) in the litigation of tax disputes and hence improve the taxpayers' confidence in the system. Obayemi (2015) emphasized the importance of an efficient and fair tax tribunal to both taxpayers and tax authority as major stakeholders in the tribunal process in Nigeria. Thus, this study expects that, in the Nigerian context, the perception of tax tribunal would influence taxpayers' compliance decision in a positive way. In other words, the effective role of tax tribunal would have a negative influence on small companies' tax non-compliance.

One important theory that can explain the connection between the perception of tax tribunal and tax non-compliance is the social exchange theory (Blau, 1964). Social exchange theory notes that people in their social relations (such as that with authorities) consider the return they will get based on their input. Hence, the taxpayers can reciprocate with compliance for a just treatment from tax tribunal as an institution and an integral part of the tax system. Similarly, Kirchler et al. (2008) emphasized that, if the authority treats their cases with fairness and justice, this treatment stimulates a willingness to contribute voluntarily by complying with the tax laws Hence, in line with social exchange theory that advocates reciprocity, when the tax system provides an effective tax tribunal that is fair, just and reduces delay, in return, the taxpayers would comply with the tax laws.

In addition, the effect of perception of tax tribunal can also be explained with the "slippery slope framework" (Kirchler et al., 2008). According to the framework, tax compliance is influenced by trust in authority and the power of the authority. Trust is associated with voluntary compliance while power is associated with enforced compliance. Hence, the role of tax tribunal possesses both trust and power (with regards to the taxpayers). In the case of trust, if the tribunal follows a just procedure, which includes a fair hearing, accurate information, consistency and upholding the ethical and moral standards to arrive at a final judgment on the taxpayers, then the taxpayers can see this as legitimate power in the role of tax tribunal and comply voluntarily. On other hand, (especially in the case of non-complaint taxpayers), punishing taxpayers found evading their taxes based on just procedures involves power and sends a deterrent message. In this vein, Tyler (1997) described legitimate power as the power of a recognized authority to which people voluntarily comply. This implies that the tax system is perceived to be deserving of compliance (Gobena & Dijke, 2016).

Legitimacy of the authority, which results from just procedures, plays a vital role in achieving the compliance objective. Legitimacy gives the right to rule and recognition of that right by the (citizens) ruled (Tyler & Jackson, 2014). Thus, a legitimate institution can facilitate public cooperation and hence compliance with the laws (Hough & Jackson, 2013). Also, if the citizens accept the legitimacy of the authority, then it is most likely that they will not violate the laws (Tyler, 1990). Therefore, fair and just procedures of the tax tribunal can buy them legitimacy in eyes of the taxpayers and hence encourage voluntary compliance with the tax laws.

Moreover, procedural justice literature indicates that, when authorities treat people with fairness, trust, respect and impartiality, people will be willing to cooperate with authorities (Hough & Jackson, 2013; Murphy, 2003; Murphy & Tyler, 2008; Murphy, Tyler, & Curtis, 2009; Tyler, 1997, 1990; Verboon & van Dijke, 2007; Worsham, 1996). Hence, people will tend to comply with the decisions and directives of the authority. Thus, an efficient and fair judicial system should help to make all citizens abide by the laws of a country and create confidence in all the systems of the country. Tyler (1990) noted the connection between compliance behaviour and the views about justice and injustice as strong.

Several studies have documented evidence in different contexts on the strong influence of perceived procedural justice (involved in the decision making) on satisfaction, support for authority making the decision and compliance with their decisions (Bates, 2014; Gobena & Dijke, 2016; Gopinath & Becker, 2000; James, Murphy, & Reinhart, 2005; Wenzel, 2002b). The perceived justice of procedures comes from various factors (Leventhal, 1980), which include consistency of application across individuals affected (Bos, Vermunt, & Wilke, 1996); accurate application and absence of the self-interest of the authority (Saad, 2009; Tyler, 1990); and fair hearing for the affected parties (Tyler, 1990). Therefore, consistency, accuracy, and fair hearing in the procedures of the tax tribunal ensures justice, which can promote tax compliance.

Finally, a review of the literature reveals a lack of studies on the direct influence of perception of tax tribunal on corporate tax non-compliance. Thus, the perception of tax tribunal is one of the major contributions of this study as one determinant of corporate tax non-compliance in Nigeria.

3.5.8 Tax Compliance Costs and Tax Non-compliance

In the last past few decades many countries have shifted from the authority assessment system of taxation to the SAS. However, the SAS comes with an increased burden on the taxpayers. The introduction of SAS in Nigeria, as in other countries, shifted the responsibility of determining income tax to the taxpayers. Hence, taxpayers were left with the options of either learning how to manage their tax affairs as provided by the law or hiring the services of tax consultants to do so. Both options come with extra burden, which are reflected in tax compliance costs. Moreover, complexity of the tax system leads to increased tax compliance costs (Slemrod, 1989) that have made hiring tax professional necessary. In many countries, the professionals have substituted taxpayers conducting tax obligations and the tax decision-making process (Borrego, 2014).

Sandford, Godwin, and Hardwick (1989) defined tax compliance costs as “The costs incurred by taxpayers, or third parties such as businesses, in meeting the requirements laid down upon them with a given tax structure” (p. 10). This is the most frequent definition of tax compliance cost (Chunhachatrachai, 2013). The United States Small Business Administration (2011) defined federal tax compliance costs as the annual costs in time and money that the taxpayer spends to comply with the federal tax rules and regulations. Allers (1994) also defined compliance costs as the costs incurred by the taxpayer in terms of cash, time, and psychological cost of operating the tax system, as well as the anxiety and sleepless nights caused by the obligations imposed by the tax system. Several studies offer definitions of tax compliance costs (Vaillancourt & Clemens, 2008; Vallaincourt, Clemens & Palacios, 2007; Yesegat, 2009), and these definitions are not far from one another. Therefore, tax compliance costs can be borne by either individual taxpayers or business taxpayers.

Moreover, several classifications of tax compliance costs are discussed in the literature, which include commencement, temporary and regular costs; avoidable and unavoidable costs; economic and non-economic costs; and external and internal costs (Chunhachatrachai, 2013; Hanefah, Ariff, & Jeyapalan, 2002; Sandford, 1995; Sandford et al., 1989). The third classification includes external and internal compliance costs. Relevant to this study is the last classification. External tax compliance costs are payments to tax experts for their services to the taxpayer, such as lawyers, accountants, tax agents or any other advisers outside the business. On the other hand, internal tax compliance costs cover all costs incurred internally in the process of complying with the tax laws, such as the costs of staff and other miscellaneous costs.

In Nigeria, all corporate taxpayers operate under the SAS, and taxpayers are expected to assess themselves and make tax payments, unlike the authority assessment system, where the tax authority conducts the assessment and collects taxes. Hence, the SAS shifts more responsibilities to the taxpayer that makes it necessary for the taxpayer to incur extra external and internal costs. However, the tax law in Nigeria requires that all corporate taxpayers have their returns endorse by a tax consultant before it is accepted by the tax authority (s. 55 CITA 2007). This is a deterring measure to curtail non-compliance. However, given the complex and high costs of compliance nature of Nigerian tax system (Umar & Saad, 2015), corporate taxpayers may find ways to evade taxes in their struggle to minimize costs and grow their businesses.

Research into estimation of tax compliance costs has significantly increased since the pioneering works of Sandford et al. (1989). Many studies have focused on only the estimation of the tax compliance costs in different countries without investigating its effect on tax non-compliance (e.g., Mansor & Hanefah, 2008; Allers, 1994; Blazic, 2004; Chunhachatrachai, 2013; Hansford & Hasseldine, 2012; Pope, 1992; Sandford & Hasseldine, 1992; Susila & Pope, 2012; Vallaincourt et al., 2007). Thus, the connection between tax compliance costs and tax non-compliance is still unexplored (Richardson & Sawyer, 2001). Hence, Richardson and Sawyer emphasized the need for studies to that effect and to investigate the likely connections between tax compliance costs and other tax compliance variables (e.g., complexity). Since then, few studies have investigated the effect of tax compliance costs on compliance in different contexts (Abdul Jabbar, 2009; Das-gupta, 2002; Nur-tegin, 2008; Sapiei et al., 2014; Sapiei & Kasipillai, 2013a; Yesegat, 2009). The next part of this section is focused on the studies connecting compliance costs with tax non-compliance.

Abdul Jabbar (2009) found an insignificant influence of tax compliance costs on tax non-compliance behaviour among Malaysian corporate SMEs. The study used self-reported data via a questionnaire survey of corporate SMEs and estimated tax compliance costs in the form of external and internal costs. Another survey of Malaysian corporate taxpayers by Sapiei et al. (2014) hypothesized a positive relationship between compliance costs and tax compliance unlike the other studies that expected negative relation. The study argued that consulting tax consultants and the internal struggle of the companies to ensure the correct filing of tax return, which is translated into high compliance costs should reduce non-compliance. The study found an insignificant effect of tax compliance costs, which supported the findings of Abdul Jabbar.

Moreover, Yesegat (2009) focused on the effect of tax compliance costs on VAT compliance in Ethiopia. The regression results showed a weak negative relationship between tax compliance costs and VAT compliance. Moreover, the qualitative aspect of the study revealed that 69% of the respondents agreed that the burden of compliance costs encouraged compliance.

From a different perspective, Nur-tegin (2008) investigated the effects of tax compliance cost on firms' tax compliance behaviour based on a cross-country study. The study used a sample of firms in 23 transitional economies drawn from the 2002 Business Environment and Enterprise Performance Survey (BEEPS II) gathered by the World Bank. The results of the study showed that compliance cost has a positive and significant influence on tax evasion. Moreover, the results show that smaller firms tend to evade tax more than the bigger companies did. However, the measurement of tax compliance costs in the study differed from that of the studies discussed. It is based on a single statement comprising the hours spend by senior officials on compliance issues as follows: "What per cent of senior management's time in 2001 was spent in dealing with public officials about the application and interpretation of laws and regulations and to get or to maintain access to public services?"

In summary, tax compliance costs have received research attention with most of the studies focusing on only estimation of the compliance costs. However, few studies have investigated the connection between tax compliance costs and non-compliance. The findings on the relationship between tax compliance costs and non-compliance have been mixed.

3.5.9 Tax Rate Perception and Tax Non-compliance

Tax rate is a fundamental characteristic of tax systems and one of the important deterrent variables in the economic theory of tax compliance (Devos, 2014). However, the standard economic model of tax compliance did not provide a clear hypothesis on the effect of tax rate on tax compliance (Kirchler et al., 2010). Hence, two opposing relationships exist. First, tax rate and effective income have a negative relationship, thus, increasing the tax rate makes tax evasion more profitable. Second, effective income and risk aversion have a negative relationship, thus, reducing the effective income decreases tax evasion. In their review of existing literature, Kirchler et al. (2010) showed that empirical evidence provided support to both hypotheses with most studies reporting low compliance with high tax rates.

More pertinent to this study is that tax rate is considered from the taxpayer's perspective. In this regard, the tax rate has also been considered in the non-economic theory of tax compliance (social-psychological theory of tax compliance) as a principal factor of tax system fairness. Tax rates involve taxpayers' perceptions about tax system and distributional fairness issues. Hence, tax rate structure fairness and its level of progressivity are integral aspects of vertical fairness (Wenzel, 2002a). Taxpayers evaluate their tax burden fairness based on the degree of progressivity of tax rates or the maximum tax rate. Similarly, the progressivity of the tax rate is one dimension of tax system fairness (Gerbing, 1988). Several studies have provided empirical evidence relating to the effect of tax rate perception on tax non-compliance.

Most studies on the effect of tax rate perception (relating to fairness) reported a negative effect. Hence, in a survey study of taxpayers in the United States, Porcano (1988) measured the tax rate by asking his respondents to indicate their approximate taxable income after they were classified based on filing status, and incomes were categorized based on tax rates. The study found that tax rate has a negative relationship with perceptions of existing evasion. The results indicated that non-compliant taxpayers were inclined to be associated with higher tax rates. Also, non-complying taxpayers perceived the extent of existing non-compliance to be higher than did compliant taxpayers. Similar findings were reported in another multiple survey study that assessed the impact of the United States Tax Reform Act of 1986 (Kinsey & Grasmick, 1993). Relevant to this review, the study reported a negative and significant effect of perceived fairness of the tax system on attitudes towards tax cheating. Moreover, the study found a negative and significant influence of perceived fairness of progressivity and perception of vertical equity on future intention to tax cheating.

Also, Tedds (2010) reported a negative effect of tax rate on non-compliance. The study investigated the influence of high taxes on corporate non-compliance among firms around the world. Using World Business Environment Survey (WBES) data from the World Bank, the study found that high taxes have a significant influence on non-compliance.

Using an experimental approach in the United States, Spicer and Becker (1980) also found a positive and significant relationship between perceived tax rate inequity and tax evasion. The results indicated higher records of tax evasion among the taxpayers who were aware that their tax rate was higher than average tax rate paid by other taxpayers. On the other hand, higher compliance was recorded among those who were told that their tax rate was less than other taxpayers. Similar findings were reported in another experiment in the United States (Moser et al., 1995). The study focused on the perceived fairness perception of tax rate. The study found a negative influence of tax rate on tax compliance in which the participants perceived that they were treated unfairly compared to others.

On the other hand, several studies have reported an insignificant influence of tax rate perceptions. Thus, in a Malaysian study on corporate SMEs taxpayers, Abdul Jabbar (2009) measured the tax rate structure and taxpayer attitudes using a self-reported data via a questionnaire survey. Three questions focusing on vertical fairness (relating to three tax rate structures (flat, proportional and progressive tax rate) were asked to elicit information about the respondents' perceptions about the tax rate structure. The findings on the influence of tax rate on non-compliance were inconclusive. Sapiei, Kasipillai, and Eze (2014) reported the insignificant influence of the perception of tax rate on overall tax non-compliance among Malaysian corporate taxpayers in their survey. The study used the same measurement of tax rate as Abdul Jabbar. Another Malaysian study by Sapiei and Kasipillai (2013) focused on the perception of external tax consultants about corporate tax non-compliance behaviour. The results of the regression analysis show that the perception of fairness in the tax rate structure had no influence on corporate non-compliance behaviour.

In studies that considered the tax rate from non-fairness perception, mixed findings were reported. On one hand, several studies reported a positive relationship between the tax rate and non-compliance. In this regard, Clotfelter (1983) and Feinstein (1991) reported a negative relationship between the tax rate and compliance using tax authority data (TCMP) in the United States. Similarly, Dubin et al. (1990) found a negative and significant effect of tax rate on tax compliance using data drawn from the Annual Report of the Commissioner of Internal Revenue and the Statistics of Income. Consistently, using cross-country data of African countries, Gambo, Mas'ud, Nasidi, and Oyewole (2014) reported a negative effect of tax rate on tax compliance.

Also, experimental studies have documented evidence supporting the positive effect of the tax rate on non-compliance. Hence, Friedland et al. (1978) found that, when the tax rate increases the level of underreporting also increases. This finding is supported by Alm, et al. (1992) when they reported negative influence of tax rate on tax compliance.

Moreover, similar evidence is documented on corporate taxpayers as Joulfaian and Rider (1998) reported a positive correlation between a high tax rate and tax evasion. Yusof et al. (2014) reported a significant and positive effect of the tax rate on tax non-compliance using tax authority data among corporate SMEs in Malaysia. On the other hand, Rice (1992) and Kamdar (1997) reported an insignificant relationship between tax rate and tax evasion using tax authority data of corporate taxpayers. Consistently, Nur-tegin (2008) focused on 23 transitional economies and reported an insignificant effect of tax rate using the Business Environment and Enterprise Performance Survey (BEEPS II) gathered by the World Bank.

Finally, to a considerable extent, the issue of the fairness of tax system rests on the tax rate. Hence, studies on tax rates have been conducted from both the economic and sociopsychological perspectives. The studies provided evidence of the influence of the tax rate on tax non-compliance. In drawing conclusions on the influence of tax rate on tax non-compliance, Kirchler et al. (2010) acknowledged that most empirical evidence supported a negative influence of a high tax burden on compliance.

3.5.10 The Mediating Role of Tax Compliance Costs

Baron and Kenny (1986) are usually cited in social science research to support indirect relationships, i.e., mediation and moderation effects. The paper of Baron and Kenny was set with the main objective of explaining the concepts of mediator and moderator with regards to their usage in research and statistical analyses using correlations and analyses of variance. The paper distinguishes between the mediator and moderator variables. The current study uses only mediator variable. Hence, further discussions in this section focus on the mediator variable. According to Baron and Kenny, a mediator is a variable "which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest" (p. 1173). In other words, a mediator variable explains the relationship between the independent and the dependent variable.

The paper continued that mediator is a variable that accounts for the relationship between the independent and the dependent variables. The mediator variable determines when certain effects will hold and provides clues about "why" and "how" the independent variable affects the dependent one. The paper noted that, in a mediating relationship, variation in the independent variable should significantly account for variation in the mediator. Second, variation in the mediator variable should also significantly account for variation in the dependent variable. Finally, when the indirect relationships (independent variable to mediator and mediator to dependent variable) are controlled, the relationship between independent variable to the dependent one that was significant becomes zero (or close to zero).

The authors suggested performing three regression equations determining mediation effect: 1) regressing the mediator on the independent variable (independent variable must influence the mediator); 2), regressing the dependent variable on the independent variable (independent variable must influence the dependent variable); and 3) regressing the dependent variable on both the independent variable and on the mediator (mediator must influence the dependent variable). Baron and Kenny (1986) asserted that the mediation is strongest when there is indirect effect with no direct effect, which is referred to full mediation. When both direct and indirect effects exist, this is referred to as partial mediation.

However, some recent studies on the mediation analyses have argued that it is not necessary to observe all the conditions provided by Baron and Kenny (1986) before achieving a mediation effect. For instance, Zhao, Lynch, and Chen (2010) faulted the constant application of the statistical procedures of Baron and Kenny as experimental approaches because statistical ones might be a more appropriate procedure in some cases. Similarly, Rucker, Preacher, Tormala and Petty (2011), using simulation and experiment approaches argued that it is not necessary to consider the significance between the independent and dependent variables in mediation analysis; hence, attention should focus on assessing the magnitude and significance of the indirect effect. In addition, Hayes (2013) emphasized that only a logical connection is enough to establish mediation effect. Based on the above discussions, for the need of more understanding of the factors that influence the complex behaviour of tax non-compliance (Alm et al., 2010; Alon & Hageman, 2013), the current study tested the mediating effect of compliance costs on the relationship between corporate tax non-compliance and its determinants. Specifically, compliance costs involve the internal and external extra costs incurred by the taxpayer in the process of compliance.

A mediator variable is a third variable that intervenes between independent and dependent variable to explain the relationship between the independent and dependent variable (Hair, Hult, Ringle, & Sarstedt, 2014). In the context of this study, the mediating effect of tax compliance costs is incorporated to investigate if the impacts of the independent variables get to the dependent variable through the mediator. Thus, when taxpayers perceive the costs of deterrence to be high, they expend extra effort to meet their tax compliance obligations (Allingham & Sandmo, 1972). This extra effort, which is usually the help of tax professional, can minimize errors and encourage correct filing, hence, reducing non-compliance (Phillips & Plumley, 2014). Also, the increased burden of answering to an audit may generate an increase in voluntary tax compliance through compliance costs. In the case of non-compliant taxpayers, the extra effort can make them compliant in their quest to avoid paying additional costs if an audit can detect their non-compliance. Equally, the extra effort can increase the compliance of the compliant taxpayers by making their returns more accurate.

As tax non-compliance can be reduced by enforcement factors through the mediation of tax compliance costs, likewise, tax compliance costs can mediate the relationship between tax non-compliance and other factors that encourage voluntary tax compliance (Murphy & Tyler, 2008). For example, taxpayers who have perceived the tax system to be fair can also reciprocate by putting extra effort in paying the correct taxes based on the notion that the tax authorities are benevolent and work beneficially for the common good.

To establish a mediating effect, some conditions need to be met. According to Baron and Kenny (1986), 1) the independent variables should explain the variability in the mediating variable; 2) there should be a connetion between the mediating and the dependent variables and 3) there should be a logical connection between the mediating and the dependent variable. For Hayes (2013), and a logical explanation is enough to establish mediating effect.

Based on the above conditions, the independent variables in this study lead to variability in tax compliance costs. For instance, when the detection level and penalties are high, the taxpayers may find it necessary to incur the additional costs to make sure they file the proper returns to avoid non-compliance and vice versa. In the same way, if the taxpayers perceive that the tax system is fair and uncorrupted even if it is complicated, they may be willing to incur the extra costs to make sure they file the correct returns. Conversely, if the taxpayers perceive that the tax system is unfair and corrupt, they may not be willing to incur the extra costs to make sure they file the correct returns, especially when the audit and penalty structures are weak. Consequently, these additional costs may be the fundamental reasons why the taxpayers either comply or do not comply.

However, in the long-run, the effect of the high tax compliance costs may be averse to the growth of small companies and their ability to pay taxes. High compliance costs resulting from complex tax system put unequal pressure on smaller companies (Coolidge, 2009). Thus, smaller companies operating under the regular system of taxation may be discriminated against compared to the big companies because compliance, requirements and the costs of compliance are the same for both small and big enterprises in Nigeria. Moreover, tax consultants may either encourage good-faith tax reporting or encourage avoidance as taxpayers gain sophistication (Forest & Sheffrin, 2002).

Moreover, evidence has been documented in the literature on the direct effect of tax compliance costs on tax non-compliance. Slemrod (2004) presumed that tax compliance behaviour was related to tax compliance costs. Slemrod further argued that tax complexity, which results in high tax compliance costs, might lead to tax non-compliance. Empirical studies (discussed previously) have established the direct connection between compliance costs and compliance behaviour (Abdul Jabbar, 2009; Das-gupta, 2002; Nur-tegin, 2008; Sapiei et al., 2014; Sapiei & Kasipillai, 2013a; Yesegat, 2009). Therefore, a lack of attention has been paid to the mediating effect of tax compliance costs in the previous studies whereas, considerable evidence has been documented on the direct effect of tax compliance costs on tax non-compliance behaviour.

For a logical explanation, deterrence theory is used to establish the mediating role of tax compliance costs. Deterrence theory involves coercive measures that ensure tax compliance. The theory can also involve persuasive measures as the end objective is ensuring compliance. Hence, the level of audit and penalties and fairness consideration (in tax rates, tax tribunal treatment and the general tax system) of the taxpayers encourage taxpayers to incur tax compliance costs to pay the correct taxes. The deterrence theory implies that, when taxpayers expect a low level of detection and penalty, they may under-report their taxable income to have savings. But, where detection and penalties are high, the taxpayers will make sure they comply. This is explained in the AL model in which the independent variables (tax rate, audit and penalty) influence tax compliance behaviour in an indirect relationship, through the mediation of monetary compliance costs (Abdul Jabbar, 2009; Fischer et al., 1992).

Therefore, given the conditions for establishing mediating effect, to the best knowledge of the researcher, there appears to be a lack of studies testing the mediating effect of compliance costs on the relationship between corporate tax non-compliance behaviour and its determinants. As such, the current study tests the mediating effect of compliance costs.

To sum up, a paucity of studies exists on the direct effect of the perception of tax tribunal and the mediating role of tax compliance cost on corporate tax non-compliance. Given the inconclusive findings and the need for more explanation of this complex behaviour, this study bridges these gaps by testing such variables in its model. Moreover, this study examines the direct effect of audit, bribery, complexity, fairness perception, penalty, and tax rate perceptions on tax non-compliance, having recognized their importance in the tax system, the tax non-compliance literature and their relevance to the small companies and the Nigerian tax environment.

3.6 Summary of the Chapter

This chapter discussed the underpinning theories for this study, followed by definitions, conceptualizations, and classifications of the key variables of this study based on the prior studies. The chapter reviewed the relevant literature available on the tax non-compliance and its determinants based on the variables in the model of this study, namely, audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal and tax compliance costs.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The previous chapter reviewed the related literature on tax non-compliance and its determinants. The current chapter discusses the research methodology employed by this study. The study is based on the positivist paradigm that uses quantitative methods. The following sections cover the research framework, hypotheses development, operational definitions and the measurement of variables. The sections also cover research design, questionnaire design and validity tests, the pilot study, the data collection procedure, data analyses and, finally, a summary of the chapter.

4.2 Conceptual Framework

The conceptual framework is a diagrammatic representation that shows the relationship between variables based on theory (Hair, Money, Samouel, & Page, 2007). The variables in the conceptual framework of this study comprise audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of the tax tribunal, tax compliance costs and tax rate perception. The variables are related based on the deterrence and social exchange theories. Deterrence theory basically involves factors that prevent non-compliance. The influences of audit and penalty and tax compliance costs on tax non-compliance are underpinned in deterrence theory. Accordingly, a high level of detection from an audit and high penalties reduces tax non-compliance. Also, with high perceptions of the possibility of an audit and penalties, taxpayers may find it necessary to incur tax compliance costs to ensure correct filing and hence reduce non-compliance. Moreover, under the Nigerian tax law, a corporate taxpayer’s return must be certified by a tax consultant before the tax authority accepts it. Certification by the tax consultants, which reflects tax compliance costs, may facilitate a more accurate filing. Hence, this is considered as deterrent measure against non-compliance.

The relationships between the other variables and non-compliance are underpinned by the social exchange theory. The theory emphasizes that social relationships are established based on the rewards obtained from such relationships. Hence, if the tax system is corrupt and bribery exists among tax authority staff, a taxpayer may give bribes to reduce his tax liability, which means increasing non-compliance. In the case of complexity, when the tax system remains complex without being simplified, a taxpayer may engage in non-compliance either intentionally or unintentionally due to the complexity. Similarly, a fair tax system, an effective role of tax tribunal, the perception of a fair tax rate and efficient public goods supply can act as compensation that may motivate a taxpayer to exhibit high compliance and, hence, reduce non-compliance.

For the indirect relationships, the mediating role of tax compliance costs is also based on deterrence theory. Given the imposition of the tax compliance costs, which reflect the costs of tax consultants and other internal efforts necessitated by the compliance effort, tax compliance costs can explain why taxpayers comply.

Based on the above discussion, the model of this study is developed in line with the deterrence and social exchange theories. The model comprises nine independent variables to predict corporate tax non-compliance. The model includes the mediating role of tax compliance costs. The model is presented in Figure 4.1.

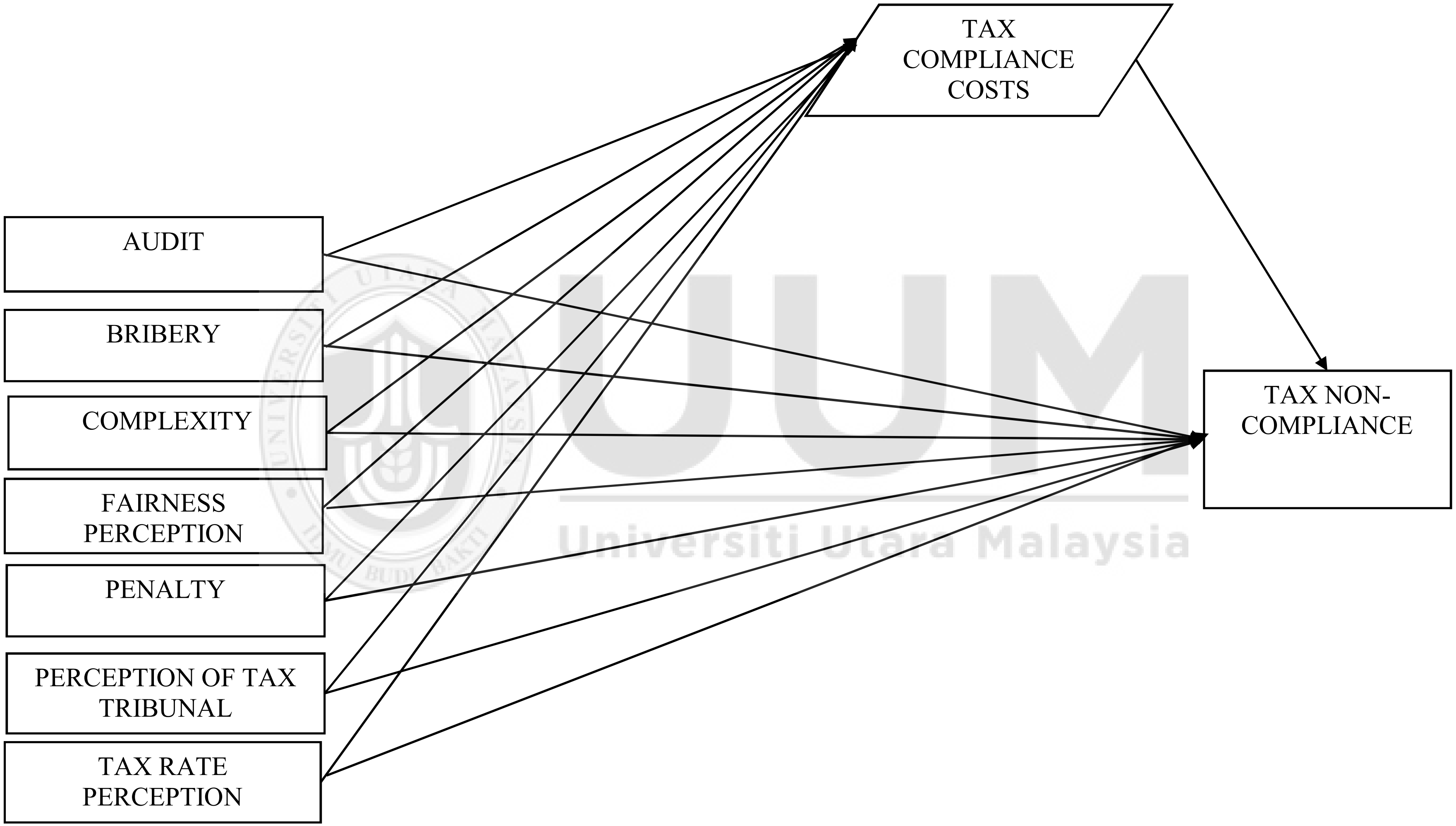

Figure 4.1
Conceptual Framework

4.3 Hypotheses Development

A hypothesis refers to a proposition that can be tested empirically (Zikmund, Babin, Carr, & Griffin, 2013). In other words, a hypothesis is a speculative statement about the relationship between variables. This study develops several hypotheses to bring direction and focus based on the literature and theoretical justifications. This study has 10 variables, namely, audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal, tax compliance costs and tax rate perception, (as the independent variables). Also, compliance costs (as the mediating variable). Tax non-compliance stands as the dependent variable.

The hypotheses are based on the two major objectives of this study. The hypotheses are concerned with relationships between the variables. The hypotheses are numbered from H_1 to H_{23}. H_1 to H_9 relate to the first objective of the study and denote the direct relationships between the independent and the dependent variables. H_{10} to H_{16} are concerned with the second objective that represents the mediating relationships. The hypotheses were developed with reference to the findings of the previous studies discussed in the literature review as detailed in the previous chapter.

4.3.1 Audit and Tax Non-compliance

Audit is a tax structure variable and stands to be an important tax compliance enforcement mechanism (Fischer, 1993; Kirchler, Muehlbacher, Kastlunger, & Wahl, 2008). Based on the literature review, mixed findings are documented with most of the studies supporting the negative effect of audit on tax non-compliance. Hence, in line with deterrence theory, most studies supported the negative effect of audit on tax non-compliance (Abdul Jabbar, 2009; Alm et al., 2004; Ayers et al., 2015; Blumenthal et al., 2001; Dubin et al., 1990; Gërxhani & Schram, 2006; Kamdar, 1997; Klepper & Nagin, 1989; Mason & Calvin, 1978; Nur-tegin, 2008; Ortega & Sanguitti, 2013; Spicer & Thomas, 1982; Spicer & Hero, 1985; Vogel, 1974; Wenzel, 2004). On the other hand, other studies have documented a weak effect of audit on tax non-compliance (Ariel, 2012; Forest & Sheffrin, 2002; Friedland et al., 1978; Gërxhani & Schram, 2006; Sapiei & Kasipillai, 2013a). Based on deterrence theory and majority of the studies, this study hypothesizes that:

H_1: There is a negative relationship between audit and small companies' tax non-compliance.

4.3.2 Bribery and Corporate Tax Non-compliance

Institutional corruption is prevalent in tax administrations in most developing countries, especially in sub-Saharan African countries and Asia countries and Latin America (Imam & Jacobs, 2014). Hence, when the number of tax of officials willing to take bribes is high, the level of non-compliance through underreporting will be wide spread among taxpayers (Bilotkach, 2006). Thus, several studies tested the effect of tax officials bribery on tax non-compliance with most studies reporting a positive effect (Aiko & Logan, 2014; Alm et al., 2016; Bilotkach, 2006; Gangl et al., 2015; Joulfaian, 2009; Nur-tegin, 2008). This is in line with the social exchange theory. Conversely, Imam and Jacobs (2014) reported an insignificant finding. Therefore, based on the theory and majority of the studies, this study hypothesizes that:

H_2: There is a positive relationship between bribery and small companies' tax non-compliance.

4.3.3 Complexity and Tax Non-compliance

Complexity of the tax system has become one of the challenges that hampers voluntary tax compliance. The effect of complexity may lead to unintentional tax non-compliance and, in turn, lead the taxpayer to pay penalties as specified under SAS (Saad et al., 2014). For the association between complexity and corporate tax non-compliance, most studies have documented the positive influence of complexity on tax non-compliance (Abdul Jabbar, 2009; Forest & Sheffrin, 2002; McKerchar, 2003, 2005, 2007; Milliron, 1985; Richardson, 2005; Sapiei & Kasipillai, 2013a; Strader & Fogliasso, 1989). This is also in line with the social exchange theory. However, Clotfelter (1983) and Isa (2014) reported an insignificant effect of complexity. Hence, based on the theory and the findings of most studies, this study hypothesizes that:

H_3: There is a positive relationship between complexity and small companies' tax non-compliance.

4.3.4 Fairness Perception and Tax Non-compliance

The success of a tax system may largely depend on the extent of fairness perceptions of the taxpayers, and the perceived unfairness of the system can encourage non-compliance. Hence, judgments about the morality of the tax laws are connected to voluntary compliance (Tyler, 1997). The relationship between fairness perception and the compliance decision has received research attention. In line with the social exchange theory, most studies have reported a negative effect of fairness on tax non-compliance (Alm, Cronshaw, & Mckee, 1993; Azmi & Perumal, 2008; Belay & Viswanadham, 2016; Faizal & Palil, 2015; Forest & Sheffrin, 2002; Gilligan & Richardson, 2005; Moser, Evans III, & Kim, 1995; Porcano, 1988; Puspita, Subroto, & Baridwan, 2016; Roberts & Hite, 1994; Song & Yarbrough, 1978; Spicer & Becker, 1980; Wenzel, 2002). Some studies have reported an insignificant effect of fairness (Faizal & Palil, 2015; Porcano, 1988; Saad, 2009). Accordingly, based on the theory and findings of majority of the studies, this study hypothesizes that:

H_4: There is a negative relationship between fairness perception and small companies' tax non-compliance.

4.3.5 Penalty and Tax Non-compliance

Penalty is another tax structure variable and important enforcement mechanism for reducing non-compliance (Kirchler et al., 2007). Swistak (2016) states that penalties are an important aspect of tax compliance strategy, which have good potential to deter non-compliance if used appropriately. However, empirical studies have provided mixed findings evidence on the influence of penalty on corporate tax non-compliance. On one hand, some studies supported the preposition of the deterrence theory by reporting a negative effect of penalty on non-compliance (Alm, Sanchez, & DeJuan, 1995; Friedland, 1982; Friedland et al., 1978; Park & Hyun, 2003). On the other hand, a comparable number of other studies could not establish a significant effect of penalty (Alm, Jackson, & Mckee, 1992; Ariel, 2012; Collins, Milliron, & Toy, 1992; Kamdar, 1997; Klepper & Nagin, 1989; Webley, Robben, Elffers, & Hessing, 1991). Based on the above, this study hypothesizes that:

H_5: There is a relationship between penalty and small companies' tax non-compliance.

4.3.6 Public Goods Supply and Tax Non-compliance

This section deals with the hypothesis on the direct relationship between public goods supply and tax non-compliance. In line with social exchange theory, most studies have documented a strong negative influence of public goods supply on tax non-compliance (Alm et al., 1992; Alm, McClelland, & Schulze, 1992; Torgler, Schaffner, & Macintyre, 2007). Similarly, Alabede, Ariffin, and Idris (2011) reported the significant and positive influence of public governance quality on tax compliance in Nigeria. Public governance quality includes the provision of public goods. However, Alm et al. (1995) reported a weak influence of public goods supply. Based on this discussion, this study hypothesizes that:

H_6: There is a negative relationship between public goods supply and small companies' tax non-compliance.

4.3.7 Perception of Tax Tribunal and Tax Non-compliance

Based on the literature review, this study identified a gap about a direct influence of perception of tax tribunal on tax non-compliance. Hence, this study extended the literature by proposing and testing the direct effect of the perception of the tax tribunal on tax non-compliance. Thus, the connection between the role of a tax tribunal and tax non-compliance is hypothesized based on theory and related studies.

Social exchange theory notes that people in their social relations consider the returns they will get based on their inputs. Hence, taxpayers may reciprocate with compliance for just treatment from the tax tribunal as an institution and an integral part of the tax system. Similarly, Kirchler et al. (2008) emphasized that, if an authority treats their cases with fairness and justice, then it stimulates a willingness to contribute voluntarily by complying with the tax laws. Thus, justice in the procedures taken by a tax tribunal to arrive at a final decision, as well as the justice of the final decision, are crucial to the taxpayers' compliance decisions.

Literature on justice and tax compliance has acknowledged the connection between voluntary compliance and the perceptions of the legitimacy of authorities and the morality of the law (Tyler, 1997). In another study, Tyler (1990) notes the strong association between compliance and the views about justice and injustice. Hence, the role of a tax tribunal is central to a tax compliance decision. Other empirical evidence shows that a connection exists between procedural treatment and trusting the authority (Murphy, 2004). Individuals are influenced by the judgments of unbiased decision-making procedures (Murphy, 2004).

Moreover, several other studies have documented evidence, in different contexts, on the strong effect of perceived procedural justice involved in the decision making of an authority on satisfaction, support for the authority and compliance with their decisions (Bates, 2014; Gobena & Dijke, 2016; Gopinath & Becker, 2000; James et al., 2005; Wenzel, 2002b). Therefore, consistency, accuracy, and a fair hearing in the procedures of the tax tribunal ensures justice, which can promote tax compliance.

Based on the above, the literature has provided evidence on the justice relating to the legitimacy of authorities and morality of the law. To the best knowledge of this researcher, the literature has ignored the perception of justice relating to the role of a tax tribunal. Hence, this study investigates the influence of the role of a tax tribunal on corporate tax non-compliance. Thus, the hypothesis of this relationship is based on the above related studies and social exchange theory. Thus, this study postulates that when the role of tax tribunal is perceived as being just by means of fair procedures and final judgement, the taxpayers would have more trust in the whole tax system and become encouraged to comply. In the case of social exchange theory, when the taxpayers perceive the role of tax tribunal to be just they reciprocate by complying with the tax laws. Therefore, this study hypothesized that:

H_7: There is relationship between the perception of tax tribunal and small companies' tax non-compliance.

4.3.8 Tax Compliance Costs and Tax Non-compliance

This section deals with the hypothesis on the direct relationship between tax compliance costs and tax non-compliance. Most studies of tax compliance costs have focused on the estimation of the tax compliance costs. However, a few studies have focused on its relationship with non-compliance. Hence, this study develops the hypothesis on the relationship between tax compliance costs and tax non-compliance based on deterrence theory, previous studies and consideration of its context.

Deterrence theory involves coercive measures that ensure tax compliance. Hence, given that in the Nigerian tax environment it is mandatory for the returns of corporate taxpayers to be certified by tax consultants for the tax authority to accept these returns (s. 55 CITA 2007), compliance costs are considered as being an imposed measure to ensure compliance. In the same vein, Sapiei et al. (2014) hypothesized a negative relationship between tax compliance costs and tax non-compliance based on the argument that consulting tax consultants and the internal struggle of the companies to ensure correct filing of tax return, which is translated into high compliance costs, should lead to reduced non-compliance.

Moreover, Yesegat (2009), in the qualitative aspect of a mixed methods study, reported that 69% of the respondents agreed that the burden of compliance costs did not discourage tax compliance. This may indicate a negative effect of tax compliance costs on non-compliance. Other studies reported a weak effect of tax compliance costs on tax non-compliance. (Abdul Jabbar, 2009; Sapiei et al., 2014; Yesegat, 2009). Conversely, Nur-tegin (2008) found a significant and positive relationship between tax compliance costs and tax non-compliance. Based on the above, this study hypothesizes that:

H_8 There is a relationship between tax compliance costs and small companies' tax non-compliance.

4.3.9 Tax Rate Perception and Tax Non-compliance

The tax rate is a key tax structure variable connected to the taxpayers' perceptions of equity (Devos, 2007). Based on social exchange theory, it is expected that a high perception of equity in the tax rate would encourage tax compliance. In this regard, several studies documented mixed evidence on the influence of perception of tax rate on tax non-compliance. Hence, Kinsey and Grasmick (1993), Moser et al. (1995), Porcano (1988) and Spicer and Becker (1980) reported the negative influence of the perception of tax rate, which is in alignment with the theory. Conversely, Abdul Jabbar (2009) and Sapiei and Kasipillai (2013a) reported a weak influence. With regards to the equity perception of the tax rate, this study hypothesizes that:

H_9: There is a relationship between tax rate perception and small companies' tax non-compliance.

4.3.10 Tax Compliance Costs as a Mediator

This section deals with the mediating relationship hypotheses. As the literature shows a lack of empirical attention of previous studies on the mediating role of tax compliance costs, this study basically develops the mediating hypotheses based on deterrence theory. Deterrence theory involves measures that impose compliance. As discussed earlier, dealing with tax consultants (which reflects tax compliance costs) is imposed on corporate taxpayers in

Nigeria to ensure compliance (s. 55 CITA 2007). Hence, based on deterrence theory, tax compliance costs can explain why taxpayers comply.

Specifically, when the detection level and penalty are high, the taxpayers may find it more necessary to incur the additional costs to ensure that they file proper returns to avoid non-compliance and vice versa. This is explained in the AL model in that the independent variables (tax rate, audit and penalty) influence tax non-compliance behaviour in an indirect relationship through the mediation of monetary compliance costs (Abdul Jabbar, 2009; Fischer et al., 1992). Similarly, if taxpayers perceive that the tax system is fair and uncorrupted, and the tax tribunal is just even if it is complicated, then they may be willing to incur the extra compliance costs to ensure they file the correct returns. Conversely, if taxpayers perceive that the tax system is unfair and corrupt, they may not be willing to incur the extra costs to ensure they file the correct returns, especially when the audit and penalty structures are weak. Consequently, these additional costs may be the fundamental reasons why the taxpayers either comply or do not comply. Based on the above discussions, this study hypothesizes the following mediating relations:

H_{10} Tax compliance costs mediate the relationship between audit and small companies' tax non-compliance.

H_{11}: Tax compliance costs mediate the relationship between bribe and small companies' tax non-compliance.

H_{12}: Tax compliance costs mediate the relationship between complexity and small companies' tax non-compliance.

H_{13}: Tax compliance costs mediate the relationship between fairness perceptions and small companies' tax non-compliance.

H_{14}: Tax compliance costs mediate the relationship between penalties and small companies' tax non-compliance.

H_{15}: Tax compliance costs mediate the relationship between the perception of perception of tax tribunal and small companies' tax non-compliance.

H_{16}: Tax compliance costs mediate the relationship between perceptions of tax rate and small companies' tax non-compliance.

Table 4.1 gives the summary of the hypotheses of this study in relationship to the objectives of the study.

Table 4.1
Summary of Research Objectives and Hypotheses

Research Objectives	Hypothesis
1. To investigate the influence of audit, bribery, complexity, fairness perception, penalty, public goods supply, perception of tax tribunal, tax compliance costs and tax rate perception on small companies' tax non-compliance.	H1: There is a negative relationship between audit and small companies' tax non-compliance. H_2: There is a positive relationship between bribery and small companies' tax non-compliance. H_3: There is a positive relationship between complexity and small companies' tax non-compliance. H_4: There is a negative relationship between fairness perception and small companies' tax non-compliance. H_5: There is a relationship between penalty and small companies' tax non-compliance. H_6: There is a negative relationship between public goods supply and small company's tax non-compliance. H_7: There is a relationship between the perception of tax tribunal and small companies' tax non-compliance. H_8: There is a relationship between tax compliance costs and small companies' tax non-compliance. H_9: There is a relationship between tax rate perception and small companies' tax non-compliance.
2. To examine whether tax compliance cost mediates the relationship between small companies' tax non-compliance and its determinants.	H_{10}: Compliance costs mediate the relationship between audit and small companies' tax non-compliance. H_{11}: Compliance costs mediate the relationship between bribery and small companies' tax non-compliance. H_{12}: Compliance costs mediate the relationship between complexity and small companies' tax non-compliance. H_{13}: Compliance costs mediate the relationship between fairness perception and small companies' tax non-compliance. H_{14}: Compliance costs mediate the relationship between penalty and small companies' tax non-compliance. H_{15}: Compliance costs mediate the relationship between the perception of tax tribunal and small companies' tax non-compliance. H_{16}: Compliance costs mediate the relationship between tax rate perception and small companies' tax non-compliance.

4.4 Research Design

A research design provides the necessary directions for conducting research (Hair, Celsi, Money, Samouel, & Page, 2015). The current research investigates the determinants of tax non-compliance. Thus, the study chooses a design that provides relevant information to achieve the research objectives and answers the research questions efficiently. Survey research is the most popular method of social sciences research (Hair et al., 2007). More specifically, this method remains popular in the tax compliance research (Abdul Jabbar, 2009).

Concerning the determinants of tax non-compliance and the non-compliance, this study investigates the cause and effect between the independent and the dependent variables. Therefore, this is causal research that tests the hypotheses regarding the cause and effect and makes inferences concerning the causal relationship between the variables. Thus, the current study employs a quantitative approach to examine the effect of the determinants of tax non-compliance on the tax non-compliance. Similarly, the study examines the mediating roles of tax compliance costs on the relationship between the independent and the dependent variables.

Therefore, this kind of research is quantitative in nature. Quantitative research attempts to achieve research objectives using empirical estimation that involves numerical measurement and analysis (Kumar, Talib & Ramayah, 2013). Thus, findings from the quantitative data analyses are expressed in numerical form, and the solution of the research problem is derived from the statistical patterns found.

Having chosen the research design, the next thing is to choose the appropriate method of data collection. There are different methods such as survey and interview (based on instrumentation) and cross-sectional and longitudinal (based on time spans). This study employs a survey method of data collection that collects quantitative data, via a self-administered questionnaire. The survey method is a process of gathering information from the representative target respondents using a predesigned questionnaire (Zikmund et al., 2013).

Concerning the time span, this study is cross-sectional research. Cross-sectional research is one that collects data once over a period to answer the research questions (Kumar et al., 2013). Cross-sectional research is more appropriate for this study as the study requires information on compliance costs for a given period (2014). In addition, the period of this study is inappropriate for a longitudinal design that collects data for two or more periods. Moreover, other constraints, such as effort and costs of longitudinal data collection necessitate the choice of cross-sectional design. Thus, this study collects quantitative information via a questionnaire from the respondents about their perceptions and compliance costs.

4.4.1 Population of the Study

Population refers to a complete group of people or objects that have a common set of characteristics (Zikmund et al., 2013). In most business research, it is difficult, if not impossible, to study all elements of a population because many researchers have budget and time constraints. In addition, a properly selected sample can give accurate results and it is, therefore, unnecessary to study the entire population.

The population of this study comprises small corporate taxpayers that pay taxes to FIRS, located and are operating in Kano state of Nigeria. Kano state is the centre of commerce in Nigeria and one of the states with the highest number of small companies. According to FIRS (2015) small corporate taxpayers' list, 15,018 small corporations are in Kano. These companies operate in different sectors of the economy, which includes manufacturing, agriculture, transport, hotels and restaurants, culture and tourism, trade and commerce, ICT and buildings and construction (MAN, 2014).

The FIRS classified the corporate taxpayers based on their annual turnover. Table 4.2 highlights the classification. Micro and Small companies comprise small business entities with an annual turnover of N199 million and below. The second class involves medium companies with an annual turnover of N200 million to N1 billion. The last class are big companies with annual turnover of N1 billion and above. This study focuses on the first category, i.e., the micro and small companies and are referred to as small companies.

Table 4.2
Federal Inland Revenue Service Corporate Taxpayer Classification

Class	**Annual Turnover in Naira**
Micro and Small Companies	Below 200 million (USD654,986[6])
Medium Companies	200 million – 999 million (USD654,986- 3,274,930[5])
Large Companies	1 billion and above (USD3,274,930[5] and above)

Source: Federal Inland Revenue Service, 2012

4.4.2 Sample of the Study

It is not always feasible to study the entire population. Thus, most business researchers select a smaller number (sample) to represent the population (Sekaran & Bougie, 2010). The sample is a part of the population selected to represent the population (Zikmund et al., 2013). There are various techniques for determining sample size, such as Dillman's (2007) and Krejcie and Morgan's (1970) formulas. The current study utilizes Dillman's formula (Sekaran & Bougie, 2010).

The chance of the contacted respondents to participate was not known when this study began. Hence, a 50% chance that the respondents would participate was assumed as this is acceptable for a homogeneous sample (Dillman, 2007). Thus, the (p) is taken to be 0.5 as

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[6] At the official exchange rate of the Nigerian Central Bank (USD1 @ NGN305.35) for November 2017.

the researcher was not fully aware of the opinions of the population (Salant & Dillman, 1994). In the case of acceptable level of sampling error (*B*), it can be set to 3%, 5% or 10% of the population size. Accordingly, this study sets the sampling error at 5% of the population. Finally, the confidence level *C* = Z can be set at a confidence interval of 1.645 (90%), 1.960 (95%) or 2.576 (99%). This study set the confidence level (*C)* at 1.960, which corresponds to the 95% level of significance. Therefore, N_p = 15,018, p = 0.5, B = 0.05 and C = 1.96. Thus, the sample size is determined as follows:

$$\text{Ns} = \frac{(15{,}018)(0.5)(1-0.5)}{(15{,}018-1)\left(\frac{0.05}{1.96}\right)^2 + (0.5)(1-0.5)}$$

$$\mathbf{N_s \approx 375}$$

Based on the above technique, the sample size is determined to be 375 respondents. Moreover, giving Roscoe's (1975) rule of thumb, the sample size determined by this study is appropriate. The rule asserts that a sample between 30 to 500 is appropriate for most social science research. Based on the above, this study considers the sample size of 375 as appropriate.

It is acceptable in a questionnaire survey to increase the sample size beyond the minimum sample size due to an anticipated low response rate and, in so doing, to ensure adequate representation and generalization (Babbie, 1973). Salkind (1997) referred to this approach of increasing a sample as over-sampling. Moreover, over-sampling is expected to tackle the possible loss that may occur because of non-cooperation and damaged or incomplete surveys from some respondents (Peers, 1996). This is done to ensure that the non-response rate would not have an impact on the results of this study. Therefore, following Salkind, this study distributed 450 (after adding 20%) questionnaires instead of 375. As mentioned earlier (in section 1.6), these sample can represent small corporate taxpayers in Nigeria based on two main reasons. Kano state is the centre of commerce in Nigeria and has a high number of small companies operating in all sectors of the Nigerian economy (National Bureau of Statistics & Small & Medium Enterprises Development Agency of Nigeria, 2010). Also, FIRS has classified this class of companies all over the country as a homogeneous group of taxpayers.

4.4.3 Sampling Technique

Having decided the total number of the potential respondents as 450, the sampling technique next determines the actual respondents from the population to whom the questionnaires would be distributed. There are two main types of sampling techniques identified as probability and non-probability sampling. Probability sampling gives an equal chance of being selected for each element of the population, whereas in non-probability sampling, all elements have no pre-determined chance of being selected (Krejcie & Morgan, 1970). Probability sampling is used in this study to determine the individual small companies to whom the questionnaires were administered. This is because the aim of this study is to draw an unbiased sample from the population. This is also crucial for wider generalizability of the results of this study.

Probability sampling can be either simple random or complex probability sampling (Sekaran & Bougie, 2010). A sample is simple when each element of the population has a known and an equal chance of being selected. It is complex when the sampling procedure offers a more viable and more efficient alternative to simple random probability sampling. This study employs simple random sampling probability as it provides the most generalizability and less bias (Sekaran & Bougie, 2010). The MS Excel computer program was used to achieve the simple random sampling. This was done by generating random numbers of the sample size from the list of the population.

4.5 Operational Definition and Measurement of Variables

As illustrated in conceptual framework of this study (Figure 4.1), the current study has ten variables. These are nine independent variables (including a mediator) and one dependent variable. This section discusses the operational definition of the variables and their measurement. Measurement in scientific research involves allotting numbers or symbols to the empirical event in accordance with a set of rules. The aim of measurement is to achieve the highest quality with the lowest possible errors in testing the research hypotheses. Therefore, measurement instruments must be reliable, valid and concrete. Hence, the instrument can accurately measure what it is anticipated to measure efficiently.

Moreover, Sekaran and Bougie (2010) suggested that, where instruments with good psychometric characteristics are available, researchers may use that particular instrument as their reliability and validity have already been tested. All the measures of the variables of this study were adapted from prior studies mainly because of the rigorous tests for validity and reliability. In the cases of bribery, complexity, fairness perception and perception of tax tribunal, some items were omitted in the process of the pilot study- validity and reliability to achieve highest level of validity and reliability. See appendix B for the omitted measures. Also, all variables, with exception of tax compliance costs are measured based on 5-point Likert scale. The details of the operationalization and measurement follow in the next sections. The measurements presented only the final measures used in the final data collection.

4.5.1 Tax Non-compliance

Tax non-compliance is the dependent variable of this study. It is operationally defined as under-reporting income and over stating the expenses of business operations. In other words, any contrary behaviour that amounts to an understatement of income and overstatement of expenses is non-compliance. This is in line with studies that define non-compliance as a reduction of income or an overstating of expenses (Abdul Jabbar, 2009).

Tax non-compliance can be measured in three ways, namely, self-reports, experiments and tax audit data (Alm, 2012). Under the first method, the taxpayers are asked to report their filing behaviour. The questions are asked in either a direct (first person) or an indirect form (third person). For the second method, the taxpayers are subjected to an experiment, and they are requested to make compliance decisions under the experimental setting. For the last method, the compliance decisions of the taxpayers are deduced from the data gathered from the audit exercise.

Most corporate compliance studies have used audit data from tax authorities (Alon & Hageman, 2013; Joulfaian, 2009; Joulfaian & Rider, 1998; Kamdar, 1997; Tagkalakis, 2013). However, some studies have used the self-reporting method (Abdul Jabbar, 2009; Maseko, 2014; Sapiei & Kasipillai, 2013a). Sapiei and Kasipillai (2013a) highlighted the difficulty of obtaining the tax authority data due to the privacy of the information. Abdul Jabbar (2009) further mentioned two Malaysian studies (Abdul, 2003; Sia, Salleh, Sambasivan, & Kasipillai, 2008) that have utilized the tax authority data conducted by the IRB staff. More recently, another Malaysian study by Yusof et al. (2014) used IRB data. However, Abdul Jabbar (2009) concluded that researchers are left with the self-reporting and experimental methods given the difficulty of getting the audit data.

Therefore, this study will measure corporate tax non-compliance using four items adapted from (Gilligan & Richardson, 2005). A 5-point Likert scale ranging from ‘1’ “strongly disagree” to ‘5’ “strongly agree” was used to measure all the items. Also, ‘1’ in the scale means non-complying and ‘5’ means complying. Table 4.3 presents the items.

Table 4.3
Measures of Tax Non-compliance

No.	Item
1.	It is not okay to under-report certain income since it does not really hurt anyone.
2.	It is not okay to hide some earnings from interest or investment that the tax authority may not be able to find out about.
3.	It does not make sense to take a chance and take a deduction when a company is not sure whether it deserves the deduction.
4.	It is not normal to stretch some deductions to include some expenses that are not really such deductions.

Source: Adapted form from Gilligan and Richardson (2005)

4.5.2 Audit

Audit involves the likelihood that the tax authority will discover non-compliance acts of the taxpayer through its enforcement mechanism (Fischer, 1993). From the perspective of the taxpayers, it is their belief about the possibility that the tax authority may detect their non-compliance that is important. This study is concerned with the taxpayers’ perceptions about the likelihood of being audited and the likelihood of detecting discrepancies (see Christensen & Hite, 1997). Thus, this study operationally defines audit as the perception of a small company about the probability of being audited and probability of detecting any discrepancy (underreporting income or overstating expense) by the audit.

This study asks the respondents to indicate their agreement with four statements are based on a 5-point Likert scale ranging from ‘1’ strongly disagree ‘5’ strongly agree. Also, ‘1’ in the scale means a low probability of detection and '5' means a high probability of detection. The measure is adapted from Christensen and Hite (1997) and Wenzel (2004). The questions are presented in Table 4.4.

Table 4.4
Measures of Audit

No.	Item
1.	The chances of being audited are high so that it is not advisable to try to cut down a little on corporate income taxes for various reasons.
2.	There are chances that any discrepancy in the tax return will be detected.
3.	It is likely that an annual tax return with a discrepancy will be audited.
4.	If a company is chosen for audit, it is likely that the audit will identify any discrepancy.

Sources: Adapted form from Christensen and Hite (1997) and Wenzel (2004)

4.5.3 Bribery

Evidence from around the world has made it clear that corruption in revenue administration is a serious problem (Imam & Jacobs, 2014). Corruption can be measured by direct observation (Olken & Barron, 2009; Sequeira, 2009) or a perception survey (Bird, Martinez-vazquez & Torgler, 2014). It is easier to measure corruption by asking about someone's perception than from direct observation of corrupt acts (Olken & Pande, 2012). Thus, corruption perception surveys form the basis of corruption indices surveys, such as the Transparency International's Annual Corruption Perception Index (CPI) (Olken & Pande, 2011). Therefore, this study operationally defines corruption as small company's perception about giving bribes to tax authority officials to get things done (such as reducing their actual tax liability).

This study measures corruption using four items adapted from Martin, Cullen, Johnson & Parboteeah (2007). The items were originally from the World Bank firm-level data set of the World Business Environment Survey (WBES, 2000) conducted in 80 countries. However, to ensure more reliability of the measures, Martin et al. (2007) conducted an extra screening of the measures in which only countries with alpha coefficients of 0.70 and greater are retained. At the end of the screening only information of about 20% of the original surveyed companies was retained because Martin et al. were interested in local companies' bribing of home-country government officials. This makes the items screened by Martin et al. more appropriate for this study. Hence, this study adapted the items and measured taxpayers' perception about bribery are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. Also, '1' in the scale means not giving a bribe and '5' means a high level of bribery. In addition, the strong alpha value also motivates the choice of this measure 0.86. The items are presented in Table 4.5.

Table 4.5
Measures of Bribery

No.	**Items**
1.	It is common for a small company to pay some irregular additional payments to get things done.
2.	A small company need to make extra unofficial payments to public officials to get connected to public services.
3.	A small company need to make extra unofficial payments to public officials to deal with taxes and tax collection.
4.	A small company need to make extra unofficial payments to public officials when dealing with customs/imports.

Source: Adapted form from Martin et al. (2007)

4.5.4 Complexity

Complexity has been measured as a multi-dimensional construct. The dimensions include the difficulty of the tax laws and the computational aspect (Long & Swingen, 1991). Milliron (1985) defined complexity of the tax system as difficulties in understanding the tax laws, computation of tax liability and other tax procedures. For Mustafa (1997), complexity has six sub-dimensions comprising changes in tax law, ambiguity in tax law, detail, record-keeping, computations and tax forms. In line with Abdul Jabbar (2009), this study considers complexity as uni-dimensional and operationally defines it as small company's complexity perception in relationship to complications in filing the tax returns and understanding the tax laws.

This study intends to measure complexity using three items adapted from Abdul Jabbar (2009). The items measure taxpayers' perception are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. Also, '1' in the scale means complex system and '5' means simple system. The questions are presented in Table 4.6:

Table 4.6
Measures of Complexity

No.	Item
1.	I consider corporate income tax return preparation simple.
2.	Complexity in the income tax law is necessary so that companies are treated fairly[7].
3.	Corporate income tax is not so complicated that you need the services of tax professionals to take advantage of most legal ways to save much taxes.

Sources: Adapted form from Abdul Jabbar (2009) and Christensen et al. (1994)

4.5.5 Fairness Perception

The seminal work of Gerbing (1988) identified fairness as a multi-dimensional construct including: general fairness, exchange with the government, attitudes towards taxes of wealthy, progressive versus flat rate and self-interest have been tested as the dimensions of fairness. Relevant to this study, fairness involves comparisons of benefits and contributions

[7] Item two of complexity is reverse coded in the analysis to tally with the other items in the Likert scale.

and comparisons of feelings on how one is treated in relationship to other taxpayers (distributive fairness) (van Dijke & Verboon, 2010). Fairness perception is measured in this study as a one-dimensional variable in line with Abdul Jabbar (2009). Thus, fairness perception is operationally defined as perceptions of the small companies on the fairness of the tax laws in relationship to the current tax system.

This study measures fairness perception as a uni-dimensional variable with three items adapted from Abdul Jabbar (2009) and Robert (1994). The items were originally developed by Roberts (1994). However, Abdul Jabbar adapted them to be more suitable for corporate taxpayers. Hence, the measures were adapted from Abdul Jabbar to measure small corporate taxpayers' fairness perception are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. Also, '1' in the scale means unfair and '5' means fair. The questions are presented in Table 4.7.

Table 4.7
Measures of Fairness Perception

No.	Item
1.	The officers of every company have a moral obligation to report all their company's income and pay the correct amount of corporate income tax.
2	Under the current income tax system corporate tax laws are fair.
3.	Change to SAS did not make corporate income tax more on small companies.

Sources: Adapted form from Abdul Jabbar (2009) and Robert (1994)

4.5.6 Penalty

Penalty is the punishment imposed on the taxpayer for non-compliance with the tax laws. As in the case of detection probability, the effect of the penalty on compliance is a perceived one because it is not the actual penalty (Fischer, 1993). Similarly, D'Arcy, Hovav, and Galletta (2009) operationally defined perceived sanction as the perception of the probability of being punished and the severity of the punishment for non-compliance with rules. Thus, this study operationally defines penalty as the perception of the severity of tax sanction and its effect on taxpayers' non-compliance decisions.

This study measures penalty using four items adapted from James, et al. (2005). The measures consist of four items measuring penalty are based on a 5-point Likert scale ranging from '1' as strongly disagree to '5' strongly agree with '1' meaning not severe and 5 meaning severe. Also, '1' in the scale means no severity and '5' means a high level of severity. The questions are presented in Table 4.8.

Table 4.8
Measures of Penalty

No.	Item
1.	If an illegal discrepancy is detected in a company's return, taking the company to court and paying the taxes owed with interest and substantial fine will cause problems for the company.
2.	If an illegal discrepancy is detected in a company's return, taking the company to the court and paying the taxes owed with interest will cause problems for the company.
3.	If an illegal discrepancy is detected in a company's return, paying the taxes owed with interest and substantial fine will cause problems for the company.
4.	If an illegal discrepancy is detected in a company's tax return, paying the taxes owed with interest will cause problems for the company.

Source: Adapted form from James et al. (2005)

4.5.7 Public Goods Supply

This study uses measures of government effectiveness (Kaufmann, Kraay, & Mastruzzi, 2011) to measure public goods supply. Although it represents one dimension in the main variable, i.e., public governance quality, Langbein and Knack (2010) argued against the dimensionality of the main variable and showed empirically that each government effectiveness as a dimension can measure the construct alone without separating it into different dimensions. A large and growing number of research has employed one or more of the six indexes to test fairly specific hypotheses, in most cases without acknowledging the possibility that the variable is really reflecting broader concepts related to the quality of governance (Tavits, 2007).

For the purpose of this study, government effectiveness in the WGI is taken as a proxy public goods supply. In the WGI, government effectiveness represents perceptions of public goods supply (with regards to the public sector) and the level of the policies independence from political pressure (Kaufmann et al., 2011). This study defines public goods supply as the perceptions of the small companies on satisfaction with the provision of public goods. Hence, this study measures public goods supply using four items adapted from Kaufamann, Kraay, and Zoido-Lobation (2002). The items were used to measure small company's perception about public goods supply are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. Also, '1' in the scale means unsatisfied and '5' means satisfied. The items are presented in Table 4.9.

Table 4.9
Measures of Public Goods Supply

No.	**Item**
1.	Public service in Nigeria is not vulnerable to political interference.
2.	The way the government is handling the health service is satisfactory.
3.	The way the government is handling the education system is satisfactory.
4.	The overall quality of infrastructure in Nigerian is satisfactory.

Sources: Adapted form from Kaufamann, Kraay, and Zoido-Lobation (2002)

4.5.8 Role of the Tax Tribunal

Ransome (2008) pointed out that accessibility, fair procedures, and correctness of outcome are the three factors that describe an effective tribunal. Similarly, in 1999, Canadian Chief Justice McLachlin had emphasized responsiveness to the public, fair procedures and equitable treatment, based on the rule of law, as the main roles of administrative tribunals

(Ransome, 2008). Thus, the current study operationally defines the perception of tax tribunal as the perception of free and fair procedures for judging tax disputes. This study assumes that fair and open procedures will lead to correct and fair ends (final decisions of the tribunal).

In measuring the perception of tax tribunal, this study adapts four items from Colquitt (2001). The items are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. Also, '1' in the scale means unfair and not free and '5' means fair and free. The items are presented in Table 4.10.

Table 4.10
Measures of Perception of tax tribunal

No.	**Item**
1.	Corporate taxpayers can express their views and feelings during the tribunal procedures.
2.	The tribunal procedures are free of bias.
3.	The tribunal procedures are based on accurate information.
4.	The tribunal procedures upheld ethical and moral standards.

Source: Adapted form from Colquitt (2001)

4.5.9 Tax Compliance Cost

Tax compliance cost is estimated in this study based on the major compliance cost studies (e.g., Sandford et al., 1989). The compliance cost is estimated based on external and internal costs. The external cost involves payments to external consultants while internal cost involves the costs of internal employees. Some issues have been raised in measuring the internal compliance costs in the case of valuing internal costs and treatment of overheads.

In the case of valuing internal compliance cost, the wage and the time of internal employees can be easily determined. For the overhead cost, an issue can arise in apportioning the cost where it is a joint cost. Even though it is theoretically considered as part of the compliance cost, it is a common practice to exclude it from the estimation of compliance costs (Abdul Jabbar, 2009). Moreover, excluding it has no significant effect in the case of small businesses (Sandford, 1995). Similarly, the psychological cost of compliance is not considered a purely compliance cost (Abdul Jabbar, 2009).

Following Abdul Jabbar, the current study does not consider psychological compliance cost. Thus, the current study asked two main questions to estimate internal tax compliance costs. One other main question was asked to estimate the external tax compliance cost. This resulted in single item (total amount in Nigerian Naira) as total compliance costs. The questions are summarized in Table 4.11.

Table 4.11
Measures of Tax Compliance Costs[8]

No.	Internal	External
1	Estimate of the internal staff cost for tax activities of the year in consideration.	1. Give an estimate of the cost of compliance activities provided by an external tax consultant.
2	Estimate of the non-staff costs of compliance of the year in consideration.	

Sources: Adapted form from Abdul Jabbar (2009) and Sandford et al (1989)

However, the measure of tax compliance costs has a significantly different mean and standard deviations in the data. In such situations of high variation, data transformation is considered to normalize the data (Osborne, 2010). Although, Partial Least Squares Structural Equation Modelling (PLS-SEM) is somehow tolerant about the assumption of

[8] The table provided a summary of the estimation/measurement of TCC. See Appendix A for details.

normality of distribution, extremely abnormal data can cause errors in the results (Hair et al., 2014). Specifically, in line with Abdul Jabbar (2009), who transformed tax compliance costs into Log 10 in his regression analysis, the current study transformed the tax compliance costs in the measurement and structural model analyses. Consistent with the current study, Abdul Jabbar tested a regression model that includes tax compliance costs and other variables in ratio and Likert scales respectively.

4.5.10 Tax Rate Perception

Tax rate is one of the four major components of taxpayers compliance decision (probability of detection evasion, punishment, income level and tax rate) under the standard economic model of tax compliance decision (Kirchler, 2007). This study focuses on the fairness perception of the tax rate. In this regard, Gilligan and Richardson (2005) defined tax rate as the perceived fairness of the tax rate structure and the burden of distribution. In line with this definition, this study operationally defines tax rate as the perception of the small company's taxpayers on the fairness of the tax rate in relationship to their size and profit performance (flat, progressive and proportionate tax rates).

Therefore, this study adapts three items from Abdul Jabbar (2009) to measure the small company's perception of the tax rate. The measures were originally from Christensen, Weihrich and Gerbing (1994), and Abdul Jabbar adapted them for corporate taxpayers. The measures are based on a 5-point Likert scale ranging from '1' strongly disagree to '5' strongly agree. The items are presented in Table 4.12.

Table 4.12
Measures of Tax Rate Perception

No.	Item
1	A fair tax rate should not be the same for every company regardless of size (small, medium or large).

2	It is fair that high-profit companies should pay a higher rate of tax than small and medium companies.
3	It is fair that high-profit companies should pay a higher rate of tax than low-profit companies.

Sources: Adapted form from Christensen et al. (1994) and Abdul Jabbar (2009)

4.5.11 Demographic Variables

The seven demographic variables for the respondents of this study included business length, number of employees, main business activity, financial year end, estimated tax liability, position of the respondent in the company and educational qualification of the respondents. Interval and nominal scales are used to measure the demographic variables. For the age and estimated tax liability of the company, the respondents were asked to choose from interval scales. In the case of financial year end and main business activity, the respondents were asked to choose from the categories provided. Finally, the respondents representing their various companies were asked about their educational qualification also based on the interval and categorical scales. Finally, the current study uses total of 34 items to measure all the variables in the study. Table 4.13 provides the summary of the variables, number of items and their sources.

Table 4.13
Summaries of Variables, Number of Items and Their Sources

Variable	Source	No of Items
Tax Non-compliance	Gilligan and Richardson (2005)	4
Audit	Christensen and Hite (1997) and Wenzel (2004)	4
Complexity	Christensen et al. (1994) and Abdul Jabbar (2009)	3
Bribery	Martin et al. (2007)	4
Fairness Perception	Abdul Jabbar (2009) and Robert (1994)	3
Penalty	James et al. (2005)	4
Public Goods Supply	Kaufamann et al. (2002)	4

Perception of Tax Tribunal	Colquitt (2001)	4
Tax Compliance Cost	Abdul Jabbar (2009) and Sandford et al. (1989)	1
Tax Rate Perception	Christensen et al. (1994) and Abdul Jabbar (2009)	3
Total		34

Note: Tax compliance costs is measured as a single amount in Naira, which is a total of internal and external tax compliance costs.

4.6 Questionnaire Design and Validity Test

The questionnaire of this study was a structured self-administered questionnaire comprising three major parts. Part one covers tax non-compliance and its determinants. It comprises questions relating to the dependent, independent and mediating variables. Part two deals with the estimation of tax compliance costs. This part is divided into two sub-sections. The first section deals with the internal compliance costs and the second section deals with the external compliance costs. Part three comprises questions about the demography of the company. The design of the questionnaire takes into consideration suggestions and considerations pointed out by Dillman (2007) in conducting survey research and Abdul Jabbar (2009), Sandford et al. (1989), Sandford and Hasseldine (1992) and Sandford (1995) in conducting tax compliance behaviour and compliance cost research.

The questionnaire was in the English language as the English language is the official language in Nigeria. The questionnaire was designed in a proper booklet format and well-arranged. Creswell (2009) argued that the questionnaire's physical arrangement of items on the pages and general appearance and format are essential for the success of a study. Similarly, a questionnaire that is carefully constructed and well-designed enables easy collation and analysis of data (Sekaran & Bougie, 2010). Therefore, the questionnaire was designed taking all the above into consideration.

Before going to the main data collection, ensuring how well the instrument measures what it is purported to measure is vital. Hence, content/face validity was conducted in this study. The content validity involves consultations with a few respondents and experts to assess the appropriateness of the items taken to measure the constructs. This study consulted two companies from the respondents (manager, director and accountant); two officers of the FIRS who deal with the taxation of small companies; and three lecturers whose areas of research is relevant to this study.

Lecturers who are acquainted with the context of this study were consulted to evaluate the clarity of the study instrument. The consultations led to the deletion and rephrasing of some items to make the instrument simpler to understand by potential respondents and more appropriately in measuring the constructs. This exercise was conducted and completed on August 2015. After adjusting the instrument by taking into consideration the observations of the validity test, this study adapted an improved version of the instrument. The improved version was administered for the pilot study.

4.7 Respondents

The small companies are more formal than most of the non-corporate enterprises (SMEs) in terms of their structures and organizational positions. This is because of the legal requirements on them being corporate entities guided by some laws (CAMA) and regulatory bodies (CAC). Positions, such as finance manager, accountant, etc. are specified in this class of companies. Therefore, this study proposed that any such person such as a CEO, a managing director, an accountant or a finance manager was the appropriate respondent to represent their various companies. People in these positions are expected to be in the best position to provide the required information with confidence and objectivity.

4.8 Pilot Study and Reliability Test

Like the validity tests, a pilot study is another method to improve the instrument of a study. A pilot study is a small-scale feasibility study conducted prior to the main study to gather information to help in improving the quality of the main study. Thus, this study conducted a pilot study to get feedback that was used to enhance the procedures of the main data collection. The pilot study procedures helped in improving the reliability of a research instrument.

In most pilot studies, the sample is generally small (Fink, 2003), usually increased to 100 responses (Dillman, 2007). A number of 15 to 30 respondents is considered sufficient; though it can be more than that especially where the test involves a number of levels (Malhotra, Hall, Shaw, & Oppenheim, 2007). Hence, this study administered 50 questionnaires to 50 companies randomly selected from the population of the study. Of the 50 distributed questionnaires, 41 were collected and seven were not properly completed, so 36 responses were considered for the analysis.

The high response rate of 76% was achieved due to the personal administration of the questionnaires. In the process of the pilot study, the respondents were asked to identify any ambiguities or difficult questions. The pilot study also recorded the time taken to complete the questionnaire to see if the time taken was reasonable. After the pilot study, all unnecessary and ambiguous questions were re-adjusted or discarded. The pilot study provided an avenue for a specific pre-testing of the research instrument of this study (questionnaire). Moreover, the pilot study showed that the proposed instrument and method of this study were appropriate and not complicated.

A pilot study also establishes the reliability of the items in the questionnaire. Reliability takes place when measurement items measure the same construct more than once and produce the same outcomes (Salkind, 2012). There are different methods of testing reliability, however, Cronbach‘s alpha coefficient stands as one of the most popular methods in testing the inter-item consistency and reliability (Sekaran & Bougie, 2010). The Cronbach’s alpha coefficient indicates the extent to which the items measuring a particular construct are consistent.

A Cronbach’s alpha coefficient of 0.60 is considered an average reliability, while a coefficient of 0.70 or higher indicates that the instrument achieved a high reliability standard (Hair et al., 2010; Nunnally, 1978; Sekaran & Bougie, 2010). This study performed a reliability test using the Statistical Package for the Social Sciences (SPSS) software. Table 4.14 presents the results of the reliability test. The Cronbach's alpha for the variables of the study ranged between 0.706 and 0.843. Therefore, all the variables had reliability within the required threshold.

Table 4.14
Items Reliability Test Result (Cronbach's alpha)

Variable	**Number of Items**	**Cronbach's Alpha**
Audit	4	0.752
Bribery	4	0.748
Complexity	3	0.729
Fairness	4	0.730
Penalty	4	0.709
Public Goods Supply	4	0.706
Perception of tax tribunal	4	0.828
Tax Non-compliance Behaviour	4	0.843
Tax Rate Perception	3	0.747

Note: Tax compliance costs is not included as it is not a latent variable

4.9 Data Collection Procedure

After a successful pilot study and necessary re-adjustment of the survey instrument, this study proceeded to the main data collection. This section discusses the procedure for the main data collection. This study employed the self-administered approach to collect data. In the self-administered questionnaire, the respondents are expected to read the questions and provide answers either in the presence of the researcher or not in his/her presence (Zikmund et al., 2013). This approach is appropriate for data collection in a survey confined to a local area, makes collection quicker, allows for clarification by the researcher, is less expensive; and has the possibility of high response rate (Sekaran & Bougie, 2010).

As mentioned earlier, the researcher embarked on the data collection procedure immediately after the pilot study. The process lasted for three months as expected. An official letter from the Othman Yeop Abdullah Graduate School of Business (OYAGSB) was used to introduce the researcher and the purpose of the data collection to the respondents. The letter helped in convincing the respondents that the data collected were for academic purposes, not for government use or any tax reasons.

4.10 Response Rate

The survey was conducted from October 2015 to January 2016. The data were collected from small corporations in Kano state of Nigeria. To allow for clarification and avoid unnecessary delay, the researcher administered the questionnaires personally. To further increase the response rate, personal visits, phone calls and SMS were used as a means of reminding the respondents.

Given the above efforts, 319 questionnaires were returned from the 450 questionnaires that were personally administered to the respondents. Thus, this yielded a response rate of 71%. Nevertheless, 16 questionnaires of the 319 returned were found to be incomplete or damaged and thus were excluded from the analysis. Hence, 303 questionnaires were used for further analysis, which gave a valid response rate of 67%. Table 4.15 presents the response rate figures. This response rate is closely related to that of Eragbhe and Modugu (2014), a similar study in Nigeria that used self-administered questionnaire in collecting tax related data and obtained a response rate of approximately 76% from corporate taxpayers.

Table 4.15
Response Rate of the Questionnaires

Response	**Rate**
Questionnaires administered	450
Questionnaires not returned	(131)
Questionnaires returned	319
Unusable questionnaires excluded from analysis	(16)
Usable questionnaires	303
Response rate (319/450)	71%
Valid response rate (303/450)	67%

4.11 Preliminary Data Analyses

After successful completion of data collection, this study subjected the data to preliminary analyses. The preliminary analysis involves treatment of missing value, outliers, normality, multicollinearity, non-response bias and common method variance. The SPSS was used in the preliminary analysis. Preliminary analysis ensures that the data meets all the assumptions for multivariate analysis. Additionally, these procedures are essential prior to multivariate analysis and help the researcher to better understand the data (Hair, Black, Babin, & Anderson, 2010). Preliminary analysis starts with data coding. All the usable questionnaires collected from the field were coded into the SPSS. After that, the coded data was subjected to screening to find any data entry errors. Having ensured correct coding of the data, the preliminary analysis starts with the treatment of missing values.

4.11.1 Missing Values

Missing data value occurs when a respondent either intentionally or unintentionally fails to provide answer for one or more questions (Hair, Hult, Ringle, & Sarstedt, 2014). Preventive action was taken to reduce the level of the missing data. For instance, questionnaires were checked during collection to ensure all questions were answered. Where answers were not provided, the respondents were gently requested to provide them. However, the problem of missing data cannot be completely avoided (Davey & Savla, 2010; Enders, 2010; Hair et al., 2010). Thus, treatment of missing data is an important part of the preliminary analysis to produce clean data free of any omissions to ensure valid results. Hence, this study performed frequency test for individual variables to identify and correct missing values using their respective mean values.

4.11.2 Outliers

An outlier refers to an excessive response case with an either uncommonly high or low value, which can have a negative impact on the analysis results. Outliers cases can occur due to variations in the measurement and indicate an experimental inaccuracy (Churchill & Iacobucci, 2006). Similarly, the existence of outlier can distort statistical results and make generalization impossible except with the same type of outliers (Tabachnick & Fidell, 2013) Therefore, handling outlier case(s) is another essential step in the preliminary analysis. Therefore, this study identified and treated multivariate outliers based on the Mahalanobis' measure (D^2) (Tabachnick & Fidell, 2013). This study treated only multivariate outliers as this takes care of univariate ones (Hair et al., 2010).

4.11.3 Normality

Normality refers to the degree to which the distribution of the sample data corresponds to the scores on the variables clustered around the mean in a bell-shaped or normal curve (Hair et al., 2010). The normality of distribution is a key assumption for statistical analysis and the structural equation model (Hair et al., 2010). Even though, PLS-SEM is somehow tolerant about the assumption of normal distribution, it requires the assessment for the normality of the data as extremely abnormal data can cause errors in the results (Hair et al., 2014). This study assesses the normality using the graphical method of normal probability plots.

Although it has been recommended to use PLS-SEM when the distribution is non-normal, some recent studies comparing the techniques of CB-SEM (parametric) and PLS-SEM (non-parametric) found that PLS-SEM can be suitable with normal distributions (Jannoo et al., 2014; Kock, 2016; Lowry & Gaskin, 2014). For instance, Jannoo et al. (2014) found that both PLS-SEM and CB-SEM path estimations have no great differences under both normal and non-normal distributions with a sufficient sample size. Hence, Jannoo et al. recommended basing the choice between parametric and non-parametric technique on the research goal. Consequently, PLS-SEM is more suitable for prediction of the dependent variables, as in the case of this study. Moreover, Kock (2016) found that PLS regression has better statistical power than the parametric path analysis in the case of both normal and non-normal data. Koch further found that PLS had a more widely accepted power threshold with a sufficient sample size under normal data. Therefore, this study found it more suitable to use PLS-SEM with the normal distribution.

4.11.4 Multicollinearity Test

Multicollinearity is a situation whereby independent constructs are extremely correlated. The independent variables are said to be extremely correlated with a value of 0.9 and above (Tabachnick & Fidell, 2013). The existence of multicollinearity among the independent constructs can significantly misrepresent the estimates of regression coefficients and their statistical significance tests (Hair et al., 2010). Hence, this study checks multicollinearity using a correlation matrix, a variance inflated factor (VIF) and the tolerance level of the independent variables based on the 0.7 threshold (Pallant, 2010).

4.11.5 Non-response Bias Test

Non-response bias refers to a mistake that can be made in estimating the characteristics of the population because of under representation of some respondents due to non-response. Ensuring unbiased representation in the sample is necessary for generalization. Non-response bias is one of the errors that can interfere with representativeness of the sample. Denscombe (2010) classified response bias into non-response through refusal and non-contact. In both cases, the non-response bias error occurs when the responses of respondents differ significantly from those who did not respond. Pearl and Fairley (1985) emphasized that, even if the size of the non-response is small, the no-response error should be investigated as there is a possibility of bias. The current study took several steps to address the problem of non-response bias and to check for the problem.

The first step taken is oversampling as suggested by Salkind (2012). Thus, the original sample of this study was increased by 20%. Moreover, this study used personal administration of the questionnaires and embarked on follow ups through personal visit, phone calls and SMS (Churchill & Iacobucci, 2006; Dillman, 2007). Furthermore, this study checked response bias by performing the non-response bias test based on early and late respondents using a t-test. Moreover, Levene's test for equality of variance was then used to find out whether the variances between the groups differ significantly.

4.11.6 Common Method Variance Test

Common method variance involves the variance related exclusively to the measurement procedure as opposed to the actual variables that the measures represent (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). As the data of the independent and dependent variables were collected at the same time using the same instrument, common methods bias could distort the data collected. Consequently, investigating the potential problem of common method bias in behavioural studies is always important (Meade, Watson, & Kroustalis, 2007). The threshold for common method bias is that a single factor should not explain more than 50% of the total variance (Podsakoff et al., 2003). Hence, the current study checked common method bias using un-rotated factors to avoid the problem of high variance in observed scores and inflated correlations.

4.12 Main Analysis

The main analysis involved two main evaluations. First, evaluation of the measurement model, which deals with the reliability of the measures. Second, evaluation of the structural model, which involves the extent of the influence of the exogenous variables on the endogenous variable. PLS-SEM is used for the main data analysis of this study.

PLS-SEM is a second-generation technique that is more suitable than first-generation techniques in analysing complex causal modelling relationships (Lowry & Gaskin, 2014). Similarly, this is in line with the submission that PLS-SEM is more suitable for models with a high number of exogenous latent variables explaining a small number of endogenous latent variables (Haenlein & Kaplan, 2004; Hair, Sarstedt, Ringle, & Mena, 2012).

Moreover, Chin, Marcolin, and Newsted (2003) and Esposito, Vinzi, Trinchera, and Amato (2010) acknowledged that PLS-SEM is a feasible alternative for testing an indirect effect. Therefore, this study uses PLS-SEM (Ringle, Wande, & Becker, 2014) to conduct the main analysis.

4.12.1 The Measurement Model

The measurement model involves the relationship between a variable and its measures. The model indicates the empirical relationship between the measures and the constructs of the study. Estimation of the measurement model gives the path coefficients, which represent the amount of variation in the dependent variable because of a unit increase in the independent variable. The amount of variation can be either positive (increase) or negative (decrease). This is represented in the model by the values on the path lines. The estimation of the measurement model is conducted using the PLS-SEM algorithm. The model determines an individual item's reliability, internal consistency, content validity, convergent validity and discriminant validity in measuring the construct (Hair et al., 2014).

1) Individual Item Reliability

Individual item reliability is determined by the outer loading of the item, which indicates its contribution in explaining a construct. This study uses the outer loading of an item to assess the reliability of the individual item (Hair et al., 2014). The outer loadings of the items were evaluated based on the threshold value of 0.50 and above (Hulland, 1999).

2) Internal Consistency

Internal consistency measures the consistency of results between items of the same test. It measures whether the proposed items measuring the construct are producing similar scores (Hair et al., 2014). Composite reliability and Cronbach's alpha are the most commonly measures of the internal consistency reliability (Peterson & Kim, 2013). However, Hair et al. (2014) prefer the use of Composite Reliability instead of Cronbach's alpha due its limitation of assuming an equal contribution by each item in measuring the construct under consideration. The threshold value is required to be 0.60 and above (Hair et al 2014: Henseler et al., 2009). Hence, this study uses Composite Reliability to measure the internal consistency of measures adapted.

3) Convergent Validity

Convergent validity refers to the extent to which an item correlates positively with other items measuring the same variable (Hair et al., 2014). Thus, items measuring a specific variable are expected to converge with a high proportion of variance. This study uses the average variance extracted (AVE) with a threshold of 0.50 (Chin, 1998; Henseler, Ringle, & Sinkovics, 2009) to establish convergent validity among the measures of its constructs as suggested by Fornell and Larcker (1981).

4) Discriminant Validity

Discriminant validity shows the uniqueness of a variable among all variables in a particular model (Hair et al., 2014). In other words, each variable should capture a phenomenon not covered by the other variables in the model. Based on the suggestion of Fornell and Larcker (1981), this study assessed discriminant validity using AVE. This is done by comparing the correlations of the latent variables with the square roots of the AVE (Fornell & Larcker, 1981). Thus, discriminant validity is achieved if the value of the square root of AVE of each variable is greater than its highest correlation with any other variable in the model (Hair et al., 2014; Henseler et al., 2009).

4.12.2 The Structural Model

After the measurement model assessment comes the structural model assessment. The structural model deals with the relationships between the endogenous and the exogenous latent variables and the predictive capability of the model. Four assessments are central in assessing the structural model: 1) assessment of coefficient of determination, 2) assessment of the effect-size, 3) assessment of predictive relevance, and 4) assessment of the significance of path coefficients through bootstrapping procedures. In this study, assessment of the significance of path coefficients involves the direct relationships and the mediating relationship.

1) Coefficient of Determination

The coefficient of determination, which is also known as R^2 value, is one of the commonly used criterion to evaluate structural model (Hair et al., 2014; Henseler et al., 2009). The coefficient of determination denotes the variation in the endogenous variable explained by the exogenous variables all together. The acceptable level of R^2 depends on the context of the research. However, 0.10 is considered as the minimum acceptable value (Falk & Miller, 1992). Moreover, Chin (1998) classified the size of coefficient of determination into three levels as weak, moderate and substantial based on the values of 0.19, 0.33 and 0.67 respectively.

2) Effect-size

Effect size, which is also referred to as f^2, is another important criterion that evaluates the relative effect of individual latent exogenous variable on the endogenous one after assessing the combined effect of the exogenous variables all together on the endogenous one. In determining the f^2 a particular exogenous variable is omitted in the model to obtained the difference in R^2 to evaluate whether the omitted exogenous construct has a substantial impact on the endogenous variables (Hair et al., 2014). As mentioned earlier, the formula below is used to determine the effect size where 0.02, 0.15, and 0.35 are considered as small, moderate and large effects, respectively (Cohen, 1988).

$$f^2 = \frac{R^2\text{included} - R^2 excluded}{1 - R^2 included}$$

3) Predictive Relevance

Predictive relevance also known as Q^2 refers to the ability of the inner model to predict the dependent variable indicators. Thus, evaluation of predictive relevance is also important in assessing structural model. The Stone–Geisser criterion is used in assessing the Q^2. The standard suggested that a structural model must be able to provide proof of prediction of the endogenous latent construct's indicators (Henseler et al., 2009). The Q^2 is determined using Stone-Geisser's Q^2 test based on blindfolding techniques (Hair et al., 2014). A research model is required to have Q^2 value of greater than zero, which indicates predictive relevance (Henseler et al., 2009).

4) Significance of Path Coefficients

Finally, assessment of the significance of path coefficients in this study involves the direct and the mediating relationships. The direct relationship is based on the structural model assessment that starts with the bootstrapping procedure. The bootstrapping is done based on 5,000 samples, which is adequate to achieve convergence (Hair, Sarsdtedt, Ringle & Gurdergan, 2017; Hair et al., 2014) and 291 original number of cases. The PLS-SEM bootstrapping procedure determines the size of the path coefficients and the significance of the relationship between and exogenous variable and the endogenous one in the direct relationships. The level of the significance in the relationships varies from 0.1 (10%), 0.05

(5%), and 0.001 (1%) levels of significance. This is in line with Chin (2003) that, for social science, significance levels of $p < .01$ or $.05$ are usually required for statistical measurements.

The mediating relationships are also examined under the structural model based on the bootstrapping procedure. However, Hayes (2013) and Preacher and Hayes (2008) identified several techniques for examining mediation such as the Sobel test, the serial approach, distribution of the product and bootstrapping. However, Hayes (2013) recommended the bootstrapping technique as it balances between validity and power. Moreover, several studies stressed he advantages of the bootstrapping technique in testing mediation over other techniques. For example, the four conditions of Baron and Kenny (1986) did not take the use of standard errors into consideration (Hayes, 2009). Also, the distribution of the product strategy is a little difficult to use without the aid of tables and requires some assumptions of normal sampling distribution (Hayes, 2009). However, the bootstrapping technique takes care of the above-mentioned weaknesses because it allows the distribution of the indirect effect to be tested empirically (Shrout & Bolger, 2002). This study examined the mediating relationships using the PLS bootstrapping procedure.

The bootstrapping technique for mediation follow three stages. It starts with estimating the path model of the direct relationships; second, the path model is estimated with the mediator variable; and finally, the product of the two path coefficients is divided by the standard error of their product $\frac{(a*b)}{Sab}$ to examine the significance of the indirect effect (Hair et al., 2014). More specifically, this study examined the mediating role of compliance costs on the influence of the determinants of tax compliance on non-compliance behaviour based on the Hair et al.'s steps.

After incorporating the compliance cost as the mediator, the bootstrapping results of the 5,000 samples were used to get the product of paths a and b. Then, to get the t- values of the mediation, the products of the a and b paths were divided by their standard error. Moreover, the level of the mediation may be estimated as partial or full, but Rucker, Preacher, Tormala, and Petty (2011) showed that it is unimportant to emphasise the level of the mediation as full versus partial. Rucker et al. (2011) further recommended that, to expand theory involving social psychological processes, attention in mediation analysis should be focused on assessing the degree and significance of indirect path. Based on this, the current study focused on the indirect paths in the mediation analyses.

4.13 Summary of the Chapter

This chapter discussed the research method for this study. It outlined the hypotheses development and the underpinning and supporting theories upon which the framework of the study is based. The chapter continued with the discussion of the research design that was based on questionnaire survey research of a sample of small companies in Kano. The chapter further outlined the pilot study that is a preliminary study carried out to improve the main process of data collection. Then, the procedure of the main data collection is discussed. The chapter ended with a discussion on the method of data analysis employed in this study. SPSS and Smart PLS were the software used to conduct the preliminary and the main analysis respectively.

CHAPTER FIVE

ANALYSIS AND FINDINGS

5.1 Introduction

The previous chapter presented a discussion on the method of data collection and analysis. The current chapter deals with the preliminary analysis results and presents the findings of this study from the results of the main analysis. The cleaning procedures and the descriptive analyses results mainly involve the treatment of missing data, outliers, normality of the data and the latent variables description. After presenting the results of the preliminary analysis, the chapter continues with the presentation of the results of the measurement and the structural models of the study. The measurement model deals with the psychometric properties of the measures of the constructs of the study. Whereas, the structural model involves the connection among the constructs in the model. The results of the structural model analysis further provide the basis for testing the hypotheses of this study. Moreover, the chapter presents the results of the effect size and the predictive relevance of the model of the study.

5.2 Missing Value Analysis

The current study checked for missing data and found some cases of randomly missing data. Specifically, of the 303 cases, three cases (34, 80 and 215) were found with more than half of the questions unanswered. Based on the suggestion of Hair et al. (2010) that any case with a high level of missing data is a candidate for deletion, the three cases were completely removed as the sample is considered sufficient. In addition, other 25 data points, which accounted for 0.23% of the 10,800 points were found randomly missing. These cases of the missing data were treated using the mean value as the percentage of the missing points was below the 5% rule of thumb above, which cannot be replaced (Hair et al., 2014; Tabachnick & Fidell, 2013). See Appendix C for the results of the missing value analysis.

5.3 Outliers Analysis

Outlier cases are treated in this study using the D^2. The D^2 was calculated by mean of the linear regression method in SPSS based on the 35 total items of this study. Thus, 35 represents the degree of freedom in the Chi-square table with $p < 0.001$, so the benchmark is 66.619 (Tabachnick & Fidell, 2013). This means that any case with a D^2 value of 66.619 and above is a multivariate outlier and should be removed. Hence, nine cases were found to be outliers (25, 72, 96, 137, 163, 187, 215, 236 and 284). Consequently, these cases were removed from continuation in the analysis as they represent multivariate outliers.

5.4 Normality Test

This study employs a graphical method to assess the normality of the data collected. In line with Field (2009), the normality of data with a large sample of 200 and above is better checked with a graph rather with the values of skewness and kurtosis. Therefore, normal probability plots were examined to ensure that normality assumptions are met. Figure 5.1 shows that the distribution of the data collected for this study follow the pattern of normal distribution as all the bars on the histogram were close to the normal curve. Therefore, the data of this study meet the assumptions of normality.

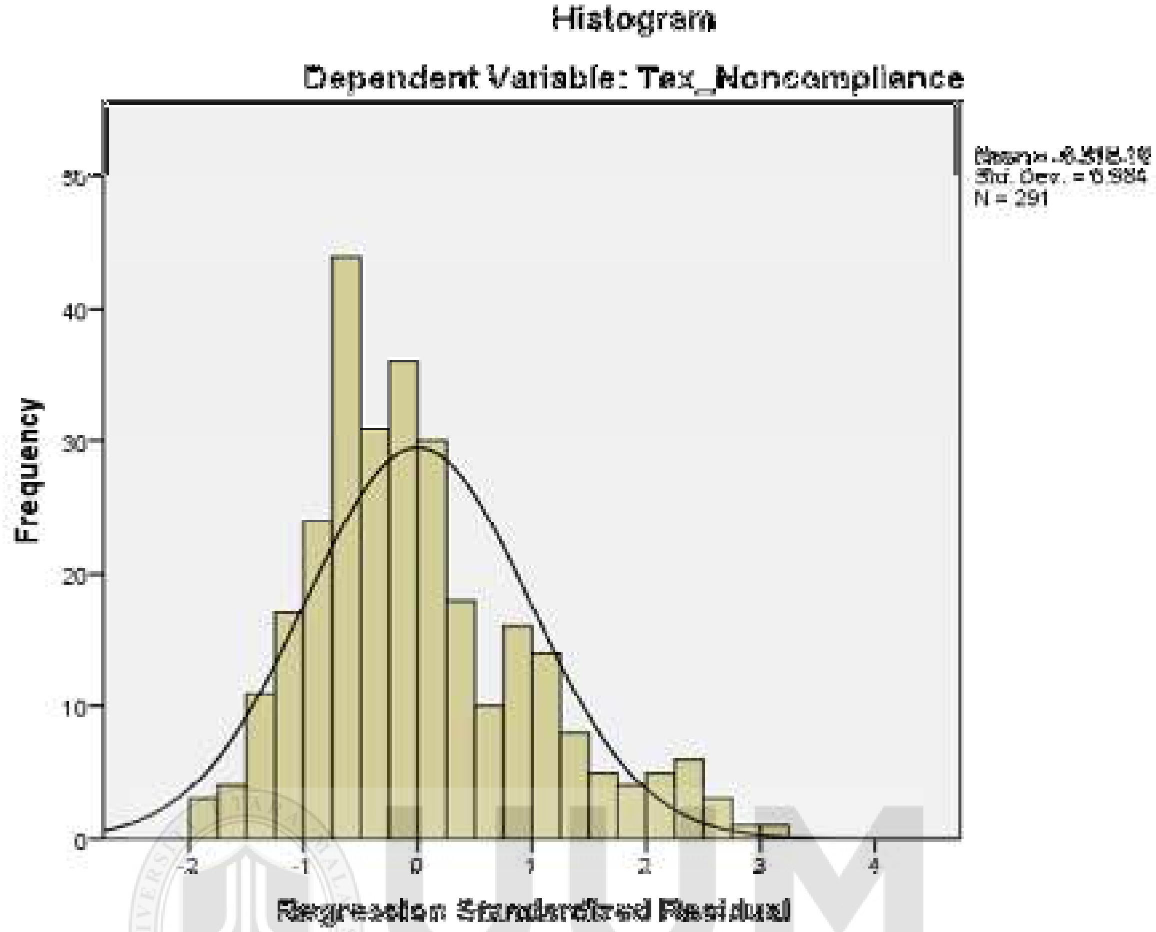

Figure 5.1
Histogram and Normal Probability Plot

5.5 Multicollinearity Test

The current study investigated multicollinearity using a correlation matrix and the variance inflated factor (VIF) and tolerance level of the independent variables. Correlation matrix is assessed based on the Pallant's (2010) suggested threshold of correlation value above 0.7 among the independent variables. Table 5.1 presents the results of the multicollinearity among the independent variables of this study. The results indicate that no multicollinearity existed as the correlation values are below the threshold.

Table 5.1
Correlations among the Independent Variables

	TRF	**AUD**	**PEN**	**CPX**	**FRN**	**BRB**	**RTT**	**PGQ**	**TCC**
TRF	1								
AUD	.404**	1							
PNT	.295**	.178**	1						
CPX	.065	.157**	.052	1					
FRN	.399**	.339**	.326**	.140*	1				
BRB	.137*	.191**	.140*	.028	.353**	1			
RTT	.622**	.422**	.276**	.055	.448**	.224**	1		
PGS	.539**	.694**	.212**	.127*	.394**	.246**	.519**	1	
TCC	.470**	.566**	.241**	.143*	.404**	.169**	.482**	.598**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Next, VIF and tolerance were examined via the SPSS collinearity diagnostics results. Hair et al. (2010) emphasized that VIF and tolerance are essential and reliable in testing multicollinearity. Tolerance values below .100 and VIF values above 10 indicate high collinearity (Hair et al., 2010; Pallant, 2010). Table 5.2 presents the collinearity diagnostics results. The results reveal that the tolerance and the VIF values were within the accepted levels. The tolerance values ranged from .478 to .937 and the VIF values ranged from 1.068 to 2.452. Therefore, the results of both the correlation matrix and the collinearity diagnostic test provided evidence of the absence of multicollinearity in the data of this study.

Table 5.2
Collinearity Diagnostic Test

Independent Variables	**Tolerance**	**VIF**
Audit	0.863	1.16
Bribery	0.813	1.63
Complexity	0.643	1.56
Fairness Perception	0.856	1.17
Penalty	0.937	1.07
Public Goods Supply	0.544	1.84
Tax Compliance Costs	0.783	1.28
Tax Rate Perception	0.478	2.09

5.6 Non-response Bias Test

This study uses t-test and Levene's test for equality of variance in the analysis of the non-response bias. The t-test was performed to discover if any bias existed between the early and the late respondent groups. Moreover, Levene's test for equality of variance was used to determine whether the variances between the groups differed significantly. Specifically, the respondents were divided into those who responded before the end of year and new year breaks (before 15 of January 2016), which comprised 176 respondents and those who responded after the break (15 of January 2016 onward), which comprised 115 respondents. The t-test was performed for all the variables of the study to find out if there any bias existed among the groups. For the Levine's test, the equality of means t-test was used to assess if a significant difference existed between the two groups.

Table 5.3 presents the results of the independent t-test for the early and late response groups. The results show the means and the standard deviation of the two groups based on the variables in the study. The means and the standard deviations on each variable show a slight difference between the groups. The table further presents the results for the Levene's Test for Equality of Variance, which shows that the equal variance significance values of the ten variables were greater than the 0.05 level of significance of Levene's test for equality of variances as suggested by Pallant (2010). Hence, the conclusion is that no significant difference between the two groups. Therefore, the assumption of equal variances between response groups of the respondents has not been violated.

Table 5.3
Group Descriptive Statistics for Early and Late Respondents

Construct	Response Group	N	Mean	Std. Dev.	Levene's Test for Equality of Variance	
					F	**Sig.**
Audit	Early Response Late Response	176 115	4.46 4.49	0.40 0.40	0.30	0.59
Bribery	Early Response Late Response	176 115	1.74 1.70	0.60 0.68	3.43	0.07
Complexity	Early Response Late Response	176 115	2.33 1.92	0.71 0.64	1.51	0.22
Fairness perception	Early Response Late Response	176 115	4.33 4.43	0.66 0.61	1.08	0.30
Penalty	Early Response Late Response	176 115	1.81 1.75	0.57 0.57	1.55	0.21
Public Goods Sup	Early Response Late Response	176 115	1.67 1.68	0.50 0.54	1.35	0.25
Role of TT	Early Response Late Response	176 115	4.19 4.19	0.66 0.68	0.16	0.72
Tax Compl. Cost	Early Response Late Response	176 115	1.37 1.34	0.58 0.56	0.91	0.34
Tax Non-Compliance	Early Response Late Response	176 115	1.75 1.75	0.70 0.73	2.15	0.14
Tax rate Perception	Early Response Late Response	176 115	2.13 1.95	0.84 0.88	0.00	0.98

5.7 Common Method Variance Test

The current study treats common method bias using unrotated factor analysis based on the threshold suggested by Podsakoff et al. (2003) that a single factor should not explain more than 50% of the total variance. Based on the 34 items measuring the latent variables of this study, the results show that no single factor accounted for more than 50% of the variance. Based on the 10 factors in the results (number of variables), the highest percentage variance explained by a single factor was 22.39 % of the total variance. Thus, this result indicates the absence of common method bias in the data of this study.

5.8 Demographic Statistics of the Respondents

The respondents of this study include only small companies in Kano that pay their income tax to the FIRS. This section analyses the information provided by the respondents on their demographic features. This information concerns the age of business, accounting year end, main business activity, type of accounting system, number of employees and position of the responding officer.

Starting with the length of business, Table 5.4 reveals that most respondents (95%) had been in business for more than three years. Specifically, 64.61% have been in business for more than eight years. Another 57 respondents (19.59%) had six to eight years of business experience. Also, 20 (6.87%) respondents had three to five years of experience. Only five (5.16%) had less than three years of business experience. This indicates that majority of the respondents had tax-related experience being in their respective businesses for at least three years.

Table 5.4
Trading Period of Respondent

Trading Period	No. of Respondents	Percentage (%)
Less than three years	15	5.16
Three to five	20	6.87
Six to eight	57	19.59
More than eight	188	64.61
No response	11	3.78
Total	291	100

In the case of main business activity, Table 5.5 shows that most respondents engaged in agricultural activities, which accounted for 20.96%. Trade and commerce activities followed agriculture with 19.59% of the respondents in the industry. The table further reveals that other respondents engaged in other industries with some variations in the proportion of the sample in such industries. The dominance of agriculture reflects the fact that, in most developing countries, that one sector is dominant. However, the responses show that small corporations operate in the various sectors of the Nigerian economy.

Table 5.5
Primary Business Activity

Industry	**No. of Respondents**	**Percentage (%)**
Manufacturing	34	11.68
Agriculture	61	20.96
Transportation	20	6.87
Hotel and Restaurant	18	6.19
Culture and Tourism	17	5.84
Trade and Commerce	57	19.59
ICT	25	8.59
Building and Construction	31	10.65
Others	13	4.47
No response	15	5.15
Total	291	100.00

About the method of keeping accounting records of the respondents, Table 5.6 shows that most of the respondents (71.82%) kept their accounting records in electronic form using computers. Others, 25.43% kept their records by using both computer and manual (mixed) methods. This indicates that most respondents preferred to keep their records using computers. This is in line with the fact that it easier to use computers in terms of storing, retrieving, and analysing information for internal or external use. Also, the responding companies were more organized, kept more copious records and had the financial ability to buy computers compared to smaller informal businesses.

Table 5.6
Type of Accounting system

Accounting System	**No. of Respondents**	**Percentage (%)**
Computerized System	209	71.82
Mixed (Computer and Manual)	74	25.43
No answer	8	2.75
Total	291	100.00

As for business size, number of employees is taken as the proxy for business size. Table 5.7 reveals that most respondents (64.26%) had employees within the range of 50 to 149. Eleven percent were below this range while 13.15% were above this range.

Table 5.7
Business Size

Number of Employees	**No. of Respondents**	**Percentage (%)**
Less than 50	34	11.68
50 to 99	109	37.46
100 to 149	78	26.80
150 to 199	28	9.62
200 and Above	19	6.53
No response	31	10.65
Total	291	100

Finally, the positions of the responding officers were considered in Table 5.8. Most of the questionnaires were completed by manager/accountant and managing directors. Questionnaires completed by manager/accountant and managing directors account for 65.29% and 19.93% respectively. This indicated that Manager/Accountant and Managing Directors were more involved in tax matters and records of the companies. Moreover, given the positions of these officers, they can complete the questionnaires for their respective companies. Positions such as Chief Executive Officer, Managing Director, Financial Manager and Accountant are specified in most of these companies. This may be explained by the fact that these companies are subjected to the requirements of CAC, CAMA and CITA, which require specification of such positions.

Table 5.8
Position of Responding Officer

Position	No. of Respondents	Percentage (%)
Chief Executive Officer	9	3.09
Managing Director	58	19.93
Manager/Accountant	190	65.29
Others	5	1.72
No Response	29	9.97
Total	291	100

5.9 Descriptive Analysis of the Variables of the Study

This section provides descriptive statistics for the latent variables of this study based on means and standard deviations of the variables. According to Boone and Boone (2012) items in a Likert scale are based on mean (composite score) and, hence, mean and standard deviations are recommended for descriptive statistics of interval scale items. All the variables were measured using a 5-point Likert scale as 1: strongly disagree, 2: disagree, 3: neutral, 4: agree and 5: strongly agree (with the exception of tax compliance costs). The results of the descriptive statistics are presented in Table 5.9. The mean scores for all the variables (excluding tax compliance costs) ranged from 1.676 to 4.435 and standard deviation scores ranged from 0.400 to 0.859.

Table 5.9
Descriptive Statistics of the Variables of the Study

Variable	Mean	Std. Deviation
Tax Non-compliance	1.747	0.699
Audit	4.435	0.401
Bribery	1.721	0.635
Complexity	2.012	0.625
Fairness Perception	3.731	0.400
Penalty	1.783	0.569
Public Goods Supply	1.676	0.516
Perception of tax tribunal	4.188	0.665
Tax Compliance Costs	4.134	0.557
Tax Rate Perception	2.063	0.859

The descriptive statistics presented in the table depict the respondents' views about the variables in this study based on the respective mean and standard deviation scores. Specifically, the dependent variable of this study, which was tax non-compliance, had a mean score of 1.747 with an associated standard deviation score of 0.699. This indicates the high perception of non-compliance among the respondents about engaging in the acts of overstating expenses and underreporting income.

The respondents stated their opinions about the independent variables of the study. Starting with the audit, the mean and standard deviations scores for audit were 4.435 and 0.401 respectively. These results indicate that most respondents had a high perception that an audit can take place and detect any discrepancies in their tax returns. For complexity, the table shows a mean and standard deviation scores of 2.012 and 0.625 respectively. This indicates that the respondents considered the corporate income tax system to be difficult, requiring the assistance of a professional. For penalty, the descriptive statistics showed a mean score of 1.783 with an associated standard deviation of 0.569, which also shows that the majority of the respondents had the opinion that paying a penalty had no severe effect on their respective businesses.

Particularly, the table shows a mean and standard deviation scores of 3.731 and 0.400 respectively for fairness perception. The scores indicate that most respondents believed the current tax system of SAS is fair. For public goods supply, the results show scores of 1.676 and 0.516 for mean and standard deviation respectively. This indicates that the respondents were not satisfied with the current supply of public goods. For tax rate perception, the results showed a mean and standard deviation scores of 2.063 and 0.859 respectively. This indicates a high perception of unfairness in the tax rate among the respondents.

Furthermore, the respondents' opinions about bribery and the role of the tax tribunal are also presented by the descriptive statistics. For bribery, the table shows mean and standard deviation scores of 1.721 and 0.635 respectively. The scores specify that most respondents disagreed with the existence of bribery in their dealings with tax authority. For the perception of tax tribunal, the table shows a mean score of 4.188 with a standard deviation score of 0.665. The score indicates that most of the respondents believed the procedures of the tax tribunal were just.

In the case of tax compliance costs, the table shows a mean of 4.134 with a standard deviation of 0.556. This indicate that the respondents incurred high tax compliance costs in meeting their compliance requirements. Tax compliance costs is originally in amounts representing total tax compliance costs used as a proxy of tax compliance costs. As explained earlier (see section 4.5.9), that tax compliance costs have significantly different mean and standard deviations of high variation, which is transformed to normalize the data (Osborne, 2010). Also, in PLS-SEM extremely abnormal data can cause errors in the results (Hair et al., 2014). Therefore, following previous study of tax compliance costs (Abdul Jabbar, 2009), tax compliance costs were converted into Log 10.

5.10 Assessment of the Measurement Model

The measurement model determines the measures reliability, internal consistency, content validity, convergent validity and discriminant validity in measuring the construct (Hair et al., 2014). In other words, the measurement model assesses the ability of the items in a model to measure the various variables in the model. Based on Sarstedt, Ringle, and Hair (2017), tax compliance costs, which is a one-item variable, is excluded in presenting the measurement model assessment results. This is because the indicator data and the variable scores are the same. See measurement model in Appendix D. Explicit explanations of the model follow in the next sections.

5.10.1 Individual Item Reliability

This study evaluates individual items reliability based on their respective outer loadings and a threshold value of 0.50 and above (Hulland, 1999). Nevertheless, outer loadings between 0.40 and 0.70 were carefully considered for deletion if they increased the value of the CR and AVE (Hair et al., 2014). Based on the above, four items were deleted of the total 34 items. Thus, 30 items were retained for the analysis as they have loadings ranging from 0.522 to 0.859. Table 5.10 presents the items and their respective loadings.

Table 5.10
Outer Loadings

Construct	Item	Loading	Deleted Items	Loadings of Deleted Items
Audit (AUD)	AUD2	0.744	AUD1	0.074
	AUD3	0.591		
	AUD4	0.823		
Bribery (BRB)	BRB1	0.853		
	BRB2	0.619		
	BRB3	0.654		
	BRB4	0.734		
Complexity (CPX)	CPX1	0.745		
	CPX2	0.810		
	CPX3	0.673		
Fairness Perception (FRN)	FRN1	0.792		
	FRN2	0.828		
	FRN3	0.766		
Penalty (PEN)	PEN1	0.859	PEN2	0.229
	PEN3	0.707		
	PEN4	0.642		
Public Goods Supply (PGS)	PGS1	0.609	PGS4	0.508
	PGS2	0.738		
	PGS3	0.820		
Perception of tax tribunal (RTT)	RTT1	0.771	RTT4	0.631
	RTT2	0.690		
	RTT3	0.706		
Tax Non-compliance (TNC)	TNC1	0.852		
	TNC2	0.839		
	TNC3	0.791		
	TNC4	0.820		
Tax Rate Perception (TRP)	TRP1	0.640		
	TRP2	0.859		
	TRP3	0.814		

5.10.2 Internal Consistency Reliability

This study assesses internal consistency based on Composite Reliability (Peterson & Kim, 2013; Hair et al., 2014). The coefficient of the Composite Reliability varies between 0 and 1 and it has a threshold value of 0.60 to 1 (Henseler et al., 2009). Table 5.11 presents the results of the internal consistency using Composite Reliability. The coefficients of the CR in this study range from a value of 0.763 to 0.896. These values of the CR are within the recommended threshold value of 0.60 and above.

Table 5.11
Composite Reliability Values

Constructs	Composite Reliability
Audit	0.767
Bribery	0.810
Complexity	0.788
Fairness Perception	0.838
Penalty	0.783
Public Goods Supply	0.763
Perception of tax tribunal	0.766
Tax Non-compliance	0.896
Tax Rate Perception	0.818

5.10.3 Convergent Validity

This study assesses convergent validity using AVE with a threshold of 0.50 (Chin, 1998; Henseler et al., 2009). An AVE of 0.50 means that the constructs account for 50% of the variance in its indicators, which is considered adequate (Hair et al., 2014). Table 5.12 shows the results of the convergent validity. The AVE values ranged between 0.519 to 0.682. Thus, the AVE values of all the constructs of this study exceed the minimum threshold value of 0.50. These results indicate the establishment of enough convergent validity among the measures of this study.

Table 5.12
Average Variance Extracted Values

Variables	AVE
Audit	0.527
Bribery	0.519
Complexity	0.555
Fairness Perception	0.633
Penalty	0.550
Public goods supply	0.527
Perception of tax tribunal	0.523
Tax Non-compliance	0.682
Tax Rate Perception	0.603

5.10.4 Discriminant Validity

Similarly, this study assessed discriminant validity using Average Variance Extracted. After comparing the correlations of the latent variables with the square roots of the average variance extracted, discriminant validity was achieved as the values of the square root of Average Variance Extracted of each variable were greater than their highest correlation with any other variable in the model (Hair et al., 2014; Henseler et al., 2009). Table 5.13 presents the results of variables' correlations and the square root of Average Variance Extracted values. The square root of AVE, which are in bold face, when compared with the correlations were higher than the correlations of any other constructs. The negative signs in some of the correlations indicates an opposite relationship with the dependent variable. In other words, audit has a negative relationship with the dependent variable whereas bribery has a positive one. Therefore, these results indicate that the required level of the discriminant validity on the variables of this study has been achieved.

Table 5.13
Latent Variable Correlations and Square Roots of Average Variance Extracted

	AUD	**BRB**	**CPX**	**FRN**	**PEN**	**PGS**	**RTT**	**TNC**	**TRP**
AUD	0.726								
BRB	-0.170	0.720							
CPX	-0.392	0.211	0.745						
FRN	0.238	-0.245	-0.402	0.796					
PEN	-0.435	0.153	0.574	-0.471	0.742				
PGS	-0.258	0.190	0.285	-0.223	0.345	0.726			
RTT	0.408	-0.252	-0.814	0.467	-0.633	-0.350	0.723		
TNC	-0.557	0.201	0.401	-0.587	0.474	0.296	-0.518	0.826	
TRP	-0.384	0.360	0.320	-0.374	0.391	0.344	-0.423	0.419	0.777

5.11 Assessment of the Structural Model

Having achieved the reliability and validity of the measures through the measurement model assessment, this study continued with the structural model assessment. As mentioned earlier, assessment of the structural model, deals with four major assessments, namely, 1) assessment of the significance of path coefficients through bootstrapping procedures (involving the direct relationships and mediating relationship in this study); 2) assessment of the coefficient of determination; 3) assessment of the effect-size; and 4) assessment of predictive relevance.

This study performed a systematic analysis of the structural model based on the direct and the mediating relationships separately. The model is separated into two as the study aims to investigate the direct and the mediating relationships each in isolation. In the PLS mediation model, the mediator variable absorbs the effect of the independent on the dependent variable (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Hence, the study separates the models into two and starts with the analysis of the direct relationship in a separate model. This procedure is used in the prior studies using PLS (Aminu, 2014).

5.11.1 Direct Relationships Hypotheses Testing

Assessment of the structural model starts with the examination of the direct relationships relating to first objective of this study covering H_1 to H_9 based on the PLS-SEM bootstrapping procedure. The bootstrapping is done based on 5,000 samples, which is adequate to achieve convergence (Hair et al., 2017; Hair et al., 2014) and the 291 original number of cases. Figure 5.2 depicts the structural model for the direct relationships. The model shows the latent variables represented by the circular shapes with their indicators in the rectangles.

All the latent variables of this study are modelled as reflective variables. Reflective variables are explained by their indicators as depicted by the arrows from the indicators to the latent variables. The values on the path lines connecting the exogenous variable and the endogenous one represents the significance level (t-value) of the relationships in the structural model. Full explanations follow in the subsequent sub-sections.

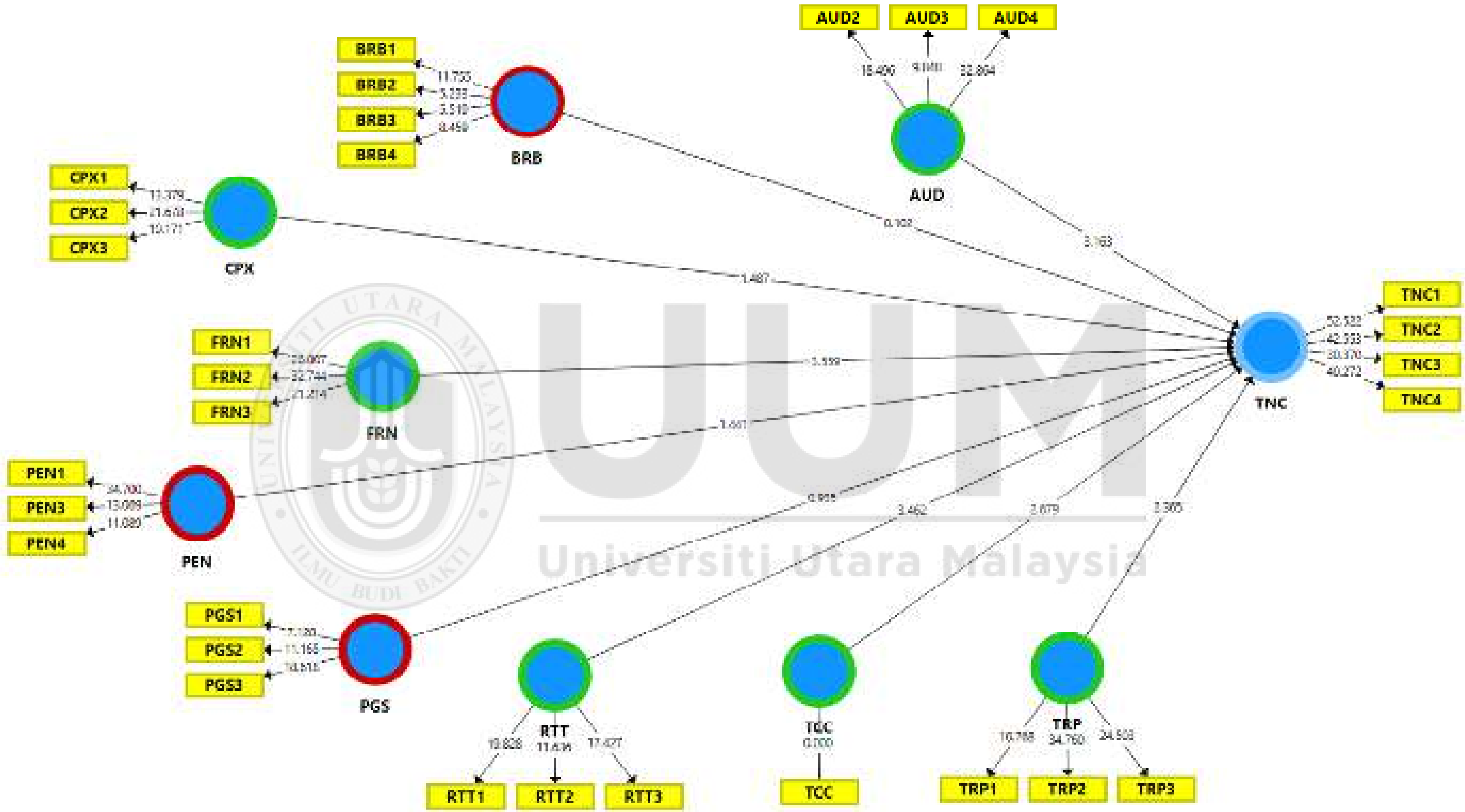

Figure 5.2
Structural Model (Direct Relationship)

Furthermore, the PLS bootstrapping gives the results of the effect of exogenous variables on the endogenous one. Table 5.14 presents the results of paths relating to the hypotheses of the direct relationships of this study. Only the results of the significant paths were subsequently explained. The results present the path coefficient/directions and their level of significance. Five hypotheses (H_1, H_3, H_4, H_7, H_8 and H_9) of the direct relationship were found to be significant.

Table 5.14
Results of Hypotheses Testing (Direct Relationships)

Hypothesis: Path	**Path Coefficient**	**T-Statistics**	**P-Value**	**Decision**
H_1: AUD->TNC	-0.229	3.163	0.001***	Supported
H_2: BRB->TNC	-0.005	0.102	0.460	Not Supported
H_3: CPX->TNC	0.091	1.487	0.069*	Supported
H_4: FRN->TNC	-0.262	3.559	0.000***	Supported
H_5: PEN->TNC	0.085	1.441	0.075	Not Supported
H_6: PGS->TNC	0.048	0.935	0.175	Not Supported
H_7: RTT->TNC	-0.315	3.462	0.000***	Supported
H_8: TCC->TNC	-0.124	2.679	0.004***	Supported
H_9: TRP->TNC	0.127	2.365	0.009**	Supported

Note: ***, **, &* mean 1%, 5% and 10% significance level. H5, H7, H8 & H9 are based on 2-tail. All other hypotheses are based on 1-tail.

Specifically, the results reveal that H_1 is supported as AUD has a negative and significant impact on TNC (β = -0.229; t = 3.163; p = 0.001). Also, H_3 is supported as the results reveal a positive and significant influence of CPX on TNC (β = 0.091; t = 1.487; p = 0.069), which is in line with the positive relationship hypothesized. H_3 is accepted at 10% percent significant level as it is recognised in social science research to do so (Hair et al., 2014). Also, several studies of tax non-compliance have accepted their hypotheses at the 10% level of significance (e.g., Alm, Clark & Leibel, 2016; Ayuba et al., 2016; Kasper, Kogler & Kirchler, 2015). For H_4 is supported giving a negative and significant impact of FRN on TNC (β = -0.262; t = 3.559; p =0.000). Similarly, H_7 is supported with a negative and significant impact of RTT on TNC (β = -0.315; t = 3.462; p = 0.000) as hypothesized.

Equally, H_8 is supported with a negative and significant impact of TCC on TNC (β = -0.124; t = 2.679; p = 0.004). Finally, H_9 is also supported with a positive and significant influence of TRP on TNC (β = 0.127; t = 2.365; p = 0.009).

5.11.2 Mediation Relationship Hypotheses Test

Tax non-compliance has been identified as a complex phenomenon that requires thorough investigation (Alm, 2012; Murphy, 2010). Thus, this study goes beyond the investigation of the direct effect of the determinants of tax non-compliance by trying to understand how and when these determinants influence the dependent variable. Accordingly, answering the how question brings the mediating effect of compliance costs into consideration. Hence, this subsection deals with the second model of this study, which relates to the mediating relationships. In the mediation model, tax compliance costs are incorporated to provide explanation of the relationship between the independent variables and the dependent one.

Figure 5.3 presents the structural model of the mediating relationships. The mediation model entails the direct relationships (from independent variables to the dependent), path ‘c’ and the indirect relationships (from the independent variables to the dependent via the mediating variable) (Baron & Kenny, 1986; Hayes, 2013). In line with Rucker et al. (2011), this study focused on the indirect path to determine the mediation effect. The indirect path has two relationships. One, path ‘a’ from the independent variable to the mediating variable; and two, path ‘b’ from the mediator to the dependent variable (Baron & Kenny, 1986; Hayes, 2013). The mediation model deals with H_{10} to H_{16} relating to the second objective of this study. Of the seven mediated relationships, four were found to be significant. Hence, only the significant mediated relationships were further discussed.

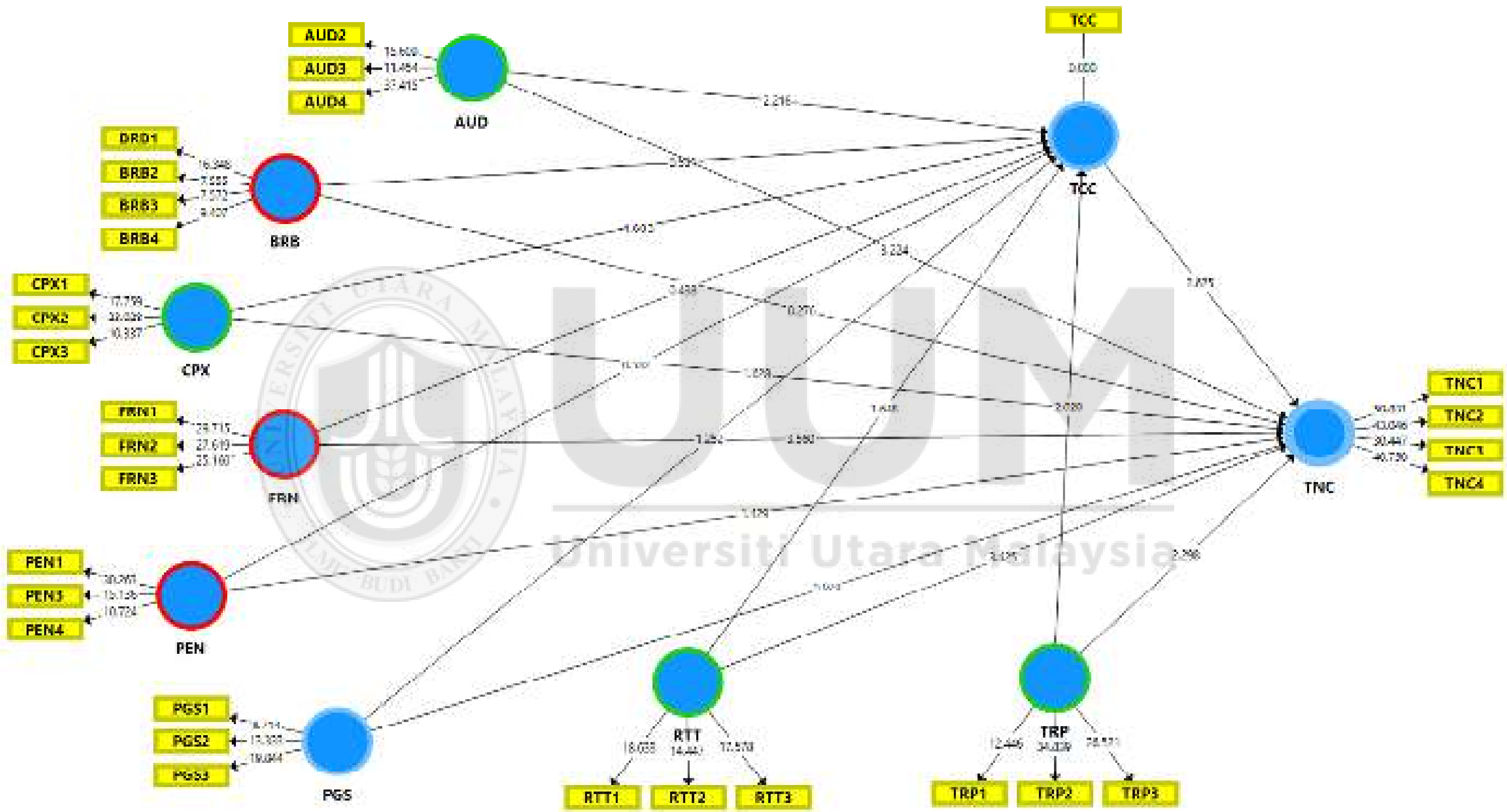

Figure 5.3
Structural Model (Mediation)

Table 5.15 presents the results of the hypotheses testing. Specifically, compliance costs mediate the relationships between AUD and TNC (β = 0.068; t = 1.651; p = 0.052); CPX and TNC (β = 0.130; t = 2.434 p = 0.015); RTT and TNC (β = 0.087; t = 1.712; p = 0.044) and TRP and TNC (β = 0.020; t = 1.910; p = 0.029). Therefore, in all the four cases, tax compliance costs are the explanation of the reduction in tax non-compliance.

Table 5.15
Results of Mediation Hypotheses Tests

Hypothesis: Path	Path Coefficient	T-Statistics	P-Value	Decision
H_{10}: AUD -> TCC-> TNC	0.026	1.611	0.054**	Supported
H_{11}: BRB -> TCC-> TNC	-0.003	-0.484	0.314	Not Supported
H_{12}: CPX -> TCC-> TNC	0.130	2.434	0.015***	Supported
H_{13}: FRN -> TCC-> TNC	0.006	0.413	0.340	Not Supported
H_{14}: PEN -> TCC-> TNC	0.005	0.478	0.316	Not Supported
H_{15}: RTT -> TCC-> TNC	0.023	1.292	0.098*	Supported
H_{16}: TRP -> TCC-> TNC	0.017	1.689	0.046**	Supported

Note: ***, **, &* mean 1%, 5% & 10% significance level respectively.

5.11.3 Coefficient of Determination (R^2)

The R^2 value, which is the coefficient of determination, is one of the measures in structural model evaluation used in this study (Hair et al., 2014; Henseler et al., 2009). R^2 indicates a model fit for a quantitative dependent variable and measures how strongly the independent variables come together and relate to the dependent variable (Menard, 2012) by explaining the variability in the dependent variable. R^2 measures how well the regression line perfectly fits the real data points and gives evidence about the goodness of fit of a given model. Thus, a higher R^2 indicates better goodness of fit for the data. Generally, R^2 is calculated as the total variance less unexplained variance, and the value of R^2 ranges between 0 and 1.

Table 5.16 presents the R^2 of the direct and the mediating models of this study. In the first model (direct relationships), the value of the R^2 shows that the independent variables explained 48% variation in the dependent variable in the direct model before including the mediator. After including the mediating variable, the R^2 shows almost no change with a value, which is approximately 48%. In both cases, R^2 is above the required minimum level of 10% (Falk & Miller, 1992). Also, based on the Chin's Classification, this is considered almost substantial. Also, this value of the R^2 is close to the 52% obtained by Sapiei and Kasipillai (2013a) in a corporate tax compliance survey. Therefore, the conclusion can be made that the model of this study has an almost substantial predictive validity.

Table 5.16
Coefficient of Determination (R^2)

Endogenous Variable	**R^2 Value**	**Size**
Tax Non-compliance Direct Model	0.478	Almost substantial
Tax Non-compliance Mediated Model	0.478	Almost Substantial

5.11.4 Assessment of Effect Size of the Models of this Study (f^2)

After assessing the combined effect of the exogenous variables all together on the endogenous one, effect size (f^2) is another important criterion that evaluates the relative effect of individual latent exogenous variable on the endogenous one. Table 5.17 provides the results of the effect sizes of individual exogenous variables in the first model of this study. The results indicated that FRN has the highest effect followed by RTT, AUD and TRP at small level. The rest of the variables also have a small effect in the model.

Table 5.17
Effect Size of Individual Exogenous Variable of the Direct Model

Variable	R^2 Included	R^2 Excluded	f^2	Effect Size
AUD-> TNC	0.478	0.451	0.058	Small
BRB-> TNC	0.478	0.469	0.023	Small
CPX-> TNC	0.478	0.465	0.031	Small
FRN-> TNC	0.478	0.443	0.073	Small
PEN-> TNC	0.478	0.465	0.031	Small
PGS->TNC	0.478	0.467	0.027	Small
RTT-> TNC	0.478	0.446	0.067	Small
TCC-> TNC	0.478	0.461	0.039	Small
TRP-> TNC	0.478	0.451	0.058	Small

Also, Table 5.18 presents the f^2 of the second model of this study. Similarly, the f^2 in the second model evaluates the relative effect of individual latent exogenous variable on the endogenous one through the mediator. Similar results with that of the first model are obtained. FRN has the highest effect followed by RTT, AUD and PGS all at a small level. All the remaining variables have negligible effects in this model.

Table 5.18
Effect Size of Individual Exogenous Variables of Mediating Model

Variable	R^2 Included	R^2 Excluded	f^2	Effect Size
AUD-> TNC	0.478	0.454	0.046	Small
BRB-> TNC	0.478	0.478	0.000	None
CPX-> TNC	0.478	0.472	0.011	None
FRN-> TNC	0.478	0.450	0.054	Small
PEN-> TNC	0.478	0.475	0.006	None
PGS->TNC	0.478	0.467	0.021	Small
RTT-> TNC	0.478	0.452	0.050	Small
TCC-> TNC	0.478	0.468	0.019	None
TRP-> TNC	0.478	0.468	0.019	None

5.11.5 Predictive Relevance (Q^2)

This study assessed Q^2 using Stone-Geisser's Q^2 test based on blindfolding techniques (Hair et al., 2014). A research model is required to have a Q^2 value of greater than zero, which indicates predictive relevance (Henseler et al., 2009). Table 5.19 presents the cross-validated redundancy for both models of this study to be greater than zero. Thus, the models provided evidence of predictive relevance.

Table 5.19
Predictive Relevance

Total	SSO	SSE	1-SSE/SSO
Tax Non-Compliance Direct Model	1164.000	795.296	0.317
Tax Non-Compliance Mediated Model	1164.000	793.396	0.318

5.12 Summary of the Chapter

This chapter presented the statistical analysis of quantitative data obtained by through the questionnaire survey of this study. The chapter presented the results of the data cleaning procedures, the response rate and the non-response bias test, which entailed the preliminary tests. The chapter continued with the main analysis, which includes the assessment of the measurement model and the structural model based on PLS-SEM. Under the main analysis, the results revealed evidence supporting the hypotheses on the direct influence of audit, complexity, fairness perception, perception of tax tribunal, tax compliance costs and tax rate perception on tax non-compliance of small corporate taxpayers in Nigeria. Moreover, the results supported four hypotheses under the indirect relationships. All the four are under the mediating role of tax compliance costs.

Ultimately, evidence from the structural model results indicated that perception of tax tribunal had a significant negative relationship with tax non-compliance. Similarly, in the direct relationships, tax compliance costs were found to have reduced tax non-compliance among small corporate taxpayers. In the mediating model, the results of structural model provided evidence that audit led to reduction in tax non-compliance through tax compliance costs. Also, tax compliance costs were found to mediate the relationships between complexity, perception of tax tribunal and tax rate perception. The next chapter provides a discussion of these findings.

CHAPTER SIX

DISCUSSION, IMPLICATIONS AND CONCLUSION

6.1 Introduction

The previous chapter dealt with the empirical findings based on the objectives of this study. Similarly, the current chapter presents the discussion of the findings based on the objectives of this study. The discussion of the findings relates to the direct relationships between small corporate tax non-compliance and its determinants as well as the mediating effect of compliance costs. The discussion further covers the contributions and implication of this study. Finally, the chapter provides the conclusion of the study.

6.2 Discussion of the Direct Relationships

The first objective of this study was to examine the direct relationships between the small corporate tax non-compliance and its determinants. The direct relationships entail nine hypotheses. Specifically, audit, fairness perception, public goods supply and perception of tax tribunal were hypothesized to have a negative influence on small corporate tax non-compliance. On the other hand, bribery and complexity were hypothesized to have a positive influence on small corporate tax non-compliance. Moreover, penalty, tax compliance costs and tax rate perception were hypothesized as non-directional. Hence, the nine hypotheses (H_1 to H_9) of the direct relationships were tested and the results of the tests provide evidence on the direct relationships (as presented in the previous chapter). The next subsections provided the discussion of the findings on the direct relationships.

6.2.1 Audit and Tax Non-compliance

In the context of this study, audit refers to the degree of possibility of detecting non-compliance with income tax law in terms of decreasing income or increasing expenses. H_1, which hypothesized a negative relationship between audit and small corporate tax non-compliance, was supported. The result of the hypothesis testing indicated that, when the small corporate taxpayers perceived that the audit system can detect tax non-compliance; the level of the non-compliance would decrease. For example, when the tax authority increases the sample of companies to be audited in previous year, the taxpayers may perceive that detection of irregularities in the current year audit would be high. Thus, the taxpayers may report more income.

The finding about the influence of audit and tax non-compliance has confirmed the prediction of deterrence theory (Allingham & Sandmo, 1972; Becker, 1968; Srinivasan, 1973) that detection probability decreases tax non-compliance. Moreover, this finding is in line with previous studies of corporate tax non-compliance that found a significant relationship between audit and a firm's tax non-compliance (Abdul Jabbar, 2009; Evans et al., 2005; Kamdar, 1997; Modugu, 2014; Nur-tegin, 2008; Sapiei & Kasipillai, 2013a; Tagkalakis, 2013). This finding further indicates that audit stands to be one of the important aspects of tax system enforcement mechanisms in Nigeria.

This finding is also in line with a Nigerian study of Ayuba, Saad and Ariffin (2016) that found a positive and significant influence of audit on tax compliance among SMEs. Conversely, another Nigerian study, Alabede (2012) found an insignificant direct effect of tax structure (which include detection probability) on tax compliance among individual taxpayers. He also found the effect of the tax structure to be negatively significant in the presence of financial condition. Other conceptual evidence characterized the Nigerian tax audit system as weak (Gwangdi & Garba, 2015; Micah et al., 2012). This opinion may be considering the real audit system. However, tax collecting institutions and the enforcement mechanisms in most developing and transition countries are characterized as weak and ineffective (Torgler, 2003). Nevertheless, this study, in line with several prior studies, has shown that a high perception of the detection probability of the audit system may play a key role in reducing non-compliance. Similarly, this current study highlights the importance of audit in reducing non-compliance of small corporate taxpayers in Nigeria.

The finding of this study is explained based on two possible reasons. One was the arrival of the new government in May 2015 that vowed to fight corruption and reinstall efficiency and discipline in the public sector (including FIRS), which may have changed the way in which the audit functions of the FIRS are being conducted. The second was that the new government has appointed a new leader of the FIRS who had a good record during his time as the chairman of Lagos state tax authority during which he dramatically increased the tax collection of the state by more than 500% within a period of 10 years. The new management of the FIRS has promised to increase tax collection and enhance audit exercise. This is likely to involve more aggressive and intense audits. Therefore, as part of the first objective of this research, this finding provides evidence that audit is a significant determinant of small corporate tax non-compliance in Nigeria.

6.2.2 Bribery and Tax Non-compliance

This study defined bribery as giving a bribe to tax officials to reduce tax liability. H_2 hypothesized a positive influence of bribery on tax non-compliance. Contrary to this postulation, the finding did not support the hypothesis. The finding showed that bribing tax officials did not considerably increase tax non-compliance among small corporate taxpayers. This finding is inconsistent with some previous corporate tax non-compliance studies (Joulfaian, 2009; Nur-tegin, 2008). However, the result is in line with the finding of Imam and Jacobs (2014).

Because several studies have reported a significant and negative influence of bribery on tax non-compliance, possible explanations for the inconsequential findings of this study should be given. The historical election of 2015 in Nigeria that brought the opposition party to lead the country with a new president who set fighting corruption as one of his priorities may have changed the perceptions of the taxpayers. The strong political will to implement anti-corruption policies in the new government approach perhaps was a key to changing the perceptions of taxpayers.

In the last decade, Nigeria has been considered one of the most corrupt countries with a high level of bribery in the public sector. For instance, the Centre for Law Enforcement Education (2012) reported that bribery and corruption trends among government officials (including tax officials) had increased from 20% in 2011 to 24%

in 2012. Similarly, Micah et al. (2012) asserted that taxpayers prefer giving bribes to tax officials rather than paying taxes. The high ranking of corruption perception index of Nigeria by Transparency International as 136th of 175 countries (Transparency International, 2014) also confirmed these two assertions.

However, since its inception, the new government has been seriously fighting corruption and tried to reinstall efficiency in the public sector by prosecuting corrupt government officials and appointing uncorrupted personalities to lead government parastatals. To be specific, the new government has appointed a new leader for the FIRS who has pledged to rake in more tax revenue. This may likely involve more aggressive tax revenue collection. Thus, FIRS have recently given a directive to its offices all over the country to start operations for recovering all tax liabilities to ensure zero-tolerance for tax evasion. This operation led to shutting down operations of some companies. Most recently, 10 defaulting companies were shut down for tax defaulting as reported by the FIRS in its online latest news page (Federal Inland Rvenue Service, 2016). Therefore, the above scenarios may explain why bribery failed to have a significant influence on tax non-compliance in the perceptions of the small corporate taxpayers.

6.2.3 Complexity and Tax Non-compliance

In the context of this study, complexity is considered as complications of the current tax system in relationship to filing the tax returns as well as understanding the tax laws. A positive relationship was hypothesized between complexity and tax non-compliance. As hypothesized, the finding supported the hypothesis by revealing a positive and significant relationship. This finding indicated that, when the filing of tax return and the tax law are complex, tax non-compliance increases. In line with social exchange theory, when the process of paying the tax is made complicated a taxpayer reciprocates by exhibiting non-compliance. Moreover, this finding is consistent with prior studies that found a positive and significant influence of complexity on tax non-compliance (Abdul Jabbar, 2009; Gambo, Mas'ud, Nasidi, & Oyewole, 2014; Isa, 2014; Sapiei & Kasipillai, 2013a).

This finding explains the current situation of the process of dealing with company income tax in Nigeria. Companies in Nigeria pay taxes through a non-automated system. Thus, taxpayers spend a lot of time in preparing, filing and paying taxes. Also, the non-automated system is characterized with human errors in returns. The Institute of Chartered Accountants of Nigeria has recently called for access to electronic tax system to all taxpayers in Nigeria to make the system the safest, fastest and easiest to pay taxes. Companies must undergo a different process to pay their income tax. The process starts with assessing themselves and then making the tax payment to one of the designated banks. After the payment, the company receives evidence of payment, which is needed to present to the appropriate tax office. Although the new leadership of Nigeria and FIRS were able to influence the perceptions of the respondents with regards to audit, the case of complexity may need more time. This is because complexity of the tax system may require a long-term process for the taxpayers to see the change. This includes, for example, re-writing of the corporate tax law or design and full implementation of e-tax to simplify the tax system.

This findings also indicated that in Nigeria the tax laws and the tax system are complex as reported by previous Nigerian studies (Gambo et al., 2014; Umar & Saad, 2015), and this complexity made it necessary for small corporate taxpayers to engage the services of tax practitioners. Thus, the survey of this research indicated that all the sample companies used the services of tax practitioners as they all incurred external tax compliance costs in 2014. However, complex tax laws can induce intentional as well as non-intentional non-compliance (Yesegat, 2009). Therefore, complexity remain a fundamental determinant of corporate tax non-compliance in this study.

6.2.4 Fairness Perception and Tax Non-compliance

The current study considered fairness as perceptions of the small companies on the impartiality of the income tax law in relationship to change to the current income tax system and all classes of companies (small, medium and large) operating under the same system. Perception of fairness in the distribution of the tax burden is an important driver of tax compliance (Kirchler et al., 2014). H_4 postulated a negative relationship between fairness perception and non-compliance. As expected, the finding supported the hypothesis. This means that, when small corporate taxpayers perceive that the tax system is fair to them, they will comply. This finding provided support to the theoretical explanations that, if the tax system is fair to the taxpayers, then taxpayers exhibit compliance in return as postulated based on social exchange theory. Moreover, this finding is consistent with the previous corporate tax compliance studies that reported a negative effect of fairness on tax non-compliance (Sapiei & Kasipillai, 2013a). Nevertheless, this finding did not lend support to Abdul Jabbar (2009).

Furthermore, this finding is explained based on the shift to the SAS from the previous official assessment system. Before the introduction of SAS in Nigeria, small corporate taxpayers operated under the official assessment system. The official assessment system is characterized by a higher frequency of physical interaction between the taxpayers and tax authority, which makes expectations of good service quality important. However, in Nigeria, public service quality, which includes the tax service, was identified as being poor (Alabede, 2012). Possibly, the absence of all the difficulties related to the authority assessment under the SAS has encouraged the taxpayers to hire the services of tax consultants and, thus, reduced non-compliance.

Therefore, respondents showed high perception of fairness in the tax system because the SAS gave them control of their tax matters. This showed that fairness stands to be one of the principal factors that determine tax non-compliance. Hence, the high fairness perception reduces tax non-compliance among small corporate taxpayers in Nigeria.

6.2.5 Penalty and Tax Non-compliance

This study considers penalty as the perception of severity of penalty on the small corporate taxpayers. Taxpayers' perception of severity and the impact of the penalty regime is important in their compliance decisions. Under the relationship between penalty and tax non-compliance, H_5 hypothesized a non-directional influence of penalty on non-compliance. The finding from the result of the hypothesis test did not support H_5. The finding indicates that small corporate taxpayer's perceptions about the severity of a penalty and its impact on their business do not have important influence on their non-compliance. The finding is in agreement with previous studies of corporate taxpayers that found an insignificant connection between penalty and tax compliance (Kamdar, 1997; Sapiei & Kasipillai, 2013a; Yusof et al., 2014). This finding is not surprising as the Nigerian tax enforcement mechanisms, which include penalty, has been identified as weak (Gwangdi et al., 2012).

In addition, this finding can be further explained by the non-stiff penalties and low enforcement of the penalty in Nigeria. For instance, Section 92 of CITA provides that a penalty of N20,000 (USD65.50[9]) is charged on conviction for non-compliance with the tax law. A further sum of N2,000 (USD6.55[5]) is charged for failure to furnish a statement or keep a required record. Even though, the Act provided for penalties against offences, the penalties are not stiff and suffer from a lack of enforcement (Gwangdi & Garba, 2015). The low and outdated penalties do not reflect the current economic reality and are inconsistent with expectations. Hence, this weakness of the penalty regime may be a possible explanation for the inability of the penalty to significantly influence tax non-compliance in this study. Consequently, the small corporate taxpayers showed a low perception about the penalty, and penalties could not affect their non-compliance to a significant level.

[9] At the official exchange rate of the Nigerian Central Bank (USD1 @ NGN305.35) for November 2017

6.2.6 Public Goods Supply and Tax Non-compliance

This study defines public goods supply as the provision of public goods and services with necessary quality by the government to the taxpayers in an efficient way. Citizens who perceive that their interests are properly represented in the political institutions and that they receive an adequate supply of public goods are more willing to pay tax than those who do not (Murphy, 2010). H_6 proposed a negative influence of public goods supply on tax non-compliance. However, the finding did not support the hypothesis. The finding indicated that the respondents had a low perception of public goods supply, which did not reduce tax non-compliance. This finding supported the governance indicator indices of Nigeria that characterized Nigeria as having a low public goods supply (Ibrahim Index of African Governance, 2015). Also, the finding is in line with a Nigerian study that found that the perception of taxpayers of the government significantly relates to tax compliance (Joshua, 2016).

This finding indicated the poor state of public goods and services in Nigeria. The infrastructure has been dilapidated. The supply of water pipelines, electricity, housing, roads and rail, is greatly inadequate. Many people have no access to electricity; especially those who cannot afford diesel generators. Also, people leaving from the main cities take hours shuttling distances that should take few minutes due to lack of good road networks and a shortage of roads. Successive governments have been unable to keep up with the expansion and maintenance of the infrastructure in line with the high population growth of Nigeria.

Likewise, the supply of core infrastructure that has been estimated at only 20% to 25% of GDP is below the required level of 70% for middle income countries like Nigeria. Although the current government (unlike its predecessors) apportioned a large part of the 2015 budget to infrastructure development, the current challenge of low revenue has hampered the implementation of the budget. Moreover, a given infrastructure project such as roads construction and building of an electricity generating plant takes time to be completed and for the taxpayers to perceive its impact.

Therefore, giving the state of the public goods and services, the perceptions of the respondents of this study indicated that the public goods supply in terms of provision of public goods and services is below their expectations. This indicated that the situation in Nigerian infrastructure is essential in determining small corporate taxpayer's non-compliance decision.

6.2.7 Perception of Tax Tribunal and Tax Non-compliance

In the context of this study, perception of tax tribunal is considered as the perception of taxpayer about free and fair procedures in judging tax disputes between the taxpayer and tax authority by the tax tribunal. In Nigeria, the role of tax appeal tribunal constitutes an important institution that affects the justice perception of taxpayers. Just treatment in tax disputes offers more promise in regulating taxpayer behaviour (Murphy & Tyler, 2008).

H_7 suggested a non-directional influence of perception of tax tribunal on tax non-compliance. H_7 was supported with a negative and significant impact of perception of tax tribunal on tax non-compliance. The finding provided new empirical evidence that a negative and significant relationship existed between the perceptions of the tax tribunal and small corporate tax non-compliance. In line with social exchange theory, the finding indicated that, when the small corporate taxpayers perceive the role of the tax tribunal to be free and fair in judging tax disputes, they will be encouraged to reciprocate by complying with the tax laws.

To the best knowledge of the researcher, a lack of studies exists on the influence of the tax tribunal on tax non-compliance. However, this finding can be related to the findings of the previous studies that found a significant influence of procedural justice (in terms of tax office treatment) on tax non-compliance (Murphy, 2003; Murphy, Tyler, & Curtis, 2009; Worsham, 1996). Similarly, this finding supported the social exchange theory in that free and just procedures of the tax tribunal in treating tax disputes is reciprocated by obedience to the tax laws by the taxpayer.

As indicated by this finding, the tax tribunal appeal process appears to be fair and just in the perceptions of the small corporate taxpayers. With regards to small corporate taxpayers, the appeal process starts when any corporate taxpayer objects to the claim of tax authority that more tax is owed. If the tax authority and the taxpayer cannot arrive at an agreement, the tax authority will then issue a notice for refusal to amend its assessment. Upon receiving the notice, and, within 30 days, the taxpayer can file an appeal with the tax tribunal as stipulated in Section 59 of the FIRSEA.

The tribunal conducts its proceedings in courts located across the six geopolitical zones of Nigeria, and an aggrieved taxpayer can file appeal with the nearest tax tribunal. The tax tribunal offers a simple objection and appeal procedure that provides an opportunity for the aggrieved taxpayer to resolve the tax disputes before going to the regular court system. The procedures provide an avenue for the real involvement of the parties and focuses on the facts rather than on the legal technicalities to ensure a speedy conclusion.

This comprehensive process may have helped the respondents develop good perceptions of the tax tribunal, thus reducing tax non-compliance. This finding suggested that, from the perception of small corporate taxpayers in Nigeria, fair treatment of the tax tribunal can discourage non-compliance. When the taxpayers are given a fair hearing and the tax tribunal uses bias-free procedures in treating tax disputes between the taxpayer and the tax tribunal, taxpayers develop confidence in the system. When the taxpayers perceive that they are treated fairly, they pay their taxes. Therefore, this study extended the literature of perceived justice and tax non-compliance and provided new evidence on the influence of perception of tax tribunal on the small corporate taxpayers' tax non-compliance.

6.2.8 Tax Compliance Costs and Tax Non-compliance

The current study considers tax compliance costs as the total internal and external costs incurred by small corporations in complying with the income tax law. The high cost of compliance, though undesirable, may be the reason for compliance of some taxpayers. Corporate tax filers in Nigeria were mandated by the law to have their tax returns certified by tax professionals before they are accepted. H_8 suggested a non-directional connection between tax compliance costs and tax non-compliance. The finding revealed a negative and significant influence of tax compliance costs on tax non-compliance. In other words, the high tax compliance costs incurred by the small corporations in the process of complying with income tax law leads to a reduction in tax non-compliance.

This finding is in line with the deterrence theory. Thus, the high tax compliance costs imposed on the small corporate taxpayers by making consultation with tax professionals mandatory (s. 55, CITA 2007) lead to improved compliance. Given their expertise, tax professionals help their clients keep proper records and file correct returns, which, in turn, leads to improved compliance. Tax consultants make sure that the proper records and correct returns are intact before their endorsements. Moreover, giving the complex tax system (as found under complexity), the services of the consultants and the internal costs (tax compliance costs) increase, and, hence, the tax system induces high costs of compliance for the taxpayer. Thus, this finding supports Yesegat (2009) in which 39% of the respondents (corporate taxpayers) agreed that tax compliance costs did not discourage compliance. However, this finding did not support studies that found a significant and positive effect of tax compliance costs (Nur-tegin, 2008), and those that found weak effects (Abdul Jabbar, 2009; Sapiei et al., 2014).

This finding indicates that the small corporate taxpayers incur high tax compliance costs, which are related to compliance. Several factors contribute to the accumulation of high tax compliance costs on small corporate taxpayers in Nigeria. First, small corporate taxpayers in Nigeria pay their income tax under the SAS. SAS is associated with high tax compliance costs as the process of assessment (which is tax authority's responsibility under authority assessment) and paying the tax are responsibilities of the taxpayers. Second, s. 55 of CITA 2007 provides that corporate taxpayers tax returns must be certified by a professional tax consultant before submission to the tax authority. Three, most respondents described tax compliance costs as high. This is related to the fact that the cost of hiring the services of tax consultant is expensive especially when comparing the size of the small companies with large ones and their ability to hire the services of consultants. Hence, tax compliance costs lead to compliance at expense of the taxpayers. This finding provides an evidence that tax compliance costs imposed high costs on the small corporate taxpayers, which eventually lead to compliance.

6.2.9 Tax Rate Perception and Tax Non-compliance

In the context of this study, tax rate perception refers to the perception of the small company's taxpayers of the impartiality of the tax rate in relationship to their size and profit performance. Tax rate has been described as the perceived fairness of the tax rate structure and burden distribution (Gilligan & Richardson, 2005). In relationship to the connection between tax rate perception and tax non-compliance, H_9 suggested a non-directional relationship between tax rate perception and tax non-compliance. Thus, the finding supported the hypothesis. This finding is in line with several previous studies that found a significant influence of tax rate perception on non-compliance (e.g., Kinsey & Grasmick, 1993; Moser et al., 1995; Porcano, 1988). This finding demonstrated that the small corporate taxpayers perceived the tax rate structure to be unfair and hence encouraged non-compliance.

This finding may be explained by the fact that the tax rate in Nigeria has been fixed as 30% of taxable profit for a long time among all classes of corporate taxpayers. Small corporate taxpayers consider this as unfair as they pay the same rate as do large companies. Hence, this finding indicated the importance of the perceived equity of tax rate structure in small corporate taxpayers' non-compliance decisions.

6.3 Mediating Role of Tax Compliance Costs

This sub-section discusses the second objective of this study. The second objective involves the mediating role of compliance costs on the relationship between small corporate tax non-compliance and audit, bribery, complexity, fairness perception, penalty, perception of tax tribunal and tax rate perception. The expectation is that the mediating variable should be the explanation behind the relationship between the independent variables and the dependent one.

A mediating relationship involves direct and the indirect relationships. The direct relationship has to do with the path from the independent variable to the dependent one. Whereas, the indirect relationship comprises the paths from the independent variable to the dependent one through the mediating variable. Therefore, the indirect relationship is expected to explain how or why the direct relationship occurs. This study did not discuss the paths from the independent variables to the mediating one in detail as they are out of the scope of the objectives of this study. This study focused on the overall mediation results, which already include the paths of the independent variables to the dependent one. Therefore, this section starts with a discussion of the two significant mediated relationships and then follows with the remaining mediated relationships that are insignificant.

Of the seven mediated relationships, four were found to be significant. Specifically, the relationship between audit and tax non-compliance; complexity and tax non-compliance; perception of tax tribunal and tax non-compliance and tax rate perception and tax non-compliance relating to H_{10}, H_{12}, H_{15} and H_{16} respectively were significant. The statistical significance of the path between the mediator and the dependent variable in a mediation model is important in achieving significant mediating relationships (Baron & Kenny, 1986). This path in the mediation model of this study was significant.

6.3.1 Compliance Costs as Mediator between Audit and Non-Compliance

H_{10} stated that compliance costs mediate the relationship between audit and tax non-compliance. As expected, the finding under this relationship supported the hypothesis. The finding indicates that a high level of expectation of an audit results in high tax compliance costs, which eventually results in low non-compliance. High tax compliance costs involve the costs of keeping required records and hiring tax consultants. However, these lead to filing a correct return and reduced non-compliance, although at high expense to the taxpayer. This finding is in line with the deterrence exchange theory as the intimidation of audit led to imposed tax compliance costs which eventually reduced non-compliance. Also, the requirement of the law that corporate taxpayers' return to be certified by the tax consultants is considered a deterrence measure to ensure compliance. However, the intimidation of audit plays a key role in determining the seriousness of what the consultants check to ensure compliance with the law.

The reason behind the ability of an audit to reduce tax non-compliance is related to tax compliance costs. When the taxpayers perceive the probability of detection via an audit to be high, they keep all required records and file a correct return with the help of the service of tax consultants. They pay the right tax at the right time, and this reduces both intentional and unintentional non-compliance. Additionally, though the tax compliance costs were imposed on the taxpayers, the high perception of probability of detection, might have increased the intensity of the tax compliance costs. Hence, taxpayers engage the tax consultants who make sure their clients keep the proper records, which would lead to the preparation of correct tax returns. This aligns with deterrence theory as the compliance costs remain significant in interacting with audit to reduce non-compliance.

Tax consultants, who add to compliance cost, are deemed necessary for two reasons. First, as the findings under complexity of this study indicated, the corporate tax compliance process in Nigerian is perceived as being complex by small corporate taxpayers (Umar & Saad, 2015). Second, by provision of s. 55 of the CITA, all corporations must engage the services of tax consultants in filing their returns. Although the efforts of the tax consultants translate into high tax compliance costs, they also translate into reduced non-compliance. Thus, tax compliance costs stand to be a key factor that explain/mediate the relationship between audit and tax non-compliance.

6.3.2 Compliance Costs as Mediator between Complexity and Non-Compliance

H_{12} stated that compliance costs would mediate the relationship between complexity and tax non-compliance. Interestingly, the finding under this relationship supported the hypothesis. The finding indicates that compliance costs lead to a reduction of tax non-compliance under a complex tax system. The high tax compliance costs of a complex tax system involve the costs of keeping all the required records and hiring tax consultants lead to reduction of intentional and unintentional non-compliance but at high expense to the taxpayer. In line with deterrence theory and in the Nigerian context, the imposed compliance costs lead to a reduction of non-compliance at the expense of the taxpayers.

Before including the mediating variable, complexity led to tax non-compliance. However, given the mandatory requirement for endorsement of tax consultants of the corporate tax return, it becomes necessary for companies to hire the services of tax consultant. In fact, the consultants do not simply endorse rather they provide extensive services that lead to filing a correct tax return. For instance, they must scrutinize the records of their clients and offer advice on the records that should be kept in case of an audit. Hence, the level of the complexity determines the extent of the services offered by the tax consultants. All these services are translated into the high imposed tax compliance costs.

After the inclusion of the mediating variable, the high-level complexity led to high tax compliance costs. Eventually, the compliance costs lead to reduced non-compliance. Thus, even though complexity existed, working with tax consultants and the extra internal efforts that the tax consultants might have encouraged led to the filing of correct return and paying the correct tax on time. Finally, tax compliance costs stand to be key factor that explains the relationship between complexity and tax non-compliance.

6.3.3 Compliance Cost as Mediator between Perception of Tax Tribunal and Non-compliance

Relevant to achieving the second objective of this study, H_{15} hypothesized the mediating role of tax compliance costs on the relationship between the perception of tax tribunal and tax non-compliance. Consistently, the statistical results supported the hypothesis. This finding indicates that tax compliance costs explain the relationship between perception of tax tribunal and tax non-compliance.

This finding is in line with the social exchange theory and studies that advocate voluntary tax compliance (Kirchler et al., 2008). Fair and just perceptions of the tax tribunal reduce tax non-compliance indirectly through tax compliance costs. Thus, the finding suggested that the taxpayers perceive the tax tribunal to be just and fair in its procedures. This encourages them to reciprocate by exhibiting compliance through the help of a tax consultant and internal extra efforts. However, non-compliance is reduced but is associated with high compliance costs. Given the imposed nature of the tax compliance costs, the high perception of the just role of tax the tax tribunal increased the intensity of the compliance efforts (internal and external) which is translated into the high tax compliance costs. Therefore, tax compliance cost explained the relationship between the perception of tax tribunal and tax non-compliance.

6.3.4 Compliance Costs as Mediator between Tax Rate Perception and Non-compliance

Under the second objective of this study, H_{15} hypothesized the mediating role of tax compliance costs on the relationship between the tax rate perception and tax non-compliance. Consistently, the statistical results supported the hypothesis. This finding indicates that tax compliance costs explain the relationship between tax rate perception and tax non-compliance. This finding supported the proposition of social exchange theory that fair procedures in the tax system encouraged taxpayers to reciprocate with tax compliance through tax compliance costs.

Tax rate perception was found to have positive effect on tax non-compliance before including the mediating variable. In essence, when small corporate taxpayers perceived that the tax rate is unfair, this encouraged them to engage in non-compliance. However, after the inclusion of the mediating variable, the imposed tax compliance costs that led to working with a tax consultant and extra internal efforts, reduced the tax non-compliance. In line with deterrence theory, though the taxpayers considered the tax rate structure to be unfair, the imposed tax compliance costs related to the use of tax consultants and record keeping led them to file the correct return and pay their taxes on time. Therefore, tax compliance costs helped explain the relationship between tax rate perception and tax non-compliance.

6.4 Policy Contribution

This study is of enormous importance to the FIRS in reducing tax non-compliance among small corporate taxpayers who comprise an integral part of corporate taxpayers in Nigeria. Reducing tax non-compliance would increase government revenue. As a complex behaviour, tax non-compliance requires consideration of several factors ranging from economic and sociopsychological perspectives. The model of this study incorporates these factors to provide a comprehensive model to explain tax non-compliance in Nigeria.

Some of the variables in the model that were incorporated to explain tax non-compliance were found to have a significant effect on tax non-compliance. Precisely, the findings of this study provided evidence on the influence of the variables of this study on tax non-compliance. Accordingly, the tax policy formulation or FIRS should consider the following facts:

This study provided evidence that an audit stands to be an important enforcement mechanism in reducing tax non-compliance. Hence, the tax authority should widen the coverage of its audit. Although not practically possible for the tax authority to audit all taxpayers, widening the scope of the audit to the maximum possible coverage would be an important mechanism to reduce the high level of non-compliance.

The tax authority should disseminate information of its audit results to taxpayers via media such as daily newspapers. Information about the companies proven to be evading tax would demonstrate the effectiveness of an audit to non-complying taxpayers and serve as a deterrent to other taxpayers. Published information would increase their perceptions about the ability of an audit to detect their own non-compliance acts and induce potential taxpayers to overrate the probability of detection. Furthermore, such an information campaign could deter non-compliance if evading companies are exposed as cheaters, thus damaging their reputations. In a quest to protect their reputations, they would comply with the tax laws. Hence, public information would also enhance the deterring effect of the audit.

Furthermore, the complexity of the tax system was also found to have a significant effect on increasing non-compliance. This indicates the need for the tax authority to intensify efforts in simplifying the tax system. One important area is a comprehensive automation of the tax system. Although the FIRS introduced the electronic tax system, so far, the system has not been fully implemented. Most small corporate taxpayers and even the staff of the tax authority related with small corporate taxpayers are not yet aware of the e-tax. Hence, the tax authority must practically automate all main tax functions of the taxpayers such as registration, filing a tax return, assessment and payment. Full implementation would make the process simple for taxpayers as they could file tax returns and make tax payments even from their homes and offices. In addition, the e-tax system could increase taxpayers' confidence by allowing them to conduct some aspects of their tax compliance procedures by themselves. In essence, this process would improve taxpayers' voluntary compliance and reduce tax non-compliance.

In relationship to e-tax implementation, this study recommended that the tax authority put measures in place to tackle the possible challenges of a slow network during the filing system; breakdowns of the system; and security to protect the taxpayer tax information. Also, the design of the e-tax sites needs to be attractive, comprehensive and simple to use to induce the taxpayers to use the system. More importantly, a need exists for proper enlightenment via the mass media about the e-tax.

Therefore, this study strongly recommends the need of tax policy to recognize the e-tax in the tax laws. For instance, the e-filing should be supported with some level of legitimacy in the law. Nigeria may have lessons to learn from the countries where the e-tax has flourished, such as the United States and Japan. In the United States, taxpayers are given incentives in the form of tax discounts when they utilize the e-tax and pay their taxes on time. Also, in Japan, the tax authority has set up walk-in centres at which taxpayers can access all needed facilities to pay their taxes electronically. They are also provided with assisting services in the case of any difficulties that may be encountered during the process.

Another critical area of reducing complexity is increasing the readability of the income tax law. Income tax law is the major reference for taxpayers regarding their assessment, filing of returns and punishment. However, the law has been found to have low readability overall, and some important parts of the law that include Part 3 (Ascertainment of profit) and Part 10 (Assessments) have high levels of complexity (Umar & Saad, 2015). These two parts are very important under the self-assessment system. Hence, re-writing the tax law may be important in reducing complexity, and this reduction may reduce the level of the need for engaging tax consultants and allow small corporate taxpayers to concentrate on growing their businesses.

One more area that need attention of the tax authority is a timely reminder to every taxpayer on their tax status, such as a timely notice on filing returns. In line with the aim of FIRS to provide customer-oriented services, the tax authority should remind the taxpayers at the right time about filing tax returns and making tax payments. This can be done through a SMS, phone calls or emails. However, an e-tax system is easier and more cost effective and sends reminders to the taxpayer either via an email or e-tax portal.

Fairness perception was found to be critical factor for encouraging voluntary compliance. Hence, fairness perception among small corporate taxpayers is another area that tax policy should address. As highlighted earlier, one concern in relationship to the perception of fairness among small corporate taxpayers is related to the complexity of the tax law and process. Because of these issues, small firms must hire the services of the tax consultants while struggling to grow their businesses. In this regard, improving the simplicity of the tax law stands to be an important policy concern. Reducing complexity (as highlighted earlier) could make the process of their compliance simple and eliminate the perception of unfair burden in relation to medium and large companies.

Moreover, the tax authority should enlighten the responsibility of the taxpayers for paying taxes and the importance of the tax money in providing public goods. This may increase their perception of the fairness of the tax system. Hence, with this approach small corporate taxpayers may view the tax system as being fair to them and hence lead to improved voluntarily compliance with the tax law.

The perception of tax tribunal is also another important factor in the Nigerian tax system. Just, fair and timely treatment of the taxpayers by the tribunal should serve as a factor that could lead taxpayers to comply voluntarily. Therefore, this study recommends that the procedures of the tax tribunal should be enhanced by making its functions more open to the public. This study recommends that all tribunal sittings be broadcast either over television or the Internet. As the role of the tax tribunal has more to do with perception, such broadcasts would lead to developing a positive perception of the role of the tribunal by the taxpayers and reduce tax non-compliance accordingly.

Tax compliance cost is another important factor that requires practical attention. Tax compliance costs impose high burdens on small corporate taxpayers. Although these costs may be unavoidable to small corporate taxpayers in Nigeria, these costs should be kept at a minimum acceptable level. High tax compliance costs, in the long-run, may create a negative effect if the high costs adversely affect the performance of small business as well as their ultimate ability to pay taxes. Additionally, high tax compliance costs may force some small corporate taxpayers to engage in non-compliance by conniving with tax consultants or tax authority staff to overstate expenses or understate income.

High compliance costs can discourage business progress. Hence, taxpayers make efforts to reduce the burden of tax compliance costs giving the profit-maximization nature of all business enterprises. In making this effort, the taxpayer could deliberately choose not to comply either completely or partially with the provisions of the tax laws.

From the perspective of welfare and efficiency reform, reforms that reduce compliance costs are preferable to those that increase audits burden in promoting tax compliance (Phillips & Plumley, 2014). This may be more relevant in the case of small corporate taxpayers especially in Nigeria where the government is putting measures in place to support and promote their growth as well as voluntary tax compliance.

With respect to tax rate perception, small corporate taxpayers consider the current flat rate as unfair. This is because all corporate taxpayers in Nigeria pay taxes under the same rate. The small corporate taxpayers indicated a preference for a progressive tax rate structure. Regrettably, the issue of the tax rate burden among small corporations has not received proper consideration in Nigeria. Hence, in line with objectives of Vision 2020 to ensure a vibrant SMEs sector, a lower tax rate should be considered for small corporations in Nigeria. A lower tax rate would increase their income and leave them with more profits for financing their growth and expansion. In turn, this would facilitate their ability to pay more taxes in the future.

Countries like Malaysia, China and South Africa who have been working to grow their SMS's sector have adopted a progressive tax rate for their SMEs. In Malaysia, resident SMEs with capital of MYR2.5 million and below are taxed at the rate of 18% on first MYR 500,000 and the balance taxed at 24%. Similarly, SMEs in China are given a special rate of 10 or 20%; state encouraged and high-technology SMEs and entrepreneurs operating in certain regions have a rate of 15%. Moreover, South Africa has a rate of 0% to 28% for small corporate taxpayers. Therefore, Nigeria must join this economic development race of countries with similar objectives in growing its SMEs sector by providing a competitive tax rate for SMEs.

Moreover, this study provided new empirical evidence about the indirect effect of tax compliance costs on non-compliance in the case of audit, complexity, the perception of tax tribunal and tax rate perception. In relationship to audit, a high level of detection probability can lead to high compliance costs. Taxpayers struggle to file correct returns and, in doing so, and can incur high compliance costs, creating an excessive burden on small business owners. Also, the complexity of the tax system leads to high costs of compliance. Compliance costs related to record keeping and hiring tax consultants, eventually ensured correct filing and reduced non-compliance. Similarly, a taxpayer's positive perceptions of the perception of tax tribunal encouraged them to incur costs that ensured compliance. Though these small companies perceived the flat tax rate to be unfair, the mediating effect of tax compliance costs, which involved working with a tax consultant and extra internal efforts, reduced the tax non-compliance.

Therefore, in addition in reducing complexity in the tax system, this study recommends that tax policy should provide tax consultation services to small corporate taxpayers at subsidized costs. This can be achieved by creating a tax compliance support unit. The unit should provide tax consultation and advisory services to the small corporate taxpayers. Moreover, the e-tax system should establish an online flat form that provides advisory and consultation services for specific issues. For instance, the Portuguese tax authority introduced the online pre-filing system in their quest to encourage voluntary compliance. Similarly, Ireland introduced the "help guide 36" that assists the taxpayers on their online compliance process. In Australia, the ATO has been using the "Making it easier to comply 37 initiatives", which also help businesses in completing their tax returns by interacting with the tax administration online. All these taxpayers support schemes can reduce tax compliance costs, ensure sustainable compliance and encourage voluntary compliance.

With regards to other developing countries, this study has provided evidence of some key tax non-compliance determinants in a developing country, particularly in Africa countries where tax non-compliance is under researched. For such determinants, it is claimed that they may also determine tax non-compliance in other countries with similar taxpayer backgrounds, economic environments, and policies. This study has provided further evidence to aid tax authorities in countries with tax tribunal.

6.5 Theoretical Implication

The model of this study is based on the deterrence and social exchange theories. Hence, the study provides empirical evidence on the theoretical relationships hypothesized. Moreover, the model of the study includes economic and non-economic factors in explaining tax non-compliance. Specifically, the model investigates the direct influence of audit, bribery, complexity, compliance costs, fairness perception, penalty, perception of tax tribunal, public goods supply and tax rate perception. Moreover, the model highlighted the mediating effect of tax compliance costs on the relationships between the direct variables and tax non-compliance among small corporate taxpayers.

Previous studies of corporate taxpayers' non-compliance have studied the influence of different variables on non-compliance (e.g., Abdul Jabbar, 2009; Alm & McClellan, 2012; Alon & Hageman, 2013; DeBacker et al., 2012; Evans et al., 2005; Imam & Jacobs, 2014; Joulfaian, 2000, 2009; Joulfaian & Rider, 1998; Kamdar, 1997; Murray, 1993; Nur-tegin, 2008; Ortega & Sanguitti, 2013; Rice, 1992; Sapiei & Kasipillai, 2013a; Tagkalakis, 2013; Yusof et al., 2014). However, tax non-compliance behaviour remains a complex behaviour that requires alternative investigation for more understanding (Cumming et al., 2009; Alm, 2012). Hence, the model of this study expanded the literature by investigating the direct effect of the perception of tax tribunal and the mediating effect of tax compliance costs.

As mentioned earlier, the model of this study is built on the deterrence and social exchange theories. Thus, in the context of this study, deterrence theory postulates that audit, complexity, penalty and tax compliance costs influence tax non-compliance. On the other hand, based on the social exchange theory, this study suggested the influence of bribery, fairness perception, public goods supply, perception of tax tribunal and tax rate perception on tax non-compliance. Therefore, the model of this study contributes to the theories of deterrence and social exchange in the area of corporate tax non-compliance by providing empirical evidence to explain tax non-compliance on the basis of the theories.

More specifically, the current study investigates tax compliance costs as a deterrence factor under the Nigerian tax system. Most of the prior studies focused on only audit and penalty to predict tax compliance using deterrence theory. Grounding on the theory, this study predicted the effect of tax compliance costs on tax non-compliance and found that tax compliance costs to have significant direct and indirect influence in reducing tax non-compliance. Thus, this study expanded the deterrence theory by providing empirical evidence of the influence of tax compliance costs. For, social exchange theory, this study established the negative relationship of perception of tax tribunal based on the theory. The empirical evidence of this study confirmed the prediction of the theory on the relationship between perception of tax tribunal and tax non-compliance. In addition, the current study makes two specific contributions to the literature.

First, this study introduced the direct influence of a non-economic institutional variable, which is the perception of tax tribunal on small corporate tax non-compliance. Hence, this study extends the literature by establishing that the perceptions of small corporate taxpayers about role of tax tribunal have a strong impact on their tax non-compliance. Also, this study answered the call of Alon and Hageman (2013) for incorporating institutional variables in explaining corporate tax non-compliance. The tax tribunal has become institutionalized in the Nigerian tax system; hence, its role can influence tax non-compliance decisions as found in this study.

Second, the model of this study investigated the mediating effect of compliance costs. The mediating role of tax compliance costs has been deduced from some conceptual explanations in the literature (Abdul Jabbar, 2009; Allingham & Sandmo, 1972; Fischer et al., 1992; McKerchar, 2002). Despite these conceptual deductions, a lack of empirical evidence exists on the mediating role of tax compliance costs in the literature. Therefore, this study investigated the mediating role of tax compliance costs and, thus, extended the literature by providing empirical evidence in this regard.

In conclusion, the review of previous literature on corporate tax compliance revealed that most studies were conducted in developed countries and countries in Asia, thus ignoring developing and African countries, like Nigeria. Therefore, this study was conducted in Nigeria with the expectation of improving the understanding of small corporate taxpayers' tax non-compliance in developing countries and Africa. Thus, this study answered the call of Alon and Hageman (2013) and Andreoni et al. (1998) that more studies on corporate taxpayers should be conducted especially in non-developed countries. Hence this study narrows the research gap between the developed and the developing countries.

6.6 Methodological Implication

In addition to the practical and theoretical contributions, this study has made methodological contributions. Most previous studies on corporate tax non-compliance have mainly used secondary data (Joulfaian, 2000, 2009; Joulfaian & Rider, 1998; Kamdar, 1997; Rice, 1992; Yusof et al., 2014) and performed their analysis with SPSS or other software used for secondary data analysis. Other studies used experimental methods (Ariel, 2012; Downs & Stetson, 2014) and a very few corporate tax compliance studies have used self-reporting data (questionnaire) (e.g., Abdul Jabbar, 2009; Sapiei & Kasipillai, 2013a). The later studies used SPSS to analyse their data.

To the best knowledge of the researcher, few studies of corporate taxpayers have used a questionnaire and very few have used Smart PLS-SEM to analyse their data. Hence, this study used self-reported data collected using a questionnaire and used smart PLS-SEM to analyse the collected data. Using a questionnaire gives the opportunity to get direct perceptions of taxpayers. By validating the measures of previous studies in a developing country of Africa, namely, Nigeria and evaluating their psychometric properties (composite reliability, convergent validity and discriminant validity), this study contributes to the methodology of corporate tax non-compliance by using self-reported data analysed with smart PLS-SEM.

6.7 Limitations and Suggestions for Future Studies

Despite important contributions, this study has limitations that need to be pointed out. The first limitation is the adoption of a cross-sectional design. which has the inherent problem of not allowing for causal inferences to be made on the population. Hence, future studies should consider a longitudinal design to measure the variables of this study at a different point in time to re-confirm the findings of this study.

Second, this study investigated tax non-compliance using self-reported data. However, self-reported data is associated with common method variance (Podsakoff et al., 2003) and social desirability bias (Podsakoff & Organ, 1986). Relatively, Bennett and Robinson (2000) highlighted that self-reported data are valid in assessing non-compliance behaviour particularly when anonymity was assured during the data collection. This study attempted to reduce these problems by ensuring anonymity and improving scale items. However, it is possible that participants in this study might have under-reported their non-compliance. Therefore, future studies should employ other strategies to overcome this problem. One important way is by investigating the non-compliance of small corporate taxpayers using tax authority data.

Third, a limitation also exists with regard to the generalizability as this study focused mainly on small corporate taxpayers in Kano state. However, the problem raised by this study has more to do with this class of taxpayers, and Kamdar (1997) highlighted the need for studying non-compliance of classes (small, medium and large companies) of companies in isolation given their different characteristics. Kano state is the centre of commerce in Nigeria and is one of the states with a high number of small companies operating in different sectors of the Nigerian economy. Therefore, future studies should widen the scope of study by including medium and/or large corporations to enhance the generalizability of the findings. Also, medium, or large corporations can be studied and compared with small corporations. Similarly, future studies should consider covering all the states in the zone or the whole country for wider generalizability.

Finally, the model of this study is comprehensive by incorporating both economic and non-economic factors and mediation effect of tax compliance costs. However, other factors can be relevant in explaining tax non-compliance of small corporate taxpayers that this study does not cover. This is evidenced by the R^2 value of the model of this study that explained only 47.5% of the variation in the dependent variable. Therefore, future studies can further expand the model of this study by considering likely factors that may influence tax non-compliance behaviour corporate. For instance, the possible moderating effect of some social factors. Moreover, the model of this study can be replicated in other contexts.

6.8 Conclusion

Taxation stands to be one sustainable source of revenue for the Nigerian government. However, tax non-compliance has hampered the ability of the government to generate the expected revenue from taxation for financing development plans. Hence, enhancing taxation has become mandatory for Nigeria to generate more revenue especially under the current trend of declining revenue due to a decrease in oil prices and production challenges. As more than 70% of Nigerian government income comes from oil, it has become necessary for the country to diversify its sources of revenue to face the current challenges. This study focuses on the income tax of small corporate taxpayers, which are an integral part of corporate taxpayers in Nigeria. Small corporate taxpayers were identified with high potentiality of generating tax revenue; but hampered by a high level of tax non-compliance. Reducing tax non-compliance of this class of taxpayers may increase revenue generation to the government.

Based on the guidance of the literature, this study developed a model that would best explain tax non-compliance of this class of taxpayers in Nigeria. The model is underpinned and supported by the theories of deterrence and social exchange respectively. The model contains variables from economic (audit, complexity, penalty and tax compliance costs) and non-economic perspective (bribery, fairness perception, public goods supply, perception of tax tribunal and tax rate perception) factors that influence tax non-compliance. Moreover, this study investigated the mediating effect of tax compliance costs on the relationship between audit, bribery, complexity, fairness, penalty, public goods supply, perception of tax tribunal and tax rate perception (as independent variables) and tax non-compliance as a dependent variable. Hence, the study was set with the objectives of investigating these direct and indirect relationships and developed its hypothesis accordingly.

Based on its objectives, this quantitative study used a survey method and collected responses from a sample of 450 small corporate taxpayers via a questionnaire instrument. The useful responses were analysed using smart PLS-SEM. The findings from the results of the analysis lent support to the theoretical propositions. Based on the findings, this study has also made some important contributions to the theory and practice and made suggestions for future studies accordingly. Hence, despite its limitations, this study has successfully achieved its objectives by testing all the hypothesized relationships.

Finally, this study has made two important contributions to the literature of corporate tax non-compliance by incorporating the direct influence of the perception of tax tribunal and the mediating effect of compliance costs. It is hoped that the findings of this study would be of valuable contributions to the tax authority in the quest to increasing revenue generation particularly among small corporate income taxpayers in Nigeria.

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Appendix A:

Questionnaire

Dear Valued Respondent,

A SURVEY OF CORPORATE TAXPAYERS PERCEPTIONS AND TAX COMPLIANCE COSTS

This is a survey of a doctoral research on company income tax and estimation of compliance costs.

The researcher appreciates your kind assistance by taking your valuable time to complete the survey questionnaire, which is in English language. The researcher does recognize that your time is precious, and many demands are made upon it by your daily workload. Your participation in this survey would provide valuable input for the success of this research.

All completed questionnaires will be the property of the researcher, which is considered as privilege and will be treated with strict confidentiality. Thus, the completed questionnaires will only be used for academic purpose.

Should you have any queries or if you are interested in the outcomes of this research kindly contact the researcher.

Yours sincerely,
Musa Sulaiman Umar
Ph.D. Student in Accounting
School of Accounting
Universiti Utara Malaysia
06010 Sintok, Kedah, Malaysia
Phone no: 08063143811/+6014321836
Email: s95505@uum.student.edu.my

INSTRUCTIONS

Kindly tick an appropriate option based on the level of your agreement or disagreement with the provided statements based on the following scale:

[1] = Strongly disagree
[2] = Disagree
[3] = Neutral
[4] = Agree
[5] = Strongly agree

Where options are not based on the above scale, please provide the required information as accurate as possible.

PART A: PERCEPTIONS AND OPINIONS

Audit

The following statements are about the possibility of the audit to take place and to detect any discrepancy. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. The chances of being audited are high that it is not advisable trying to cut down a little on corporate income taxes for various reasons.	1	2	3	4	5
2. There are chances that any discrepancy in the tax return will be detected.	1	2	3	4	5
3. It is likely that an annual tax return with a discrepancy will be audited.	1	2	3	4	5
4. If a company is chosen for audit, it is likely that the audit will identify any discrepancy.	1	2	3	4	5

Bribery

The following statements are about giving bribe to government officials to get things done. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. It is common for small company to pay some irregular additional payments to get things done.	1	2	3	4	5
2. A small company need to make extra unofficial payments to public officials to get connected to public services.	1	2	3	4	5

3. A small company need to make extra unofficial payments to public officials to deal with taxes and tax collection.	1	2	3	4	5
4. A small company need to make extra unofficial payments to public officials when dealing with customs/imports.	1	2	3	4	5

Complexity

The following statements are about difficulties in filling the tax return and understanding the tax laws. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**Strongly agree** **[4]**	**[5]**
1. I consider corporate income tax return preparation simple.	1	2	3	4	5
2. Complexity in the income tax law is necessary so that companies are treated fairly.	1	2	3	4	5
3. Corporate income tax is not so complicated that you need the services of tax professionals to take advantage of most legal ways to save much taxes.	1	2	3	4	5

Fairness Perception

The following statements are about how fair is the tax law in relation to the current tax system that shifts more responsibilities to the taxpayers. Please show your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**Strongly agree** **[4]**	**[5]**
1. The officers of every company have a moral obligation to report all their company's income and pay the correct amount of corporate income tax.	1	2	3	4	5
2. Under the current income tax system corporate tax laws are fair.	1	2	3	4	5
3. Change to SAS did not make corporate income tax more on small companies.	1	2	3	4	5

Income Tax Non-Compliance

The following statements are about reporting incomes and expenses of a company. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. It is not okay to under-report certain income since it does not really hurt anyone.	1	2	3	4	5
2. It is not okay to hide some earnings from interest or investment that the tax authority may not be able to find out about.	1	2	3	4	5
3. It does not make sense to take a chance and take a deduction when a company is not sure whether or not deserving the deduction.	1	2	3	4	5
4. It is not normal to stretch some deductions to include some expenses that are not really such deductions.	1	2	3	4	5

Penalty

The following statements are about the certainty and severity of tax sanction and its impact on the taxpayers. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. If an illegal discrepancy is detected in a company's return; taking the company to court and paying the tax owe with interest and substantial fine will cause problem to the company.	1	2	3	4	5
2. If an illegal discrepancy is detected in a company's return; taking the company to the court, paying the tax owe with interest will cause problem to the company.	1	2	3	4	5
3. If an illegal discrepancy is detected in a company's return; paying the tax owe with interest and substantial fine will cause problem to the company.	1	2	3	4	5
4. If an illegal discrepancy is detected in a company's tax return; paying the tax owe with interest will cause problem to the company.	1	2	3	4	5

Public Goods Supply

The following statements are about provision of public goods by the government. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. Public service in Nigeria is not vulnerable to political interference.	1	2	3	4	5
2. The way the government is handling the health service is satisfactory.	1	2	3	4	5
3. The way the government is handling the education system is satisfactory.	1	2	3	4	5
4. The general quality of infrastructure in Nigerian is satisfactory.	1	2	3	4	5

Perception of Tax Tribunal

The following statements are about the procedures of tax appeal tribunal in judging tax disputes. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	**Strongly disagree** **[1]**	**[2]**	**[3]**	**[4]**	**Strongly agree** **[5]**
1. Corporate taxpayers can express their views and feelings during the tribunal procedures.	1	2	3	4	5
2. The tribunal procedures are free of bias.	1	2	3	4	5
3. The tribunal procedures are based on accurate information.	1	2	3	4	5
4. The tribunal procedures upheld ethical and moral standards.	1	2	3	4	5

Tax Rate Fairness

The following statements are about the justice of the tax rate in relation to company size and profit performance. Please indicate your level of agreement with the statements by ticking one option under each statement.

Statement	Strongly disagree [1]	[2]	[3]	[4]	Strongly agree [5]
1. A fair tax rate should be the same for every company regardless of size (small, medium or large).	1	2	3	4	5
2. It is fair that high-profit companies should pay a higher rate of tax than small and medium companies.	1	2	3	4	5
3. It is fair that high-profit companies should pay a higher rate of tax than low-profit companies.	1	2	3	4	5

PART B: ESTIMATION OF TAX COMPLIANCE COSTS

Section 1: Internal Tax Compliance Cost

10. Please estimate the **time spent** and **wage proportion** (per month) by the staff working on income tax activities (excluding usual bookkeeping and overhead cost) in your company for 2014. Please write '0' if you do not incur these costs.

	Total hours/month	Wage proportion ₦/month
Manager/ Accountant	[ ]	[ ]
Account Clerk	[ ]	[ ]
Admin Staff	[ ]	[ ]
Other Staff	[ ]	[ ]

11. Did your company incur any other additional non-staff costs for income tax compliance in 2014? Please provide or estimate the amount spent. (Please write '0' if you do not incur these costs in your company).

	Naira/month ₦
Stationery	[ ]
Postage	[ ]
Transportation	[ ]
Computer & Software	[ ]
Others, please specify:	[ ]

Section 2. External cost

12. If your company employed external tax professionals to handle Company Income Tax in 2014, please provide or estimate the cost paid to an external tax professional for Company Income Tax in 2014. [Please write '0' if you did not incur these costs (in 2014) in your company]:

	Naira/year ₦
Accountant	[ ]
Lawyer	[ ]
Others, please specify	[ ]

13. If your company claims costs from the government for the time and money spent (for internal or external tax compliance cost) by the company in dealing with Company Income Tax in 2014, how much do you think is a fair compensation? (Please write '0' if you did not incur these costs in your company):

	Amount ₦
Internal cost	[ ]
External cost	[ ]

14. Compared with other business in your industry, the estimated level of Company Income Tax compliance costs is.

Very High	High	Normal	Low	Very low
[ ]	[ ]	[ ]	[ ]	[ ]

PART C: DEMOGRAPHIC INFORMATION

15. How long have your company been in business:

Less than 3 years	3 to 5	6 to 8	More than 8
[ ]	[ ]	[ ]	[ ]

16. Please indicate the main business activity of your company in 2014:

Manufacturing [ ]
Agriculture [ ]
Transportation [ ]
Hotels and restaurants [ ]
Culture and tourism [ ]
Trade and commerce [ ]
ICT [ ]
Building and construction [ ]
Others, please specify...................................... [ ]

17. How do you keep your accounting system?

Manual system [ ]
Computerized [ ]
Mixed (computer & Manual) [ ]
Other, please specify ....[ ]

18. Please indicate the number of staff in your company in 2014.

Less than 50 [ ]
50 to 99 [ ]
100 to 149 [ ]
150 to 199 [ ]
200 and above [ ]

19. What is your current position in the company

Chief Executive Officer	Managing director	Manager/Accountant	Others, please specify
[ ]	[ ]	[ ]	[ ]

20. Make any comment either on company income tax or compliance costs: ....
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Thank you very much for taking your time to answer this questionnaire

Appendix B:

Measures with Deleted Items

Original Measures of Bribery from Martin et al (2001)

1. It is common for firms in my line of business to have to pay some irregular "additional payments" to get things done.
2. Do firms like yours typically need to make extra, unofficial payments to public officials to get connected to public services
3. Do firms like yours typically need to make extra, unofficial payments to public officials. to get licenses and permits
4. Do firms like yours typically need to make extra, unofficial payments to public officials. to deal with taxes and tax collection
5. Do firms like yours typically need to make extra, unofficial payments to public officials. to gain government contracts
6. Do firms like yours typically need to make extra, unofficial payments to public officials when dealing with customs/imports

Note: items deleted are shaded

Original Measures of Complexity from Christensen, Weihrich and Gerbing (1994) And Abdul Jabbar (2009)

1. Personally I consider corporate Income Tax return preparations difficult.
2. Corporate Income Tax law is relatively simple.
3. Complexity in the Income Tax law is necessary so that companies are treated fairly.
4. Corporate Income Tax is so complicated that only people who can afford to pay tax professionals can take advantage of most legal ways to save much taxes.

Note: items deleted are shaded

Original Measures of Fairness from Abdul Jabbar (2009) and Robert (1994)

1. I believe that each company's officers have a moral obligation to report all of their company's income and pay the correct amount of Corporate Income Tax.
2. Do you believe that the move to self-assessment system made the corporate tax laws more or less fair?
3. Overall, has the move to self-assessment system made the distribution of the Corporate Income Tax burden among small, medium and large companies more or less fair?
4. Do you believe that as result of changes in the Corporate Income Tax during the past five years SME companies are paying more or less taxes?
5. Do you believe that as result of changes in the Corporate Income Tax during the past five years large companies are paying more or less taxes?

Note: items deleted are shaded

Original Measures of Perception of Tax Tribunal from Colquitt (2001)

1. Have you been able to express your views and feelings during those procedures?
2. Have you had influence over the (outcome) arrived at by those procedures?
3. Have those procedures been applied consistently?
4. Have those procedures been free of bias?
5. Have those procedures been based on accurate information?
6. Have you been able to appeal the (outcome) arrived at by those procedures?
7. Have those procedures upheld ethical and moral standards?

Note: items deleted are shaded

Appendix C:

SPSS Outputs

Missing Values

	TRP1	TRP2	TRP3	AUD1	AUD2	AUD3	AUD4	PEN1	PEN2	PEN3	PEN4	CPX1	CPX2	CPX3	FRN1	FRN2	FRN3
N Valid	300	300	300	298	300	299	300	298	298	300	300	299	298	298	300	300	300
Missing	0	0	0	2	0	1	1	2	2	0	0	1	2	2	0	0	0

BRB1	BRB2	BRB3	BRB4	RTT1	RTT2	RTT3	RTT4	PGS1	PGS2	PGS3	PGS4	TCC	TNC1	TNC2	TNC3	TNC4
298	298	298	299	299	300	299	299	300	300	300	298	300	300	300	300	300
2	2	2	1	1	0	1	1	0	0	0	2	0	0	0	0	0

Appendix D:

PLS Outputs

PLS Quality Criteria Overview

	AVE	Composite Reliability	R Square	Cronbach's Alpha	Communality	Redundancy
AUD	0.527	0.767		0.752	0.527	
BRB	0.519	0.810		0.748	0.519	
CPX	0.555	0.788		0.729	0.555	
FRN	0.633	0.838		0.730	0.633	
PEN	0.550	0.783		0.709	0.550	
PGS	0.527	0.763		0.706	0.527	
RTT	0.523	0.766		0.828	0.523	
TNC	0.682	0.896	0.480	0.843	0.682	0.136
TRP	0.603	0.818		0.747	0.603	

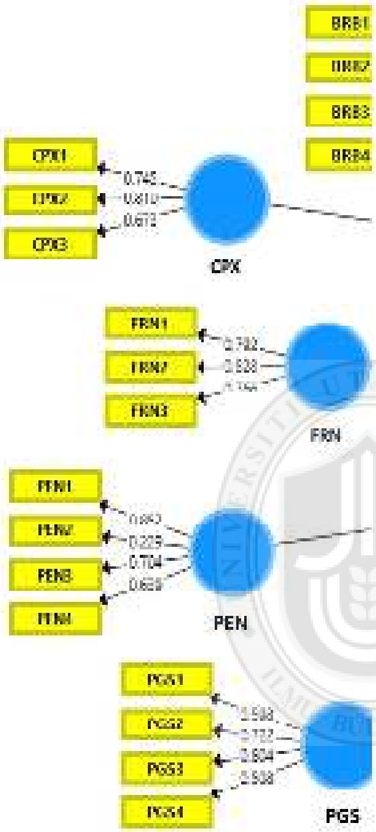
Cross Loadings

	AUD	BRB	CPX	FRN	PEN	PGS	RTT	TCC	TNC	TRP
AUD2	0.744	-0.085	-0.200	0.564	-0.315	-0.167	0.244	-0.171	-0.390	-0.232
AUD3	0.591	-0.192	-0.270	0.337	-0.279	-0.173	0.240	-0.290	-0.298	-0.367
AUD4	0.823	-0.118	-0.372	0.656	-0.353	-0.219	0.382	-0.369	-0.497	-0.274
BRB1	-0.241	0.853	0.234	-0.306	0.167	0.179	-0.317	0.202	0.207	0.271
BRB2	-0.075	0.619	0.131	-0.116	0.186	0.128	-0.132	0.104	0.078	0.319
BRB3	-0.074	0.654	0.151	-0.149	0.136	0.167	-0.171	0.115	0.086	0.213
BRB4	-0.028	0.734	0.071	-0.070	-0.008	0.086	-0.051	0.110	0.148	0.275
CPX1	-0.316	0.190	0.745	-0.359	0.446	0.291	-0.687	0.338	0.305	0.377
CPX2	-0.304	0.131	0.810	-0.293	0.467	0.206	-0.671	0.268	0.350	0.161
CPX3	-0.253	0.159	0.673	-0.240	0.357	0.123	-0.418	0.170	0.222	0.179
FRN1	0.600	-0.230	-0.280	0.792	-0.402	-0.158	0.316	-0.304	-0.452	-0.292
FRN2	0.570	-0.119	-0.307	0.828	-0.340	-0.219	0.405	-0.213	-0.521	-0.276
FRN3	0.600	-0.253	-0.381	0.766	-0.393	-0.149	0.394	-0.336	-0.421	-0.334
PEN1	-0.439	0.114	0.492	-0.437	0.859	0.290	-0.564	0.271	0.480	0.466
PEN3	-0.279	0.133	0.369	-0.295	0.707	0.285	-0.387	0.246	0.254	0.173
PEN4	-0.184	0.106	0.407	-0.279	0.642	0.191	-0.429	0.128	0.247	0.105
PGS1	-0.183	0.180	0.184	-0.168	0.299	0.609	-0.242	0.220	0.236	0.204
PGS2	-0.220	0.153	0.291	-0.184	0.283	0.738	-0.333	0.201	0.260	0.339
PGS3	-0.161	0.047	0.109	-0.135	0.131	0.820	-0.155	0.157	0.115	0.195
RTT1	0.317	-0.264	-0.357	0.395	-0.447	-0.273	0.771	-0.277	-0.444	-0.364
RTT2	0.277	-0.151	-0.694	0.341	-0.434	-0.279	0.690	-0.325	-0.303	-0.389
RTT3	0.289	-0.109	-0.799	0.270	-0.500	-0.211	0.706	-0.282	-0.355	-0.169
TCC	-0.384	0.195	0.356	-0.351	0.299	0.265	-0.401	1.000	0.226	0.354
TNC1	0.371	0.139	0.302	-0.434	0.401	0.236	-0.420	0.178	0.852	0.352
TNC2	0.527	0.209	0.356	-0.557	0.428	0.271	-0.441	0.183	0.839	0.455
TNC3	0.466	0.166	0.346	-0.467	0.379	0.205	-0.469	0.242	0.791	0.240
TNC4	0.462	0.139	0.314	-0.466	0.352	0.261	-0.377	0.143	0.820	0.319
TRP1	-0.252	0.364	0.183	-0.233	0.264	0.223	-0.238	0.260	0.234	0.640
TRP2	-0.380	0.333	0.312	-0.375	0.317	0.329	-0.400	0.315	0.416	0.859
TRP3	-0.236	0.150	0.224	-0.232	0.335	0.230	-0.318	0.245	0.289	0.814

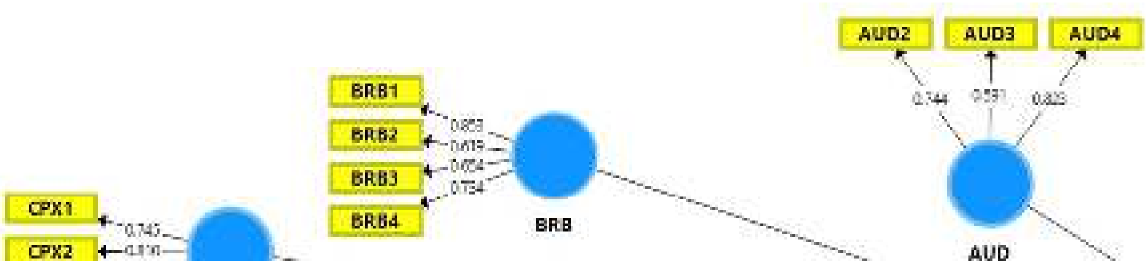
Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Std. Dev (STDEV)	Std. Error (STERR)	T Stat (|O/STERR|)	P Values
AUD -> TNC	-0.228	-0.233	0.072	0.072	3.148	0.001
BRB -> TNC	-0.004	0.007	0.046	0.046	0.089	0.460
CPX -> TNC	0.091	0.105	0.074	0.074	1.487	0.069
FRN -> TNC	-0.260	-0.256	0.073	0.073	3.540	0.000
PEN -> TNC	0.083	0.084	0.058	0.058	1.426	0.075
PGS -> TNC	0.061	0.064	0.049	0.049	1.252	0.175
RTT -> TNC	-0.318	-0.313	0.090	0.090	3.551	0.000
TCC -> TNC	-0.126	-0.128	0.048	0.048	2.621	0.004
TRP -> TNC	0.129	0.127	0.053	0.053	2.433	0.009

Measurement Model Before Deletion of Low Loadings



Measurement Model of The Direct Relationships



Measurement Model of The Mediated Relationships