DETERMINANTS OF TAX COMPLIANCE BEHAVIOUR OF SMEs IN NIGERIA: THE MODERATING ROLE OF PERCEIVED SERVICE ORIENTATION AND PERCEIVED CORRUPTION

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BY

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ABSTRACT

The issue of low compliance among small and medium enterprises (SMEs) has become a serious concern in Nigeria. This is particularly evident when the number of SMEs who did not pay tax rose from 22.2% in year 2014 to 65% in year 2015. In respond to this issue, this study examined the determinants of tax compliance behaviour (TCB) among SMEs in Nigeria. The study examined the effects of work-family financial commitment (WFFC), fuel subsidy removal (FSR), and the role of perceived service orientation (PSO) and perceived corruption as potential moderators of the relationship between economic factors, psychological factors and TCB. Partial Least Squares path modeling was employed to test the study hypotheses. Based on a sample of 281 SME's owners/managers, the results provided support for most of the hypothesized relationships of the study. In particular, WFFC, FSR and tax complexity were significantly and negatively related to TCB. The findings suggest that the variables are important in further explaining the puzzle of TCB. The probability of detection, incentives and public governance quality (PGQ) were significantly and positively related to TCB. However, tax rates and tax knowledge were found to be insignificant. Furthermore, the results of the moderating effect indicated that six of the 12 hypotheses were significant. Perceived corruption showed a significant moderating effect on the relationship between tax rates, the probability of detection, incentives, tax knowledge and TCB. In addition, PSO also moderate the relationship between incentives, PGQ and TCB. The results indicate that PSO could assist in reducing the climate of deterrence between the taxpayers and the relevant tax authorities. Thus, relevant tax authorities should integrate these variables into their processes in order to enhance the level of tax compliance. An enhanced level of tax compliance could lead to the overall improvement in the revenue collection of the states and the country at large.

Keywords: work-family financial commitment, fuel subsidy removal, perceived service orientation, perceived corruption, tax compliance behaviour

ABSTRAK

Pematuhan cukai yang rendah dalam kalangan perusahaan kecil dan sederhana (PKS) merupakan isu yang serius di Nigeria. Ini dibuktikan apabila bilangan PKS yang tidak membayar cukai meningkat daripada 22.2% pada tahun 2014 kepada 65% pada tahun 2015. Sebagai tindak balas kepada isu ini, kajian ini menyelidik faktor penentu gelagat pematuhan cukai dalam kalangan PKS di Nigeria. Selain itu, kajian ini meninjau kesan konflik di antara komitmen kewangan kerja dan keluarga, pemansuhan subsidi minyak dan peranan tanggapan orientasi perkhidmatan dan tanggapan rasuah faktor perantara ke atas hubungan di antara faktor ekonomi, faktor psikologi serta gelagat pematuhan cukai. *Partial Least Squares Path Modelling (PLS)'* digunakan untuk menguji hipotesis kajian. Berdasarkan sejumlah 281 sampel kajian ke atas pemilik/pengurus PKS, keputusan kajian menyokong kebanyakan hipotesis dalam kajian. Secara khususnya, konflik di antara komitmen kewangan kerja dan keluarga, pemansuhan subsidi minyak dan kerumitan cukai adalah berhubung secara signifikan dan negatif dengan gelagat pematuhan cukai. Dapatan ini menunjukkan bahawa pemboleh ubah-pemboleh ubah ini adalah penting di dalam menerangkan secara lebih lanjut persoalan gelagat pematuhan cukai. Kebarangkalian dikesan, insentif (pendorong positif) dan kualiti pentadbiran awam adalah berhubung secara signifikan dan positif dengan gelagat pematuhan cukai. Walau bagaimanapun, kadar cukai dan pengetahuan cukai didapati tidak mempunyai hubungan yang signifikan dengan gelagat pematuhan cukai. Selain itu, dapatan menunjukkan enam daripada 12 hipotesis berkaitan faktor perantara adalah signifikan. Tanggapan rasuah menunjukkan kesan perantara yang signifikan di antara kadar cukai, kebarangkalian dikesan, insentif (pendorong positif), pengetahuan cukai dan gelagat pematuhan cukai. Di samping itu, tanggapan orientasi perkhidmatan juga memberikan kesan pengantara ke atas hubungan di antara insentif (pendorong positif), kualiti pentadbiran awam dan gelagat pematuhan cukai. Hasil dapatan menunjukkan orientasi perkhidmatan boleh membantu di dalam mengurangkan bahang penghalang di antara pembayar cukai dan pihak berkuasa cukai. Oleh itu, pihak berkuasa cukai boleh mengambil kira pemboleh ubah-pemboleh ubah ini di dalam meningkatkan tahap pematuhan cukai. Peningkatan tahap pematuhan cukai boleh mendorong penambahbaikan kutipan hasil bagi setiap negeri mahupun negara secara keseluruhan.

Kata kunci: konflik di antara komitmen kewangan kerja dan keluarga, pemansuhan subsidi minyak, tanggapan orientasi perkhidmatan, tanggapan rasuah, gelagat pematuhan cukai

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LIST OF ABBREVIATIONS

ATO	Australian Tax Office
AVE	Average Variance Extracted
CB - SEM	Covariance Based Structural Equation Modeling
CBN	Central Bank of Nigeria
CGT	Capital Gains Tax
CITA	Company Income Tax Act
CITN	Chartered Institute of Taxation of Nigeria
DTO	Direct Taxation Ordinance
EU	European Union
FCT	Federal Capital Territory
FIRS	Federal Inland Revenue Services
FIRSEA	Federal Inland Revenue Services Establishment Act
FRN	Federal Republic of Nigeria
FRNC	Federal Republic of Nigeria Constitution
FSR	Fuel Subsidy Removal
GDP	Gross Domestic Product
IPI	Incentives (Positive Inducement)
IRBM	Inland Revenue Board Malaysia
ITMA	Income Tax Management Act
ITO	Income Tax Ordinance
JTB	Joint Tax Board
MSMEs	Micro Small and Medium Enterprises
BNM	Bank Negara Malaysia
N	Naira
NBS	National Bureau of Statistics
NITO	Nigerian Income Tax Ordinance
NPC	National Population Commission
NMSMECS	National Micro Small and Medium Enterprises Collaborative Survey

NRO	Native Revenue Ordinance
OECD	Organization for Economic Co-operation and Development
PAYE	Pay As You Earned
PC	Perceived Corruption
PD	Probability of Detection
PGQ	Public Governance Quality
PIT	Personal Income Tax
PITA	Personal Income Tax Act
PITAM	Personal Income Tax (Amendment) Act
PLS - SEM	Partial Least Squares Structural Equation Modeling
PPTA	Petroleum Profit Tax Act
PSO	Perceived Service Orientation
RM	Ringgits Malaysia
SBIRS	States Board of Internal Revenue Services
SPSS	Statistical Packages for Social Science
SMEDAN	Small and Medium Enterprises Development Agency of Nigeria
SMEs	Small and Medium Enterprises
TC	Tax Complexity
TCB	Tax Compliance Behaviour
TK	Tax Knowledge
TR	Tax Rate
US	United State
VAT	Value Added Tax
WFFC	Work - Family Financial Commitment

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Achieving a high level of tax compliance and maintaining the current compliance rates are issues of concern to fiscal policy makers, be they in developed or developing countries. This is the case as the principal objective of taxation, irrespective of the nature of the economy, is to raise revenue towards the financing of public goods and services (Cheunjit, 2014). Although much research has concentrated on the tax compliance behaviours of general taxpayers (e.g., Jackson & Milliron, 1986; McKerchar, 2007), little is known about the behaviours of businesses or Small and Medium Enterprise (SME) taxpayers, even though they are important sources of tax revenue to the government.

Therefore, business or SMEs tax compliance is critical to the fiscal viability of any government, whether in a developed or developing country (Joulfaian, 2009). Torgler (2007) reinforced the above assertion reiterating that tax compliance issues in relationship to business or SMEs has generally received very little attention in the literature. This is surprising taking into account the economic contribution of SMEs in the development of any economy (Charoenrat & Harvie, 2014; Kubickova, Votoupalova, & Toulova, 2014).

Presently, SMEs have been given due recognition, especially in the developed nations, for playing crucial roles in fostering accelerated economic growth and development (Abubakar, Kamariah, & Hadi, 2012; Sando-Kriszt, 2000).

Furthermore, Ihua (2009), Okpara (2009), and Taylor (2013) revealed that SMEs made-up the largest proportion of businesses globally. By their very nature, these enterprises play a tremendous role in employment generation, as well as immensely contributing to the Gross Domestic Product (GDP) of many countries.

To affirm the above scenario, Kubickova et al. (2014) further revealed that SMEs approximately account for almost 99% of all viable and economic entities in the entire European Union. In relationship to Nigeria, the Federal Office of Statistics reported that Nigerian SMEs make up 97% of the entire economy (Atawodi & Ojeka, 2012). Although, smaller in size, they are regarded as the most important enterprises in the economy because, when aggregated, the resultant effect of these SMEs exceeds that of the larger companies (Adebisi & Gbegi, 2013). Similarly, the National Micro, Small and Medium Enterprises Collaborative Survey (NMSMECS) (2010) also show that SMEs constitute one, if not the most, important sector of the Nigerian economy. They currently represent 96% of the businesses in Nigeria and contribute 75% of the national employment. A Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) survey in conjunction with the National Bureau of Statistics (NBS) showed that the country has more than 17.3 million SMEs and growth in the sector directly correlates with the growth in the economy as a whole (Ndumanya, 2013). Additionally, another report further revealed that SMEs constitute more than 90% of the Nigerian businesses, but their contribution is only 1% of the GDP (Ghandi & Amissah, 2014).

Over the years, the contribution of SMEs, and prevailing issues of tax compliance have become a national and public concern. This is due to large number of cases of

non-compliance in the country. Issues of tax compliance have been seen as a global phenomenon; for instance, the BBC news magazine (2013) revealed that, in the United Kingdom low and even noncompliance is being recorded year in and year out. According to the report, Amazon and Google units in the United Kingdom, who separately recorded a turnover of 3.35 billion and 395 million UK pounds respectively only paid 1.8 million and 6 million pounds as tax, while the Starbucks United Kingdom unit recorded a turnover of 400 million but engaged in transfer pricing with a sister company in New Zealand. In the same vein, another statistic issued by the *New Sabah Times* (2013) revealed that Inland Revenue Board Malaysia was able to solve only 1.9 million tax litigation cases in 2012, which enabled the government to recoup RM2.95 million.

In recent times, Nigeria has appeared on the bottom rungs of many global indexes of economic and social development. One of the latest indexes, Paying Taxes (2014, 2015) by the World Bank and PwC, compares tax systems across the world. In 2009, 2010, 2011, 2012, 2013, 2014 and 2015, Nigeria was ranked 132th, 180th, 138th, 155th, 170th, 179th, and 181th in collections respectively out of 189 countries. The assessment was based on three major indicators, namely, total tax rate; number of payments and compliance time, which further revealed that Nigeria‘s tax administration was ranked better than only eight countries of the 189 countries surveyed at the end of 2015. The report further disclosed that the explanation for Nigeria‘s decline in the latest ranking was because the time it takes for most businesses to comply with the requirements for tax payment is longer than what is reported in most countries.

Similarly, statistics issued by Nigeria's Department of Planning, Reporting and Statistics of the Federal Inland Revenue Services (FIRS) revealed that the contribution of non-oil tax revenue to the Nigeria economy was on the decrease compared to the oil tax revenue as shown in Table 1.1 and depicted in Figures 1.1 and 1.3. The statistics further revealed that in 2013 the North West geopolitical zone achieved the lowest tax collection performance of 72.2% compared to other regions with 93.3%; 91.6%; 125%; 81.1% and 83.3% for South West, South East, South South, North Central, and North East as presented in Table 1.2. In terms of revenue contribution, the North West contributed the lowest percentage of tax revenue to the economy as depicted in Figure 1.2.

Table 1.1
Nigeria's Total Tax Revenue Collection from 2011 to 2014 (2nd Quarter)

Year	**Non-oil tax (N' Billion)**	**Oil tax (N' Billion)**	**% of non-oil tax**	**% of oil tax**
2011				
1st Quarter	297.70	657.40	31.17	68.83
2nd Quarter	337.10	648.10	34.21	65.79
3rd Quarter	528.70	888.20	37.31	62.69
4th Quarter	379.60	891.40	29.87	70.13
2012				
1st Quarter	315.30	857.10	26.89	73.11
2nd Quarter	523.20	743.90	41.29	58.71
3rd Quarter	567.70	798.30	41.56	58.44
4th Quarter	385.90	815.80	32.12	67.80
2013				
1st Quarter	403.70	802.90	33.46	66.54
2nd Quarter	643.00	793.40	44.77	55.23
3rd Quarter	635.20	520.40	54.97	45.03
4th Quarter	454.80	551.80	45.18	54.82

2014				
1st Quarter	418.20	638.00	39.60	60.40
2nd Quarter	815.90	639.20	56.07	43.93

Source: FIRS (2014).

Table 1.2
2013 Tax Collection Performance Based on Geopolitical Zones

Zones	**Targeted Revenue (N' Billion)**	**Actual Revenue (N' Billion)**	**Achievement in %**
South West	133.20	124.80	93.30
South East	14.40	13.20	91.60
South South	76.80	96.00	125.00
North Central	45.60	37.00	81.10
North East	21.60	18.00	83.30
North West*	21.60	15.60	72.20

Source: FIRS (2014).

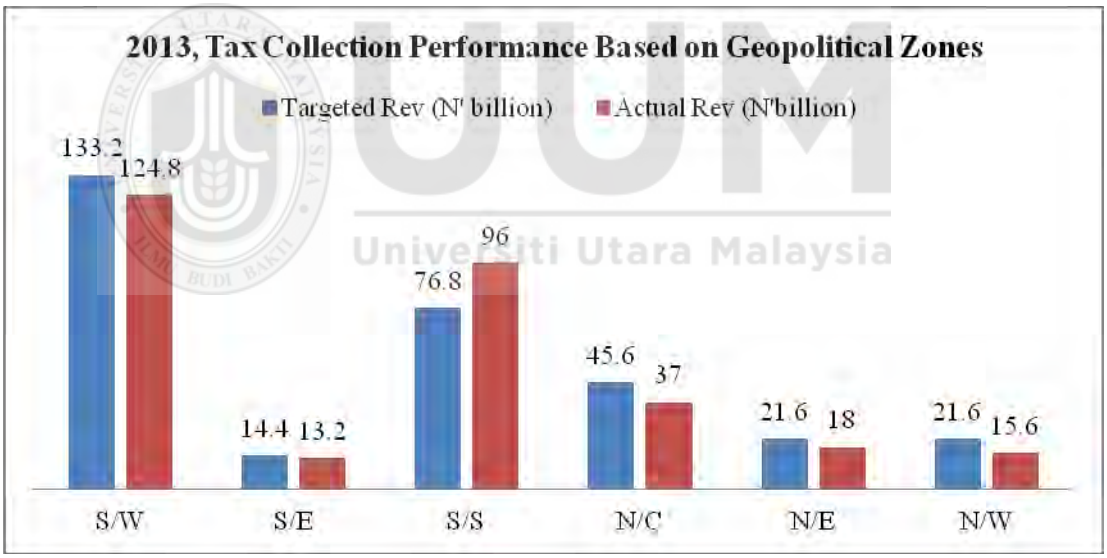


Figure 1.1. 2013 Tax Collection Performance Based on Geopolitical Zones Regions.

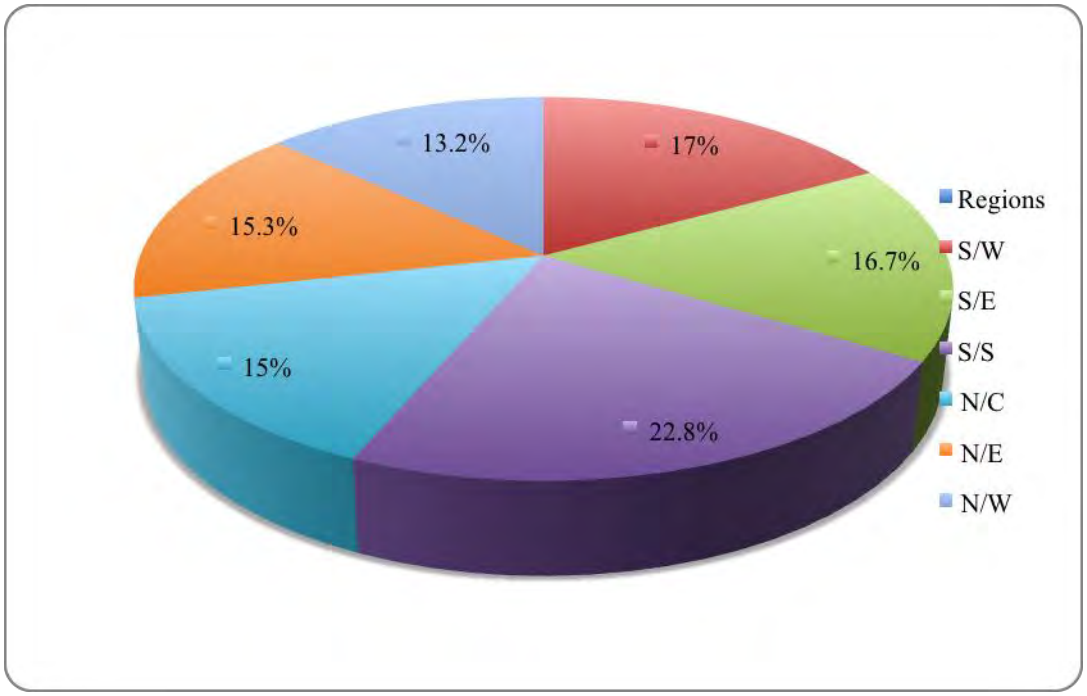


Figure 1.2. A pie chart showing Nigeria's 2013 Tax Revenue Contributions Based on Zones/Regions.

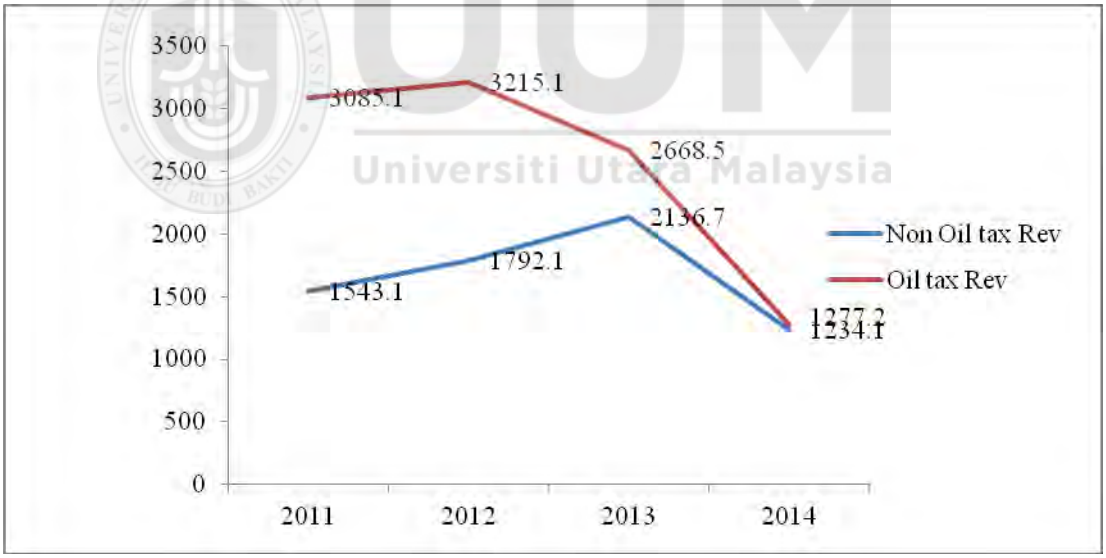


Figure 1.3. Contribution of Non-Oil Tax Revenue to Oil Tax Revenue.

Furthermore, Taiwo (2014) also revealed that total tax revenue represents only 4.6% of the GDP in Nigeria before rebasing the current GDP. In contrast, the tax revenue of a Ghana, a neighbouring country with a lower population and fewer SMEs as well as incorporated firms, contributes 21% of tax revenue to its GDP. The statistics

further revealed that the situation is reported to be particularly critical, especially in the informal sector, the SME's, which should be the engine of the economy. In addition, taking a cursory look at the currently revised GDP of Nigeria in 2014, the percentage of taxes to GDP is a far cry from what the 12% of GDP that it should be, falling below the rule of thumb of 15% the International Monetary Fund has recommended (Harmon, 2014). Similarly, a more recent report issued by the Nigeria Minister of Finance, revealed that the country‘s GDP has increased from N42.3 trillion to N80.3 trillion, making the country the largest economy in Africa, as well as the 26th largest economy in the world. However, the Minister further reiterated that, the tax revenue ratio to the country's GDP has declined from 20% to 12% and now to 3.85%. Even in war-torn countries, the percentage is 11%, but Nigeria is far from reality (NAN, 2014).

Additionally, other statistics issued by the FIRS show that the government lost more than N110 million in Jos (Plateau State), which resulted in sealing off a micro-finance bank and another 16 SMEs owing to tax-related issues on the 16th November, 2014 as reported by the state tax controller (Abimaje, 2014). Also, the Executive Chairman of the Kaduna State Board of Internal Revenue Service‘s further reported that the government of Kaduna state lost more than N18 billion ($112.5 million) in 2013 due to unpaid taxes (Tanko, 2014). The singular act resulted in the closure of twenty-five private schools, hospitals, eateries, hotels and even a remarkable number of micro-finance banks over the low level of payments in June, 2014.

Similarly, the Accountant General of the Kaduna State government shows that of the six million taxable residents in the state only five hundred thousand complied with tax payments (Shekari, 2014). In a related development, the Chairman of the Task Force on Revenue Generation in Kano State, Nigeria reported that the Kano State Board of Internal Revenue Service's has shuttered more than twenty-nine educational institutions as a result of alleged failure to pay taxes to the government (Muhammad, 2012). This, according to the report, has negatively affected the internally generated revenue of the state.

Based on the foregoing, re-examining the present tax compliance of SMEs within the prevailing economic condition of Nigeria is expedient. The President of the Chartered Institute of Taxation of Nigeria (CITN) recently reported that the level of tax compliance in Nigeria is abysmally low, so every effort to gather more taxes and increase compliance is a welcome development (Dike, 2014). Hence, the current study attempts to fill the current gap by focusing on the determinants of tax compliance behaviour among the SMEs, and the moderating role of Perceived Service Orientation (PSO) and perceived corruption that could assist in explaining the puzzle of tax compliance in relationship to Nigerian SMEs.

1.2 The Problem Statement

The low level of tax compliance is one of the major problems facing most policy makers in many developing countries. This is because lack of compliance limits the ability of government to raise revenues for developmental purposes (Torgler, 2003). However, most research on taxpayers has been tailored to determine why people and

entities evade their taxes, at the expense of why a remarkable number of people willingly comply with their tax obligations (Slemrod, 1992).

In Nigeria, the issue of tax compliance has become a serious concern. Although tax audits and investigation departments exist in almost all State Boards of Internal Revenue Service (SBIRS) with sufficient mechanisms to address compliance issues, low compliance remains a persistent problem among SMEs and other sub sectors (Dike, 2014; Taiwo, 2013).

In recent times, Atawodi and Ojeka (2012) reported that tax compliance issues remained a difficult task to achieve due to the fact that a good number of SMEs carted away a large chunk of unpaid taxes, which might have been invested in developing the economy and are lost annually. The Coordinating Minister for the Economy and Minister of Finance lamented that more than 65% of the businesses in the country have not filed their tax returns for the past two years which has again brought to the forefront the issue of low tax compliance in the country (NAN, 2014).

In addition, the Joint Tax Board (JTB) statistically reported that, about 10,006,304 registered for personal income tax purposes in all the states of the federation including the FCT which the SMEs falls under its jurisdiction (Taiwo, 2016). Out of this, about 4.6 million or 46% are registered with the Lagos State Internal Revenue Service (LIRS) indicating an average of 153,000 or 1.5% per state for others (National Bureau of Statistics, 2016). Compared to the labour workforce of 77 million at the end of 2015 according to the National Bureau of Statistics (NBS), the number of people in the tax net is only 13%. Ironically even government as the

largest employer of labour is not fully compliant in deducting and remitting taxes on the salaries of their workers less alone SMEs owners (Taiwo, 2016). This is evident in the paltry personal income tax collection nationwide. To buttress further, the NBS recently released tax collection data by all 36 states of the federation which totalled N683.6 billion out of which Lagos state accounted for N268 bn or 40% of the total revenue collected by all the states of the federation in 2015. In fact, Lagos state collected more than all the other states in terms of personal income tax combined excluding Rivers, Ogun and Delta.

Therefore, the choice of SMEs is motivated by the fact that the contribution of SMEs worldwide has been recognized as contributing immensely to the areas of revenue and employment generation (Charoenrat & Harvie, 2014; Kubickova et al., 2014). Even though the collection and administration of SMEs taxes falls under the jurisdiction of Personal Income Tax that cuts across every State in the country. However, it is under PIT that compliance issues are on the increase due to the presence of this large informal sector (Nzotta, 2007; Slemrod, 2007).

Many theoretical studies are available on the relationship between the factors that influenced tax and or a combination of other factors on tax compliance behaviour. The economic factors and psychological factors that have received empirical attention in relationship to tax compliance behaviour over the years include tax rates (Allingham & Sandmo, 1972; Ali, Cecil, & Knoblett, 2001; Mas'ud, Aliyu, & Gambo, 2014; Modugu, Eragbhe, & Izedonmi, 2012; Palil, Hamid, & Hanafiah, 2013), detection probability (Eisenhauer, 2008; Palil & Mustapha, 2011; Stefura, 2012), tax complexity (Forest & Sheffrin, 2002; McKerchar, 2003; Saad, 2014),

incentives including positive inducements (Alm, Jackson, & McKee, 1992b; Feld, Frey, & Torgler, 2006; Manaf, 2004), tax knowledge (Kasipillai & Jabbar, 2003; Kirchler, Niemirowski, & Wearing, 2006; Loo, McKerchar, & Handsford, 2009; Palil, 2010; Saad, 2014), public governance quality (PGQ) (Alabede, Ariffin, & Kamil, 2011; Everest-Philips & Sandall, 2009; Levi, 1998).

Despite the numerous studies conducted on the factors influencing tax compliance behaviour as documented earlier, unfortunately the literature has had varied, mixed and weak findings and were thus inconclusive (Eisenhauer, 2008; Slemrod, Blumenthal, & Christian, 2001; Young, 1994). In order to improve the existing debate, Alm (2013), and Stefura (2011, 2012) suggested the need for studying more psychological and other noneconomic factors that may help in explaining the puzzle of tax compliance. To buttress this discussion further, Alm (1999) and Jackson and Milliron (1986) pointed that tax non-compliance decisions may be influenced by other factors not captured in the basic model. Furthermore, Khlif and Achek (2015) were of the view that future studies should account for the previous significant determinants of tax compliance before exploring new variables.

To heed this call for exploring new variables, Work - Family Financial Commitment (WFFC) and Fuel Subsidy Removal (FSR) was selected for this current study because they may serve as important determinants of tax compliance behaviour. Although the literature has not adequately addressed the relationship between WFFC, FSR and tax compliance behaviour (TCB), Work - Family Financial Commitment has been found to be an important determinant of job performance, individual obligation or commitment, organizational commitment as well as stress (Aryee,

1992; Frone, Yardley, & Markel, 1997; Kalliath & Kalliath, 2013; Shaffer & Joplin, 2001; Ahmad, 2008; Patel & Ramgoon, 2006; Rehman & Waheed, 2012; Kalliath, Hughes, & Newcombe, 2012; Kossek & Ozeki, 1998). Additionally, FSR has been discovered to correlate with other factors, such as cost of production, and growth of SMEs (e.g., Kehinde, Kyade, Felix, Musibau, & Ishola, 2012; Odemero, 2013). Thus, Nzotta (2007) and Odinkonigbo (2009) supported the inclusion of these variables for study, asserting that poverty and other extended family burdens (for instance WFFC) might be responsible for the low level of tax compliance in Nigeria.

Furthermore, considering the inconsistencies found in the studies relating to the determinants of tax compliance as earlier pointed, Alabede et al. (2011) also suggested the need for further exploring the moderating effects of its relationship especially in developing countries. Therefore, Perceived Service Orientation (PSO) and perceived corruption were selected due to the fact that taxpayers who perceived greater service would be more willing to pay their taxes (Gangl, Muehlbacher, de Groot, Goslinga, Hofmann, Kogler, Antonides, & Kirchler, 2013).

In addition, service orientation could promote mutual and cordial interactions between the taxpayers and the relevant tax authorities, instead of creating a climate of deterrence and distrust, which could warrant negative attitudes towards the payment of tax (Kirchler, Hoelzl, & Wahl, 2008). Similarly, perceived corruption was equally considered because Rahmani and Fallahi (2012) pointed out that, when a country is characterized with more democracy and less corruption, the willingness and ability of the taxpayers to pay their taxes may be increased.

Moreover, not much has been written on the issue of tax compliance in the Nigerian setting, except for few studies, such as Alabede (2012) and Atawodi and Ojeka (2012); however, their studies have been criticized in terms of coverage and ability to generalize.

No doubt exists that past studies had given sufficient attention to the factors affecting TCB as documented in the literature. Importantly, the present study is an attempt to establish a relationship among WFFC, FSR and TCB as well as the moderating role of PSO and perceived corruption on the relationship between economic factors (the tax rate, the probability of detection, and the tax complexity), and psychological factors (the incentive of positive inducement, tax knowledge, and Public Governance Quality), and Tax Compliance Behaviour of SMEs owners/managers that previous studies have not considered. In line with the current issues and the suggestions of the need for future research in this direction, it is now crystal clear that gaps actually exist in the prevailing theories, practical aspects, and empirical findings, concerning the recurring issues of tax compliance in Nigeria. Hence, an empirical study is needed to fill up these gaps, especially in predicting and explaining the influence of WFFC, FSR and the moderating role of PSO and perceived corruption in relationship to TCB.

1.3 Research Questions

Referring to the discussion on the need for this research to be carried out as stated earlier, the following research questions are to be addressed:

1. Are Work - Family Financial Commitment, Fuel Subsidy Removal, economic factors (tax rates, probability of detection and tax complexity), and

psychological factors (incentives i.e. positive inducement, tax knowledge and public governance quality) related to Tax Compliance Behaviour?

2. Do Perceived Service Orientation and perceived corruption moderates the relationship between economic factors (tax rates, probability of detection and tax complexity), psychological factors (incentives i.e. positive inducement, tax knowledge and public governance quality) and Tax Compliance Behaviour?

1.4 Research Objectives

Generally, this study aims at investigating the influence of Work - Family Financial Commitment, Fuel Subsidy Removal and the moderating role of Perceived Service Orientation and Perceived Corruption on the relationship between Economic Factors (tax rates, the probability of detection, and tax complexity), Psychological Factors (incentives i.e. positive inducement, tax knowledge, and Public Governance Quality) and Tax Compliance Behaviour of SMEs owners/managers. In line with the above research questions, the study seeks to accomplish the following specific objectives:

1. To examine the relationship between Work - Family Financial Commitment, Fuel Subsidy Removal, Economic Factors (tax rates, probability of detection and tax complexity), Psychological Factors (incentives i.e., positive inducement, tax knowledge and public governance quality) and Tax Compliance Behavior; and
2. To determine whether Perceived Service Orientation and Perceived Corruption moderates the relationship between Economic Factors (tax rates, probability of detection and tax complexity), Psychological Factors

(incentives i.e., positive inducement, tax knowledge and public governance quality) and Tax Compliance Behaviour.

1.5 Significance of the Study

This study, which is about investigating the influence of Work - Family Financial Commitment, Fuel Subsidy Removal, and the moderating role of Perceived Service Orientation and perceived corruption on the relationship between economic factors, psychological factors and Tax Compliance Behaviour of SMEs owners/managers, is important to theory, methodology and practice.

1.5.1 Theoretical Significance

In the literature, three areas of a research contributions have been identified as empirical, conceptual, and methodological (Davidsson & Wiklund, 2009). In line with this, the present study aims at contributing to the enhancement of knowledge by expanding Fischer et al.'s (1992) tax compliance model with two exogenous variables (WFFC and FSR) and two moderating variables (PSO and perceived corruption) in relationship to TCB of SMEs owners/managers. Even though, we excluded some of the variables (i.e., demographic variables, attitudes and perception, noncompliance opportunities) in the original Fischer's model due to the fact that; the dimensions offered in Fischer et al.'s model were viewed as not totally suitable for this study. Because the variables were documented in the literature by authors (e.g., Mustafa, 1997; Tayip, 1998; Manaf, 2004). Additionally, the relationship between the excluded variables has been established in the context of Nigerian environment (e.g., Alabede, 2012; Atawodi & Ojeka, 2012). Hence, like any other model of tax compliance (for instance, Manaf, 2004; Mustafa, 1997; Tayib, 1998; Chau & Leung,

2009; Alabede, 2012), this study added four exogenous constructs to the Fischer‘s model.

Furthermore, the inclusion of these new constructs is in line with Alabede et al. (2011), Alm, (2013), Alm and Torgler (2006), and Stefura (2011, 2012) who called for empirical studies that will incorporate more psychological variables in explaining and understanding the puzzle of tax compliance. To the researcher's knowledge, this is the first study to use these variables as a combined model. Generally, for the first time the current study will add to the existing knowledge by demonstrating the direct effects of WFFC, FSR, as well as the moderating effects of PSO and perceived corruption. Thus, the proposed theoretical framework for this study may be a useful tool for academics and other researchers in understanding these antecedents in the future and improve on them.

Moreover, the work family spillover theory has not been extensively examined in relationship to tax compliance, particularly in the Nigerian context, considering the differences in culture and environmental influences. This study also adds theoretically by introducing the work family spillover theory to the area of tax compliance and the capable of establishing a relationship between WFFC and TCB.

Finally, this study serves as motivation for other researchers who are interested in the field of tax compliance, especially in developing countries in general and Nigeria in particular. They might use this current work towards examining and identifying other factors across another set of taxpayers that could influence compliance. Indeed, the

study contributes to academic discourse and literature in the area of taxation and accounting.

1.5.2 Methodological Significance

In addition to theory, this study intends to contribute in terms of methodology in the sense that the researcher recognizes the weaknesses associated with estimation of parameters in the literature.

As such, to this researcher‘s knowledge, only a few studies such as Saad (2011) on tax compliance duly have utilized PLS-SEM as technique for data analysis. Her research is a comparative (between Malaysia and New Zealand) mixed model study, which utilizes both survey and interview in achieving the research objectives. However, this current study is purely cross-sectional.

In Nigeria, the few studies that were available either used multiple regression, ordinary least squares or simple percentages as an analytical technique (e.g., Alabede et al., 2011, 2012; Atawodi & Ojeka, 2012; Ibadin & Eiya, 2013). Therefore, to the researcher‘s best knowledge, no study has utilized either SmartPLS or PLS-SEM as a technique for data analysis in the area of tax compliance in Nigeria. Hence, another unique contribution of PLS SEM, over Covariance Based SEM (AMOS) and SPSS is in it robustness in the estimation of path coefficient as well as its non-assumptions about data distribution. This is due to its predictive accuracy (Bacon, 1999; Hwang et al., 2010; Wong, 2010).

In addition, PLS is said to have proven potential to deal with extremely complex models with considerably high number of relationships, constructs, or indicators (Barclay, Higgings, & Thompson, 1995; Garthwaite, 1994). This study opted to use PLS because of its ability to deal with model complexity and due to its predictive orientation. As such, Smart PLS software (Ringle et al., 2005) was considered for this study as it is said to be one of the most powerful SEM tools available as of now compare to others (Chin, 1998).

Another methodological contribution of this study emanates from the measures used in measuring the tax compliance construct because previous studies (Alabede et al. 2011; Kasipillai, Aripin, & Amran, 2003; Chan, Troutman, & O'Bryan, 2000; Kirchler & Maciejovsky, 2001; Recker et al., 1994; Saad, 2011) used scenario cases to measure tax compliance behaviour. This study applied a 5-point Likert-type scale, an interval scale to measure tax compliance behaviour, easily giving room for respondents to express their respective judgments as well as enhancing its predictive power. The interval scale was employed because; scenario cases are time-consuming, which may not give participants enough time to express their opinion (Mietzner & Reger, 2005). In the same vein, scenario cases have been reported to yield fruitful outcome, only when the study is stem on a more qualitative approach with a strong emphasis on the selection of experts, and in practice this task could not be easily fulfil as reported by Mietzner and Reger (2005). Whereas this study is of quantitative in nature. Unlike the scenario cases, interval scale has been established to be simple, highly reliable as well as easy to read and complete by participants (Kaplan, 2000).

In terms of large sample size, the study used a large sample size which other renown scholars were of the view that large sample size can be properly executed without violating the assumptions of variance based SEM (Astrachan, Patel, & Wanzenried, 2014). Even though in their study, they employed a sample size of 480 respondents; but the current research finally used a sample of 218, which was far below that of Astrachan et al. (2014). Hence added methodologically in the area of large data set, which other researchers claimed PLS SEM could not handle effectively.

1.5.3 Practical Significance

In addition to theory, this research is also significant in a practical sense. Generally, the findings will help the governments of Kaduna and Kano States, and the country at large to see the need for instituting a service-oriented mechanism. This mechanism will empower and strengthen the public relations arm of the States Board of Internal Revenue Service's (SBIRSs) and the Federal Inland Revenue Services (FIRS) for the purpose of rendering efficient and effective service delivery in the form of selfless services in an effort to meet the expectations of the taxpayers. This singular act will enhance the SMEs business operation vis-à-vis the mind-set of the owners for the purpose of minimizing the issues of tax compliance and thus enhance revenue collection within their jurisdictions.

Specifically, SMEs as an institution will find this study informative due to the fact that the findings will help both owners and institutions as a whole understand the need for regulating the problems associated with financial obligations emanating either from the family or workplace, because these obligations do affect the

psychological status of the taxpayers as well as their performance, which may invariably affect their compliance behaviours.

Furthermore, the findings also serve as a reference point to the respective SBIRSs, FIRS and other regulatory bodies to reconsider their tax policies towards establishing an appropriate tax mix that will help in restructuring the tax rate for the purpose of mitigating the level of corruption in the tax system as well as complimenting the effect of FSR being experienced by SMEs owners/managers in Nigeria and other oil producing countries. This is because one policy thrust of every government is to ensure the social welfare of its citizens.

Finally, the study has contributed to the institutional, regulatory, and legal framework by examining new avenues in tackling other tax related issues at this critical period of the country in which 95% of the States find it difficult to pay staff salaries due to volatility of crude oil prices in the international market and in achieving the country's vision 2020.

1.6 Scope and Limitations of the Study

This study investigates the influence of WFFC, FSR, and the moderating role of PSO and perceived corruption on the relationship between economic factors (tax rate, the probability of detection, and tax complexity), and psychological factors (incentives, tax knowledge, and PGQ) on the TCBs of SMEs owners/managers in Kaduna and Kano States, North West Nigeria. Importantly, this is a pioneering study that thoroughly emphasizes the psychological factors in explaining the intrinsic

motivations or human elements, which may be responsible for low level of tax compliance in Nigeria.

However, this study is narrow in scope examining SMEs in Kaduna and Kano States, North West geopolitical zone, Nigeria with a total of 472 SMEs (185 in Kaduna, and 287 in Kano) because the other geopolitical zones of the country, particularly the North East geopolitical zone, comprising Adamawa, Bauchi, Borno, Gombe Yobe, Taraba, and some States in the North West comprising Jigawa, Katsina, Kebbi, and Sokoto States were not covered by this study due to the activities of the *Boko Haram* insurgency.

Boko Haram, which literary means "Western Education is Forbidden" is an Islamic extremist sect in Nigeria that has created havoc for human life and economic activities across the northern part of the country as well as the Federal Capital Territory, Abuja. Its daily violent attacks are mainly on individual businesses, individual residential houses, government offices, and places of worship (Gwamna, 2011). Due to this unfortunate situation in the country, business activities have been shut down in most of the affected areas until further notice as the leader of Boko Haram has called for more attacks in the country (Omomia, 2015).

The present study could not cover the Southern and North Central geopolitical zones of the country because they were inaccessibility due to the Niger Delta Militancy and the BIAFRA struggle for self-independence. Because of this turmoil, attacks on innocent individuals and the unfortunate recurrent crisis in North Central Nigeria,

particularly, the Plateau, Kogi and Benue States limited the scope of this study to only two States.

Additionally, these two states are known to have the highest number of SMEs among the seven States as well as in the six geopolitical zones of the country (NMSMEs Collaborative Survey, 2010; SMEDAN, 2014). Similarly, these are the most populated States in the country with an estimated population of more than 16 million out of the total estimated Nigerian population of 140 million (National Population Commission, 2006). Kaduna and Kano States are located in a geopolitical zone that has the highest number of states in Nigeria (FRNC, 1999). In addition, SMEs owners/managers were considered as the unit of analysis because the study focused on individual behaviour. Because the decision to pay or not to pay taxes is made at the individual level, investigating behavioural issues at this level is expedient. The study also focused on the 2014 year of assessment. This study did not include any analysis for corporate or company income tax. The study only focused on the SMEs owners/managers, as their number is huge compared to other taxpayers such as corporate organizations.

In predicting the tax compliance behaviour of the SMEs owners/managers, only economic factors and psychological factors were taken into account and other political or environmental factors were excluded as these were beyond the scope of this study. Neither Fischer et al. (1992) nor Alabede (2012) included those factors in their tax compliance models.

Finally, the study however narrowed to SMEs in Kaduna and Kano states North West, Nigeria. These SMEs were selected because they are duly registered with the SMEDAN and the respective SBIRSs.

1.7 Assumptions of the Study

This study will be conducted on the bases of the following assumptions:

1. Small and Medium Enterprises owners/managers are assumed to have knowledge of tax regulations in the country.
2. It is also assumed that SMEs owners/managers will be subject to the influence of similar factors as SMEs owners/managers in other countries. Although different countries worldwide have different tax policies.
3. Other factors outside the purview of this study, which may influence tax compliance behaviour of SMEs owners/managers in any way, are held constant.

1.8 Outline of the Thesis

Chapter one focuses on the background of the study in relationship to the needs and issues to embark upon the study.

The problem statement is highlighted, followed by the formulation of research questions and the objectives the research intends to accomplish. This, in turn, provides an avenue for identifying the significance of the study. Within this context, the scope and limitations of the study are presented in order to indicate the boundaries of the research. Furthermore, the chapter ends with the assumptions of the study.

Chapter Two covers the overview of the SMEs income tax system, while Chapter Three covers the relevant theories, literature review, and review of tax compliance models of other researchers. Chapter Four deals with the research framework that arises from the literature, the direct as well as the moderating relationship between the key constructs and the hypotheses development. Chapter Five discusses the research methodology employed in the current study. The chapter highlighted the research paradigm, research design, followed by the population and sampling techniques.

Additionally, the chapter further documents the operational definitions and measurement of the study variables, the pilot study, followed by the data collection methods and procedures, and finally ends with the method of data analysis adopted in the study.

Chapter Six presents in detail the descriptive analysis of the respondents, empirical results, key findings, and test of the research hypotheses. Finally, Chapter Seven emphasizes the discussion of the findings, the limitations of the study, directions for future research, and the conclusion.

CHAPTER TWO
OVERVIEW OF NIGERIAN INCOME TAX SYSTEM

2.1 Introduction

The chapter covers an understanding of the Nigerian SME income tax system in totality. According to the 1999 Constitution of the Federal Republic of Nigeria, the country is constitutionally made up of three tiers of government, namely, Federal, State, and Local governments. Each of these tiers is given with the outright power of raising revenue through taxes within its jurisdiction. The Federal government has the power to administer and collect taxes, such as the personal income tax (some portion), the company income tax, petroleum profit tax, value added tax, education tax, and customs duties among others. While the State government collects individual income tax within their territory, and the Local government collects minor levies such as market fees, motor park fees, and street naming charges in their domain (FRNC, 1999: 86).

The overview of Nigerian SMEs income tax system is presented in this chapter, which begins with the background, followed by the history of Nigerian personal income tax, tax regulations applicable to SMEs owners in Nigeria, Nigerian SMEs income tax law, taxing powers, among others and finally a summary of the chapter.

2.2 History of Nigerian Personal Income Tax

In Nigeria, the history of taxation started with the personal income tax in 1904 when the British colonial leader called Lord Lugard first introduced the income tax in the northern part of Nigeria (Ola, 1999). Similarly, the community tax became operational through the Revenue Ordinance (RO) in 1904. However, in 1917, after the amalgamation of the Northern and Southern Protectorates in January 1914, the Native Revenue Ordinance (NRO) of 1917 replaced the 1904 Revenue Ordinance. The provisions of the 1917 Ordinance were amended in 1918 and extended to Southern Nigeria, the West and the Mid-West and, subsequently, to Eastern Nigeria, in 1928 (Ola, 2004).

The NRO was later incorporated into the Direct Taxation Ordinance (DTO) No. 4 of 1940, cap 54. In the pre-independence regime, Personal Income Tax (PIT) was administered and collected by the Native administrations or Local governments in the name of direct taxation. Under the DTO of 1940, the assessment and collection of taxes were the sole responsibilities of the Native administrations/authorities throughout the country, and the taxes so collected that time were their main sources of revenue (Yerokun, 1997). In 1943, another Ordinance known as the Income Tax Ordinance (ITO) of 1943 was promulgated for Lagos residents, who had opposed the 1940 ordinance. Unlike the 1940 ordinance, the 1943 Ordinance was a mixture of both the poll tax and an income tax, which were received from the native residents in the township of Lagos and non-native residents in Nigeria by the central government for the general revenue of the country.

The Nigerian Income Tax Ordinance (NITO) of 1943 remained in force in the Federal Territory of Lagos until late in 1961 when the PIT (Lagos) Act of 1961 was enacted by the Federal government. Ola (2004) and Angahar and Alfred (2012) have pointed that the root of the present laws on PIT in Nigeria can be traced to the Fiscal Commission set up in 1957, which included Sir Jeremy Rainsman as the chairman and Professor R.C. Tress as a member among others. The purpose of establishing the commission was to examine the jurisdiction and fiscal powers of the various tiers of government in Nigeria. At present, the laws that regulate the PIT in Nigeria are as follows:

1. The Income Tax Management Act (ITMA) 1961;
2. Personal Income Tax Act (PITA) 1979 as amended in 1993; 2004, and 2011;
3. Tax reforms, and;
4. Annual pronouncements that have been gazetted.

2.3 Tax Regulation Applicable to SMEs and Owners in Nigeria

The tax regulation that is applicable to SMEs, sole proprietorship, partnership and other related businesses in Nigeria is governed by the Personal Income Tax Act (PITA) 1993 as amended in 2004, and 2011 (Angahar & Alfred, 2012). Section 3 of the Act specifies, among others, that, tax is payable on:

1. Gains or profits from any trade, business or vocation for whatever period of time such business, trade, profession or vocation may have been carried on or exercised in any part of the country;

2. Any salary, fees, wages, allowances or other gains or profits from an employment that are payable in money by the employer to the employee, including gratuities, bonuses or premium, compensation, benefits or other perquisites allowed, given or granted by any to an employee subject to some exceptions;
3. Profits or gains, including any premiums arising from a right granted to any other persons for the use or occupation of any property;
4. Interests or discounts, and gains;
5. Any pensions, charge or annuity; and
6. Any profit or gains not falling within the preceding categories.

Tax regulations applicable to SMEs owners are not much different from those that are applicable to people in paid employment or vocations, such as persons employed by companies or civil servants in the country (Angahar & Alfred, 2012). In terms of corporate taxpayers, the Company Income Tax Act (CITA) governs the applicable tax regulations applicable. Other tax regulations such as the Petroleum Profit Tax Act (PPTA), Capital Gains Tax (CGT) and Value Added Tax (VAT) are different and distinct from the Personal Income Tax Act (PITA), which governs taxation with respect to people who are self-employed or in paid employment such as SMEs (Ola, 1999).

2.4 Nigerian SMEs Income Tax Law

The Federal Republic of Nigeria Constitution (FRNC) (1999) established the authority to impose taxes on individuals, sole proprietorships, and partnerships as well as those who run a business have a trade and or a vocation as the case may be. The body entrusted with the sole mandate and authority to make laws in relationship to taxes in the country is the National Assembly under items 58 and 59 of the exclusive legislative list and items 7 and 20 in the concurrent legislative list. State government is delegated with the responsibility of collecting and administrating certain aspects of taxes, such as personal income taxes under the concurrent legislative list as enshrined in the constitution of the country. States Houses of Assembly are empowered to make laws in relationship to taxes of individuals, businesses, trade and vocation and some specified categories of SMEs within their domains. Thus, the law to regulate and impose taxes on SMEs, which falls under the PITA in Nigeria, is one enactment of the National Assembly exclusive list. The NRO of 1906 was the first law on Personal Income Tax in Nigeria.

Odusola (2006) has noted that the Income Tax Management Act (ITMA) of 1961 laid the foundation for modern and articulated Personal Income Tax administration in the country. After Nigeria gained her independence in 1960, the ITMA of 1961 was promulgated because of the dire need to have uniform PIT administration in the country. According to Lekan and Sunday (2006), the ITMA introduced several remarkable changes to the administration of PIT in Nigeria such as income from individual, trade, vocation, employment, and the income of SMEs was assessed

under the Pay As You Earn system (PAYE). However, as Odusola (2006) further noted the application of ITMA varied from one part of the country to another, thereby dampening the burden of multiple taxes in relationship to personal income.

In 1991, the Federal Government created two important study groups to review personal income tax and other taxes in the country. One recommendation of the group resulted in the repeal of ITMA 1961 and its replacement by PITA No 104 of 1993 (PITA). The Personal Income Tax Act (PITA) Cap P8 LFN 1993 as amended in 2004 and 2011 was promulgated as a result of the consolidation of PITA 1993 with various amendments, the PITA Cap P8 LFN 1993 was made up of 13 parts, 109 sections and 8 schedules.

Furthermore, in 2011, the President of the Federal Republic of Nigeria signed into law, the PITA (Amendment) Act (PITAM or _theAct‘), 2011. The gazette version of the Act was made available to the public in January 2012. The PITAM amended or deleted (36) thirty-six sections of the PITA, Cap P8, Laws of the Federation of Nigeria, 2004 (PITA). It also made modifications to the First, Third and Sixth Schedules to the PITA. Generally, the main objective of PITAM, among other things, was to remove the flexibility that employers had under the old PIT regime to provide tax efficient compensation to their employees (e.g., through the use of leave allowance and housing allowance). Whether the overall impact of the PITAM on taxpayers is consistent with the National Tax Policy considering the impact of the recent removal of fuel subsidy in Nigeria remains debateable.

2.4.1 SMEs Income Taxable in Nigeria

According to Angahar and Alfred (2012), SMEs income includes income of self-employed taxpayers, unincorporated persons or body of persons engaged in their own businesses either as sole traders or in partnerships. Such persons include individual contractors, tradesmen, professionals, consultants, artisans and all other entities that are not liable to tax under the Companies Income Tax Act (CITA), but under the PITA 1993, as amended in 2004 and 2011. Therefore, PIT could be seen as taxes imposed on a person‘s income (Joshua, Ehichioya, & Famous, 2015). That means the incomes of such persons accruing to them personally are taxable (Angahar & Alfred, 2012).

2.4.1.1 SMEs Income Tax Assessment and Collection in Nigeria

According to the Nigerian tax regulations, two types of assessments exist for SMEs, owners or the income of individuals from trade or business. The assessments are: 1) self-assessment and 2) government assessment. Under Section 44, PITA, 1993, as amended in 2004, and 2011, SMEs, owners are free to choose either of the two assessment methods to file their tax return (Odusola, 2006).

The law according to the PITA stipulates that every SME owner/manager is mandated to file his/her tax returns to the relevant tax authority within 90 days from the commencement of every year of assessment which is January every year (PITA, 1993, as amended 2004 & 2011). Based on the 2011 amendment, the returns are expected to have the following information: the income of the SMEs, owners from

all sources and detailed information for allowances, relief, and other deductions as the case may be. The option is given to SMEs, owners or individual taxpayers to opt for the second option of assessment (Section 43, PITA 1993, as amended 2004, 2011).

The relevant tax authority normally proceeds with the assessment of the taxpayer upon the receipt of the return (Section 54 (2), PITA 1993, as amended 2004, 2011). Section 45, PITA 1993, as amended 2004, 2011, gave power to the relevant tax authorities to ask for more information and clarification, where information contained in the return is unsatisfactory. For SMEs owners who either fail to file a return at the correct time or do not file at all, the tax authority uses the Best of its Judgment method in determining the assessable income of such owner (Section 54 (3), PITA 1993, as amended, 2004, 2011). Thus, the law gives power to the relevant tax authorities to reassess an SME owner the amount that they ought to have been charged if the tax authority discovers that such an individual has not paid a fair amount. Section 55 (1), PITA 1993, as amended 2004, 2011 permits this power to be exercised within six years from the initial assessment. Upon completion of the assessment, notice is normally sent to the owners of SMEs informing them of the assessable income, total chargeable income, where to pay the tax, and also the owner‘s right to object (Section 57, PITA 1993, as amended 2004, 2011). In an instance in which an SME owner does not have any objections to the assessment, he is expected to settle the tax within two months from the date of notice.

On the other hand, an SME owner can object to the assessment in writing to the authority within 30 days from notice. Where the relevant tax authorities and the taxpayer fails to reach a consensus over the assessment, the SME owner can appeal to an independent body of tax experts called the Body of Appeal Commissioners within 30 days from the date the tax authority issued to him a notice of refusal to amend the assessment based on his objection (Section 58, PITA 2004). If the SME owner is dissatisfied with the verdict of the Commissioners, he may appeal the decision to the high court (Section 65 (2), PITA 2004). Another appeal may be made against the decision of the high court to the court of appeal, then to the Supreme Court, which is the apex court in Nigeria (Section 65 (11), PITA 2004). The decision of the Supreme Court is final and binding in respect to tax appeals in Nigeria.

In relationship to tax collection, SMEs, owners or individual taxpayers are categorized under direct assessment and indirect assessment otherwise known as Pay as You Earn (PAYE). Individuals under direct assessment are to pay their taxes not under appeal or objection within two months after the notice of assessment has been given (Section 68 (1), PITA 1993, amended 2004 & 2011). The collection of tax on assessments that are subject to appeal or objection remains in abeyance until the objection or appeal is settled and must be paid one month after the appeal is settled (Section 68 (3), PITA 1993, as amended in 2004 and 2011).

2.5 Taxing Powers and Authorities in Nigeria

In Nigeria, the administration of tax is carried out by relevant tax authorities at three levels of government, namely, Federal, State and Local levels, within their legally defined domains (FRNC, 1999).

2.5.1 Tax Administration at the Federal Level

The FIRS is a government organization that is in charge of tax administration at the Federal level. The organization came into operation as a board on 1 January 1959, as a result of section 3 of the Income Tax Administration Ordinance No 39 of 1953 that established its existence. In 1993, the FIRS was established following the recommendations of the study group on the Nigerian tax system and administration. Fourteen years later in 2007, FIRS was granted administrative autonomy with the legal backing of the Federal Inland Revenue Service (Establishment) Act No 13 of 2007 (FIRSEA). Among the objectives of the Revenue Service is to control and administer the personal income tax of the individuals in the Federal Capital Territory, Expatriates, and Personnel of Armed Forces, such as the Army and Police as prescribed under section 2 of PITA, 1993 as amended in 2004 and 2011. However, the FIRS is also in charge of the administration and collection of the following taxes in Nigeria:

1. Petroleum profit tax;
2. Personal income tax (some part);
3. Company income tax;
4. Stamp duties;

5. Capital gains tax in respect of companies; and
6. Value added tax, and other revenues of the Federal government.

2.5.2 Tax Administration at the State Level

The State Board of Internal Revenue Service's (SBIRS), with the support of the Joint Tax Board (JTB), has the legitimate power and responsibility of administrating tax at the State level.

2.5.2.1 State Board of Internal Revenue

The State Board of Internal Revenue Service's (SBIR) is responsible for the administration of tax at the State level. Section 87 (1) of the Personal Income Tax Act LFN 1993, as amended in 2004, and 2011 establishes the SBIRS as the operational arm for the administration of taxes at the State level. The State Boards of Internal Revenue Service (SBIRS) are the operational arms of the States as enshrined in the constitution of the country. Normally, the SBIRS is made up of a team, headed by the Executive Chairman of the State Board of Internal Revenue Services, who is appointed by the governor for tenure of five years subject to renewal, and six other members representing various interests and other institutional groups.

The sole aim of SBIRS is to ensure the adequate and effective collection of all taxes and penalties due to the state government. In addition, the board does everything necessary for the purpose of assessment and collection of tax and accounts for all amounts so they collected in the manner directed by the Commissioner in charge of

finance. Furthermore, the SBIRS makes recommendations to the Joint Tax Board (JTB) in respect to tax treaties, tax policy, and other control mechanisms, which affect the policy formulation of the SBIRS.

2.5.3 Joint Tax Board

The Joint Tax Board (JTB) is the board that unifies the States and Federal Government on issues relating to taxation. Section 27 of ITMA, now under section 86 of PITA, establishes the existence of JTB. The Board comprises the Executive Chairman of FIRS, who serves as the Chairman and a member each from the 36 SBIRS of the Federation. The Federal Civil Service Commission always appoints the Secretary of the JTB.

The Board advises the Federal Government on the taxation arrangements with any other country as well as the rates for capital allowance and other taxation matters that are in effect throughout Nigeria. The Board also has powers and duties conferred on it by express provisions of the PITA and any other power and duties arising under PITA 1993 as amended in 2004 and 2011, which may be agreed by the government of each State to be exercised by the Board. Furthermore, the Board also promotes uniformity both in the application of a PITA and the incidence of taxation on individuals throughout Nigeria.

2.5.4 Tax Administration at the Local Level

The responsibility of tax administration at this level is the Local government revenue committee. Being the third level of government in Nigeria, the Local government committee is set up under the authority of section 90 of PITA 1993 as amended. This committee comprises a treasurer as the head and chairman of the committee, plus three elected Local government councillors with two other persons with vast experience in revenue matters to be appointed by the honourable Chairman of the respective Local government as members.

The constituted committee is totally autonomous of the Local government treasury and is responsible for the day-to-day administration of the Treasury Department. However, the Treasury Department serves as the nerve centre and operational arm of the Local government revenue committee. The responsibility of the committee, among any other things, is assessing and collecting all taxes, fines and rates under the jurisdiction of the Local government and to account for all amounts collected from time to time to the Local government.

2.6 Summary

This chapter presented an overview of Nigerian SMEs income tax system. Nigeria is a federation comprising three tiers of government, namely, Federal, State, and Local governments. Powers and responsibilities are assigned to each tier of government as established in the Nigerian Constitution. The personal income tax is one of the oldest taxes imposed and collected by the government in Nigeria according to its history.

The personal income tax is currently administered under the provisions of the Personal Income Tax Act, Cap P8 LFN 1993, as amended in 2004 and 2011 through the Federal Inland Revenue Services at the Federal level, State Board of Internal Revenue Service at the State level and Local Government Revenue Committee at the Local government level. The next chapter focuses on reviews of the related literature.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

This chapter first provides an overview of the contextual terms used in the study; it then explores the relevant theories and reviews the extant literature in connection with the research. In achieving that, the chapter starts by defining the term SME in a broader context and then narrows the definition down to the contextual environment in which the study was conducted. In addition, the chapter further explores the concept of tax compliance and noncompliance. Furthermore, relevant theories of tax compliance and how they are applied in the context of this research was also discussed. It then culminates by focusing on the theory underpinning the study, in turn, exploring other supporting theories. Then literature reviews and tax compliance models that various researchers explicated were also considered and finally the chapter ends with a summary.

3.2 Concept of Small and Medium Enterprises (SMEs)

The concept of SMEs encompasses a varied range of definitions. Different individuals, institutions, organizations and countries employed their guidelines for defining a SME. Some definitions were often based on the number of people, turnover or assets. SMEs are clearly and adequately distinguishable in many countries be they developed or developing. As a result, a single definition of SMEs cannot encompass all meanings (Abor & Quartey, 2010), and firms are always

differentiated in terms of their level of capitalization, sales, ownership structure, assets and employment.

In that regard, any definition of SMEs that uses measures of profitability, turnover, and number of employees, if applied to a specific sector could result in all firms being grouped as small. However, the same definition when applied to a different sector could lead to an entirely different outcome. Based on the foregoing, researchers and international bodies or organizations have always attempted to provide a yardstick for defining SMEs. No such definitions have been accepted universally due to differences between countries, and the nature of SMEs across the world.

Consequently, Ayyagari, Beck and Demirguc-Kunt (2005) reported that SMEs are seen to be those enterprises or businesses that are set up with the following characteristics: a maximum of 300 employees, $15 million in annual revenue, and $15 million in assets. Therefore, an SME owner is normally seen as a person who establishes and manages a business for the purpose of furthering personal goals (Carland, Hoy, Boulton, & Carland, 1983). As such, the owners perceive the business as an extension of their identity and are intricately bound with family needs and desires. Table 3.1 shows the categorization and definition of SMEs by the World Bank.

Table 3.1
The World Bank Definition of a SME

Firm size	Employees	Assets ($' 000)	Annual sales ($'000)
Micro	Less than 10	Less than $100	Less than $100
Small	Less than 50	Less than $3,000	Less than $3,000
Medium	Less than 300	Less than $15,000	Less than $15,000

Source: Ayyagari, Beck, and Demirguc-Kunt (2005).

In Malaysia, the definition of SME is based on two criteria, namely, the number of people the business employs and the revenue it makes. In 2013, the Prime Minister, Datuk Seri Najib Abdul Razak announced a new definition of SMEs, which took effect from 1 January 2014. According to the Malaysia SME Corp (2013), SMEs in the manufacturing sector were to be defined as enterprises whose annual turnover is less than RM50 million with fewer than 200 employees from the earlier definition, up from the previous definition of less than RM25 million in revenue and fewer than 150 workers. Services and other sector SMEs were defined as enterprises with turnover not exceeding RM20 million and the number of full-time workers not exceeding 75 employees. The above definition is represented in Table 3.2.

Table 3.2
SME Definitions by the Malaysian Government with Effect from 1 January 2014

Category	Small	Medium
Manufacturing	Sales turnover of RM300, 000 to less than RM15 million OR full-time employees from 5 to less than 75.	Sales turnover from RM15 million to not exceeding RM50 million OR full-time employees from 75 to not exceed 200.

Table 3.2 (continued)

Category	Small	Medium
Services & other Sectors	Sales turnover of RM300, 000 to less than RM3 million OR full-time employees from 5 to less than 30.	Sales turnover from RM3 million to not exceeding RM20 million OR full-time employees from 30 to not exceed 75.

Source: Malaysia SMEs Corp (2013).

However, with respect to the Nigerian environment, Sule (1986) observed the following characteristics as part of the definition of SMEs: taxpayers' tended to be few, taxpayers of the business were also the managers, transactions were based on cash payments and hardly any bank payments, the businesses normally had a dynamic lifespan, and the places of business for SMEs were normally fixed but volatile and reacted to changes/demands.

Similarly, the Central Bank of Nigeria (CBN) (2010) defined a SME as an enterprise whose asset base ranged between N5 million to N500 million and a staff strength between 11 to 300 workers. The NMSMEC Survey (2010) recently defined MSMEs on the bases of dual criteria, employment and assets (excluding land and buildings) as shown in Table 3.3.

Table 3.3
SMEs Categorisation by the Nigerian Government

S/N	Size Category	Employment	Assets (N = Million) Excl. Land & Buildings
1	Micro Enterprise	Less than 10	Less than 5
2	Small Enterprise	10 to 49	5 to Less than 50
3	Medium Enterprise	50 to 199	50 to Less than 500

Source: NMSMECS (2010).

Due to inconsistencies in definitions, researchers have adopted definitions for SMEs that are more appropriate to their particular jurisdictions. To this end, SMEs within the context of this study are defined as any business enterprises having between 10 and less than 199 full-time workers, and total assets between N5 million and less than N500 million (Excluding Land and Buildings) adopted from the NMSMEs Collaborative Survey (2010). This definition is more encompassing, and much larger, and also applicable to the context in which the study is being conducted.

3.3 Conceptualizing Tax Compliance

One critical tool for revenue collection of any responsible government is attaining an optimal level of tax compliance of taxpayers. James and Alley (2004) pointed out that tax compliance is one fundamental issue confronting many relevant authorities across the world. Hence, a Herculean task exists to persuade taxpayers to comply with the requirements even though tax laws are always dynamic.

Therefore, the definition of tax compliance in its simpler form is usually narrow in terms of the magnitude to which taxpayers‘ comply with the tax law and regulations.

Unlike other concepts, the meaning of tax compliance can be viewed as a phenomenon that changes over time. Accordingly, James and Alley (2004) documented the categorization of tax compliance into two approaches, namely, the traditional narrow law enforcement, to the wider economic perspectives and through a more comprehensive approach relating to taxpayer decisions to conform to the wider objectives of the society as reflected in the tax policy. These approaches are captured in Table 3.4.

Table 3.4
Approaches to Tax Compliance

Tax Compliance	**First Approach**	**Second Approach**
Concepts	Tax gap 100% compliance less actual revenue	Voluntary, willingness to act in accordance with the spirit as well as the letter of tax law
Definition	Narrower	Wider
Tax compliance	Economic rationality	Behavioral cooperation
Exemplified by	Trade off: 1. Expected benefit of evading. 2. Risk of detection and application of penalties. 3. Maximise personal income and wealth	Individuals are not simply independent, selfish utility maximiser's. They interact according to differing attitudes, beliefs, norms and roles. Success depends on cooperation
Issues of	Efficiency in resource allocation	Equity, fairness, & incidence

Table 3.4 (continued)

Tax Compliance	First Approach	Second Approach
Taxpayers are seen as	Selfish calculator of pecuniary gains and losses	Good citizen
Can be termed the	Economic approach	Behavioral approach

Source: James & Alley (2004).

Tax compliance has been defined in so many ways. For instance, Song and Yarbrough (1978), in a simple term, defined tax compliance as the taxpayers' ability and willingness to comply with the relevant tax laws and regulations, which are determined by ethics, legal environment and other factors at a given time and place.

Over the years, tax authorities and multinational organizations have suggested a similar appropriate definition for tax compliance. Hence, the IRBM (2009) and Australian Tax Office (ATO) (2009) both defined tax compliance as taxpayers' ability and willingness to obey the tax laws, declare their actual income annually and pay the correct amount of taxes on the due date. Moreover, the Organization for Economic Co-operation and Development (OECD) (2001) outlined two categorizations for defining tax compliance: 1) technical compliance and 2) administrative compliance.

According to the OECD, technical compliance has to do with the technical requirements of tax laws in the computation of tax liability, whereas administrative compliance always aligns with the combination of reporting compliance, procedural compliance as well as regulatory compliance. In short, it is generally concerned with

complying with the rules relating to lodging and the payment of tax. Compliance is enforced on taxpayers who did not pay taxes by mechanisms such as threat and the application of audit and penalties (OECD, 2001).

Roth, Scholz, and Dry-Witte (1989) defined tax compliance as the ability to comply with reporting requirements, which invariably means that the entity files all required tax returns at the proper time, and the returns accurately report tax liability in accordance with the internal revenue code, regulations and court decisions applicable at the time the returns are filed. James and Alley (2002) offered an alternative to this definition, defining tax compliance as the ability of taxable entities to respond in relationship to the spirit as well as to the letter of relevant tax laws without the administration or application of enforcement. They considered tax compliance in terms of the tax gap, the difference between the true entity's income tax liability and that which is finally collected by either voluntary payment or enforcement.

However, several studies have viewed tax compliance from other different dimensions. For instance, McBarnet (2003) said that tax compliance can be structured into three dimensions: 1) committed compliance: which has to do with the taxpayers‘ willingness and ability to pay his/her taxes without grudges; 2) capitulative compliance: willingly giving in and paying taxes; and 3) creative compliance: engagement to reduce taxes by taking advantage of possibilities to redefine income and deduct expenditures within the bracket of tax laws. Hence, tax compliance is defined as the willingness of the taxpayers to abide by the tax laws,

declare the correct income, claim the correct deductions, relief and rebates and pay all taxes on time (Palil & Mustapha, 2011). Recently, Geibart (2014) conceived of tax compliance as a means of navigating a maze of rules, regulations, exceptions and exemptions, which can leave a tax agent confused, disorientated and often lost when reaching a frustrating dead end.

It is noticeable from the definitions proffered by different authors that some standards keywords have accompanied their assumptions, such as willingness, ability, obey, the act of filing tax returns, declaring the correct amount, reporting all income, correct amount of tax, and timeliness. To this researcher‘s knowledge none have borrowed the term "appropriate quotas". However, without the proper identification of the appropriate quotas in paying taxes, noncompliance can result even though the taxpayer has made his best efforts to comply.

In the context of this study, tax compliance is defined as the ability and willingness of a taxpayer to obey tax laws, declare his actual income and pay the correct amount of taxes on the due date using the appropriate quotas and taxpaying jurisdiction. Commonly, in the literature the terms noncompliance, compliance and evasion are often used interchangeably to describe either the intentional or the unintentional reporting behaviours of taxpayers (Kirchler, 2007).

3.4 Exploring Tax Noncompliance

Tax noncompliance in simple terms is the opposite of tax compliance; any violation in tax compliance may entirely result in tax noncompliance. As a complex phenomenon, tax noncompliance could be addressed from different perspectives. A remarkable amount of literature shows that no universal definition of tax noncompliance exists.

Kasipillai and Jabar (2003) studied the influence of taxpayers' attitudes and behaviour in Malaysia. In their study, they structured tax noncompliance into different categories, which, according to the authors included, but were not limited to, the inability either to submit a tax return within a specified period or non-submission, understatement of income, overstatement of deductions, and the failure to pay the assessed taxes at the appropriate time. Stemming from the submission, the authors described how tax noncompliance could only be perpetrated without fully defining the concept in its entirety and therefore not encompassing.

In addition, Jackson and Milliron (1986) and Kesselman (1994) defined tax noncompliance as the failure of taxpayers to remit an actual amount of tax as a result of the difficulties in tax administration or regulations. Though a little bit encompassing, their definitions lay emphasis on the difficulties in tax administration. However, such a limited definition cannot be ultimately regarded as the only yardstick that may lead to tax noncompliance.

In the same vein, Kinsey (1984) also defined noncompliance with tax laws as the failure of a taxpayer to meet his tax obligations either intentional or unintentional. Similarly, Kirchler (2007) regarded the taxpayer's inability or failure to report actual income, claim deductions, and rebates and remit the exact amount of tax revenue as the main cause of tax noncompliance. In the same line of argument, Saad (2012) also defined tax noncompliance as the unwillingness to act in relationship to the tax law and administration applicable at a particular point in time. Even though Kinsey, Kirchler (1984) and Saad (2012) defined the term in their respective studies, their definitions might have been far more interesting for comparison if the actual reasons for noncompliance were stated in their definitions.

To explicate the problem, Palil and Mustapha (2011) studied the likely factors affecting tax compliance behaviour via a Self-Assessment System. In their study, the authors viewed tax noncompliance as the inability of the taxpayer to be in agreement with the tax regulations, to report amount of income incorrectly, to claim incorrect deductions, relief and rebates to pay the incorrect amount of tax beyond the required time frame.

Similarly, Tan and Sawyer (2003) also conceived of tax noncompliance as a process by which taxpayers wrongly arrived at the appropriate income due to the inaccurate reporting of income and expenses, or failing to abide by the established norms in filing or not filing their returns within a specified period of time in accordance with applicable statute and court decisions at the period of filing. These authors actually

viewed tax noncompliance in a broader term, even though their study focused on the processes by which the act can be perpetrated. However, their definition is more encompassing compared to other definitions reviewed in this study as such can be extended beyond the jurisdiction in which they developed their study.

Fischer et al. (1992) and Chau and Leung (2009) separately pointed to several probable reasons for tax noncompliance including peer influence, income levels, weak enforcement of the tax system, and complex tax system. Moreover, James and Alley (2004) further perceived tax noncompliance in relationship to the tax gap, which measured and compared the differences between the tax that was supposed to have been collected and that which have been actually collected if there were total compliance.

Thus, tax noncompliance may be grouped into avoidance and evasion according to James and Alley (2004). By contrasting the two words, the authors clearly demonstrated that one act is legal (avoidance) and the other is illegal (evasion). From the legal point of view, evasion differs from avoidance in the sense that evasion is unlawful and hence punishable. As far as economic realities are concerned, however, evasion and avoidance are mostly used interchangeably without a clear-cut demarcation due to their strong similarities (Cowell, 1990; Feldman & Kay, 1981; McBarnet, 1992).

Moreover, Hasan, Hoi, Wu, and Zhang (2014) formulated formidable distinguishing characteristics of tax evasion that included: intentional act, illegal act, inability to comply with the laid down laws and regulations, some ingredients of concealment, recklessness, disregard for the tax system, and falsification of records. James and Alley (2004) studied tax compliance, self-assessment and tax administration. In their study, they further outlined the tax noncompliance problem as totally an evasion issue, which, according to the authors, is yet to adequately address the full nature of the situation. The authors consider tax evasion as a direct form of non-compliance.

3.5 Underpinning Theory

In the context of this study, the main theory underpinning this research is the economic deterrence theory as discussed below.

3.5.1 Economic Deterrence Theory

The economic theory of tax compliance is said to have originated from the work of Allingham and Sandmo (1972) and Srinivasan (1973), which were based on economic of crime models. The theory posits that the behaviour of taxpayers is influenced by factors such as the tax rate in ascertaining the rewards of evasion or penalties of noncompliance, the probability of detection and penalties for the crime or fraud which help in determining the costs (Allingham & Sandmo 1972; Becker, 1968). This actually means that, if the probability of detection is likely or certain and penalties attached to it are severe, this will, in turn, lead to higher level of tax compliance.

Meanwhile, in the presence of low audit probabilities and low penalties, the expected outcome of returns in relationship to evasion or noncompliance will definitely go high all things being equal (Fjeldstad, Sjursen, & Ali, 2013). The theory gives room for substantial noncompliance as predicted by the above variables. However, the theory has suffered much criticism for emphasizing entirely on economic variables or factors as well as the coercive aspects of compliance at the expense of other factors (Sandmo, 2005).

The theory seeks to examine the deterrence effect that various levels of punishment have on people's decisions either to comply with the law or not to comply. Jackson and Milliron (1986) were of the view that much tax compliance research has emphasised this particular theory, especially with reference to the relative deterrence effect of different categories of sanctions. Grasmick and Scott (1982) outlined three strategies of social control in the form of threatened punishment that might mitigate illegal behaviour. The strategies or mechanisms are: 1) legal sanctions (state imposed punishment), 2) social stigma (peer imposed punishment), and 3) feelings of guilt (self-imposed punishment). In a nutshell, this theory posits that people or individuals who are in a position to eliminate feelings of guilt before engaging in the acts of noncompliance are more likely to engage in such acts.

McKerchar and Evans (2009) outlined key issues relevance in supporting deterrence strategies for addressing noncompliance. For instance, the fear of getting caught has been discovered to be an effective mechanism for encouraging truthful behavior

(Fjeldstad et al., 2013). Furthermore, the theory was developed based on the economics-of-crime model, in order to optimize government and private policies in curtailing the unwanted behaviour because threats of punishment were seen to encourage lawful behaviour (Becker, 1968). Basically, Alm, Jackson, and McKee (1992) pointed out that the economic deterrence approach assumed taxpayers would engage in tax compliance decisions as a result of the fear of the possibility of being caught and penalized.

In short, a large body of theoretical and empirical evidence in the literature supports the view that higher audit probabilities and penalties encouraged compliance and higher tax rates discouraged compliance. For instance, Allingham and Sandmo (1972) opined that the only way to ensure people pay their taxes was using a deterrence policy such as the use of threat of punishment, which involved the probability of audit, the severity of the penalty and an increase in the tax rate. However, most studies on the influence of audit probabilities on tax compliance were in accordance with the theory. Even though the fiscal psychological approach had been introduced earlier, this approach only began to draw researchers‘ attention in the 1990s.

However, this theory has been criticized on the basis of not considering the importance of human element (Cullis & Lewis, 1997). Therefore, Alm, Sanchez, and De-Juan (1995) argued that, in explaining tax compliance, other factors should be looked at, which may encourage a taxpayer, especially those that are above and

beyond the ordinary standard economics of crime approach, so as to incorporate theories of behaviour and other social sciences. Supporting the above assertions, the framework of this study account for other noneconomic factors as Stefura (2011, 2012) suggested. Rather than relying heavily on the narrow economic approach to encourage tax compliance, exploring other approaches to understand noneconomic factors that might influences taxpayers‘ behaviours is better (James, Murphy, & Reinhart, 2005).

For instance, a fiscal psychological approach or a political legitimacy approach will be more appropriate for exploring the willingness and ability of taxpayers to comply with tax laws. In short, the deterrence theory does not explain the reasons why many people will comply with tax laws because this theory has only emphasised the economic factors at the expense of noneconomic factors that influence tax compliance. The next section will discuss in full the psychological theories underpinning the current study.

3.6 Other Supporting Theories

In relationship to tax compliance behaviour, this section discusses theoretical concepts related to this study. As one of the most diverse and multidisciplinary types of study, theories of tax compliance cut across many disciplines. Based on the literature, many factors have been found that might influence tax compliance; thus, the use of one theory might be unable to relate all the variables. For example, Alm (1999) and Jackson and Milliron (1986) suggested that theories from psychology,

sociology and anthropology could also be of assistance in explaining other variables that might influence taxpayers‘ compliance behaviour. Hence, theories supporting the economic deterrence theory are discussed in the next subsection.

3.7 Psychological Theories

In the past, the extant literature on tax compliance research mainly emphasized a single theory, which offered only restricted and biased research and analysis of the tax compliance problem (McKerchar, 2001), with the exception of a few researchers who linked these theories in order to have an articulated and comprehensive view of taxpayers‘ compliance behaviours. Hasseldine and Bebbington (1991) and Schmolders (1959) suggested that a proper blend of both the economic and behavioural approaches, which is referred to as the fiscal psychological approach, is required in order to have a wider understanding of the prevailing issues surrounding tax compliance. Schmolders (1959) was the first author who introduced the phenomenon of ―fiscal psychology", a term that stresses the deficiency in stimulating taxpayers to pay taxes as a result of non-reciprocity from the government to the taxpayers in the form of either monetary or public goods.

Fjeldstad et al. (2013) and Moore (2004) in a separate but related study revealed that the reciprocity benefit of tax payment was documented to be a major concern of taxpayers, which can take the form of either public goods or services. Furthermore, Alm, Jackson, and McKee (1992b) were of the view that the availability of public goods and services were the main determinants that triggered compliance.

Individuals are subjected to paying taxes as a result of the goods provided by the government, bearing in mind that their monetary payments will be used to finance the goods and services (Fjeldstad & Semboja, 2001). Drawing from the above findings, the deduction can be made that the behaviour of taxpayers is always affected either negatively or positively based on the symbiotic relationship that exists between that behaviour and the government as a result of the tax payments and the rewards derived from such acts.

The presence of positive benefits such as incentives has the ability to increase the probability that taxpayers will voluntarily comply without any coercion (Fjeldstad et al., 2013). However, assessing the actual value of what they received from the government in return for taxes paid as claimed by the above authors is difficult for taxpayers. As such, Richupan (1987) argued that assessment is made on the basis of general impressions and attitudes concerning their own and others contractual relationships with the government.

Most behaviour of taxpayers is influenced by the attitudes of government in one way or another, which can be attributed to the provision of quality of goods in relationship to their contractual relationship. Hence, if the tax system is perceived to be unfair, taxpayers may resort to evasion in order to reconsider their terms of trade with the government. Evidence to support this theory is, however, unclear (D'Arcy, 2011).

Therefore, psychological theory stresses the importance of positive policies developed by a government in order to improve the cooperation between taxpayers and government. Thus, for instance, using reduced tax rates, as an incentive to induce the positive behaviour of taxpayers during the process of tax compliance decision-making because tax enforcement is seen as problematic in the fiscal psychological approach and can be improved with the cooperation of taxpayers with government or tax authority.

In addition, research has also indicated that numerous factors influence tax compliance, such as: personal factors (e.g., attitudes, experiences, morale and financial circumstances), demographic factors (e.g., age, gender and level of education), and other aspects of the tax system, which include (tax rate, penalties of detection, probabilities of audit, enforcement strategies, tax complexities and compliance cost) (McKerchar & Evans, 2009). Even with so many attempts in the literature to examine these factors, the complexities of tax compliance behaviour of taxpayers remain unclear (Alm et al., 1992).

As Andreoni, Erard, and Feinstein (1998) suggested, incorporating and exploring the influence of psychological and sociological factors on tax compliance behaviour into a formidable tax compliance model, particularly from the economic approach, is critical. In line with this call for research, Hasseldine and Li (1999) suggested that researchers have been encouraged to provide more evidence across disciplines and

international borders in order to provide more information to policy makers and enhance the understanding of taxpayers‘ compliance.

The conceptual approach of tax evasion has been expanded in the past years to incorporate compliance and noncompliance with the adoption of several methodologies in order to provide an in-depth understanding of the factors that influenced tax compliance behaviour (McKerchar, 2001). Integrating the economic and noneconomic factors in a study might offer the most promising route for solving the puzzle of tax compliance. Thus, the following theories fall under the group of psychological theories, therefore serving as supporting theories.

3.7.1 Work - Family Spillover Theory

In the parlance of work - family spillover theory, Staines (1980) stated that either the family or work system may have or possess a spillover effect or an influence on the other. Similarly, the theory further proposes that satisfaction or dissatisfaction in one area of life extends to other domains. Thus, financial commitment of the family may affect individual business obligations such as tax payments and vice versa (George & Brief, 1990). Therefore, excess work may affect the family, and an excess in family life may affect work (Kelly & Voydanoff, 1985). Similarly, Belsky, Lang, and Rovine (1985) pointed that the experiences gained from the family domain may have a resultant effect on the work domain. Therefore, dual representation in two systems often leads to strain and overload for individuals, families, and work units.

Additionally, the work - family spillover theory also has a lineage with the role theory, which proposes that employees or workers would find it difficult to handle or fulfil each role successfully, if they engage in two or multiple roles collectively. This, in turn, may invariably lead to inter-role problems (Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964). Therefore, Jackson and Schuler (1985) and Katz and Kahn (1987) reiterated further that work - family financial commitment would produce a negative effect when employees find it difficult to successfully complete each of their diverse roles as a result of limited resources. Because of this difficulty, role conflict may be associated with the difficulty encountered by employees in handling more sets of pressures as well as multiple roles occurring simultaneously (Katz & Kahn, 1978; Kahn et al., 1964). Logically, the spillover effect may affect either the work or family domain either negatively or positively.

The spillover effect pattern shifts attention from the effects of social institutions upon each other to the effects of family members on each other, thereby ignoring the social and political consequences of the context in which family and work are located. Xu (2009) studied the work-family linkage and work-family financial condition model. The study discovered that spillover could be either positive or negative. Positive spillover has to do with the satisfaction and achievement in one domain, which may bring along satisfaction and achievement in another domain. This includes, for instance, a peaceful family or less family pressure or problems that will invariably not cause a burden to SME owners or individuals in paying their taxes or complying with tax payments.

On the other hand, negative spillover refers to the fact that difficulties and depression (for instance, more pressure and family commitment for an individual and organizational obligations such as tax compliance) in one area of life may result to the same emotion in another. Based on the foregoing, the deduction can be made that the more the family financial commitment in terms of meeting the financial needs of the family and other allied demands, the great the impending impact on the compliance behaviour of individuals, especially with regard to tax payments and other organizational commitments. When the work - family financial commitment is tense or high, it may have a negative effect on the compliance behaviour of the taxpayer and vice versa. In general, the work family spillover theory is, therefore, capable of establishing the relationship between work - family financial commitment and tax compliance behaviour.

3.7.2 Social Exchange Theory

As the name implies, social exchange theory provides an insight into the perceptions of a system by an individual. Homans introduced the theory in 1958, and Blau (1964) further developed the theory. Homans concentrated more on the psychology of instrumental behaviour while Blau emphasised technical analysis. Homans (1974) defined social exchange as a kind of voluntary interactions between individuals that are motivated by expected returns from such actions. Blau differentiates social exchanges from economic exchanges by simply arguing that economic exchanges have specific outcomes, whereas social exchanges require trust and are not legal

obligations and are more flexible. Hence, tax compliance can be seen as a social exchange between the government and the taxpayers.

Furthermore, social exchange theory suggests that individuals evaluate inputs and outputs that comprise exchange. Social exchange theory reiterates that three important factors shape an individual‘s happiness with a social exchange: 1) the inputs he contributes (tax payment or amount of taxes), 2) the outputs he receives (benefits in terms of social and infrastructural facilities), and 3) his perception of how likely it would be for him to obtain a more favourable exchange relationship (Aronson, Wilson, & Akert, 2010). Hence, an individual may continue to contribute to the social exchange if he or she perceives few alternative options and even if he/she is not absolutely satisfied with the inputs provided and outputs received. Social exchange theory agrees that perceptions of fairness (for instance in relationship to the spending the revenue derived from fuel subsidy removal) can significantly influence the decisions of an individual (DeConinck, 2010; Masterson, Lewis, Goldman, & Taylor, 2000).

Similarly, Homans (1974) premised the theory of social exchange on the following points. The success assumption states that for all actions taken by individuals, the more often a particular action of an individual is rewarded with benefits, the more likely the individual is to undertake that action. In application of taxation and in relationship to the removal of the fuel subsidy, as taxpayers receive more benefits from the payment of taxes in the form of the high-quality governance, such as the

provision of infrastructural facilities including electricity, good road networks, and access to a regular supply of water, among others, the more they will be willing to comply with their tax obligations. Thus, if the money or funds derived from the fuel subsidy removal are channelled into worthwhile ventures such as the provision of infrastructural facilities, the more willing SMEs owners/managers will be to comply with their tax obligations. Conversely, if the money or funds derived from the fuel subsidy removal are not channelled into something worthwhile, the less willing SMEs owners/managers will be to comply with their tax obligations. Homan (1974) posited that, if in the past, the occurrence of a particular stimulus has benefited an individual‘s action and the more similar the present stimuli are to the past ones, the more likely that individual will be to undertake appropriate actions.

In the context of this current study, if the removal of the fuel subsidy has not provided added benefits, taxpayers would be less likely to comply with tax obligations. Conversely, if the removal of the fuel subsidy has produced remarkable improvements in the provision of goods and services, control of corruption, and proper handling of security, this would go a long way in enhancing the compliance behavior of taxpayers.

Finally, in relationship to taxation, if the benefits taxpayers have received from the government are valuable in quality, then they would be more willing to comply. Wallace and Wolf (1999) suggested that people will consistently repeat an action that is rewarding, and thereby respond to stimuli having a direct link with such

rewards and act in accordance with the values given to the action. The social exchange theory has received much attention and is well established theoretically in the literature.

3.7.3 Social Influence Theory

The theory of social influence has a lineage with Bandura's (1977) theory of social learning that was premised on the influence of the environment. The theory of social influence states that behaviour is one of the most important ingredients in the environment and that others in the environment can influence behaviour either intentionally or unintentionally. The theory further posits that individuals learn from each other as well as through observations, imitation, and orientations. Therefore, the theory explains human behavior in relationship to the continuous exchange interaction between cognitive and behavioral environmental influences. Bandura (1977) documented that people learn not only from the behavior of others through observing them, but are influenced by the outcomes of their own personal behaviors.

In relationship to tax compliance behaviour and, in the context of this study, social influence theory identifies the opinions of peers and the extent of social influence an individual encounters in socialization, for instance, tax knowledge through service orientation, as important variables in determining compliance (Sutinen & Kuperan, 1999). Furthermore, Crisp and Turner (2007) conceived that social influence is concerned with how our thoughts, feelings and behaviour change in the midst of others. Hogg and Vaughan (2005) reiterated that social influence could be aligned to

conformity, compliance and obedience. The authors further posited that compliance may be influenced by the persuasive ways individuals employ in seeking consent as well as the power that individuals are perceived to have at their disposal. Power in the context of this study is regarded as the ability to exert influence by an individual or institution through service orientation.

French and Raven (1959) outlined five bases of social power, which Raven (1965 & 1993) later expanded to six. The six bases of social power are: 1) reward power, 2) coercive power, 3) informative power (for instance service orientation), 4) expert power (for instance ability to influence), 5) legitimate power and 6) referent power. Reward power, according to the literature, has to do with the provision of incentives for compliance. For instance, Manaf (2004) found that incentives in the form of positive inducement have significant impacts on the compliance attitudes of land taxpayers in Malaysia.

Coercive power, which is the second basis, involves the use of threats of punishment to encourage compliance. In connection with taxation, the probability of detection serves as coercive power.

The third power is information power, which subjects individuals to compliance through the availability of thorough and frequent information. In the context of this study, service orientations and tax knowledge available to the taxpayers may go a long way in encouraging the taxpayers to comply with their tax obligations.

Expert power is the fourth base; this has to do with the absolute ability or capacity of experts together with their knowledge to motivate compliance. The relevant tax authority may provide services in the form of orientations that will help in addressing an individual tax problem, which may motivate the individual to comply with tax obligations.

As Gangl et al. (2013) pointed out; taxpayers who perceive a greater service orientation will be more willing to pay their taxes. Hence, legitimate power is based on authority and the recognition bestowed to the body to which compliance is to be made. For instance, the legitimacy of the tax authority may exert an influence for compliance.

Referent power is the sixth base, and the power is derived from the reference group, that is, the groups that are significant for an individual‘s behaviour and attitudes. In practical terms, social influence in taxation may not be easily achieved due to different needs or requirements of taxpayers. For instance, an influential SME owner/manager will probably receive more attention from the relevant tax authorities compared to a less influential SME owner/manager despite their contributions.

3.7.4 Equity Theory

According to McKerchar and Evans (2009), equity theory states that individuals will be in the position to comply with certain rules or standards, only if such rules are perceived to be impartial by them. In supporting the above assertions, equity theory

has been highlighted in the social and psychological model as one of the most important theories in the area of tax compliance (Fjeldstad et al., 2013). This theory may explain that, when the tax system is complex, taxpayers may question its fairness. Therefore, the more complex the tax system is, the more taxpayers perceive inequity in the system. Thus, based on the theoretical insights, tax complexity may induce a level of negativity on tax compliance behaviour.

3.8 Reviews of Past Studies on the Factors Influencing Tax Compliance and Noncompliance

Tax compliance has been widely recognized in the fields of accounting, auditing, economics, political economy, sociology, law, and psychology. Therefore, it is of interest to know that compliance is a major problem confronting all countries and all revenue authorities. Hence, more tax compliance and less tax avoidance or tax evasion could be influenced by WFFC, FSR and other factors such as economic (tax rate, the probability of detection, and tax complexity), and psychological factors (incentives including positive inducements, tax knowledge, and PGQ), and the moderating role of PSO and perceived corruption. Because of this, tax compliance and public acceptance of taxation cannot be examined within any field comprehensively.

3.8.1 Studies on Work - Family Financial Commitment (WFFC)

Work - family financial commitment is an issue of general concern to individuals, families, and organizations as it relates directly to families and the workplace. Greenhaus and Beutell (1985) viewed WFFC as a form or type of inter-role conflict in which one's role conflicts make it difficult either to have valuable time with the family or when commitment in the family makes it difficult to be fully engaged at work or to meet individual organizational responsibilities and obligations. Additionally, Howard (2008) as put forth by (Boyar, Maertz, Pearson, & Keough, 2003; Greenhaus & Beutell, 1985), in separate but related studies, conceptualized the work-family financial condition to be an inter-role issue whereby both work and family issues exert pressures on an individual as such creating more financial commitment where compliance with some set of pressures (i.e., meeting the needs of immediate and extended family) increases the difficulty of complying with the other set of pressures (i.e., tax payments and compliance with other obligations to individuals or to an organization).

Frone, Russell, and Cooper (1992) also conceived of WFFC as comprising two reciprocal processes in which work could interfere with family (i.e., work-to-family financial commitment) or family could interfere with work (i.e., family-to-work financial commitment). The nature of the relationship between the two sources of roles highlights the fact that unmet demands in one role will eventually lead to unmet demands in the other role. Because of such financial commitment, taxpayers might be more likely to experience increased work-related stress and WFFC. In

addition, researchers have shown that more financial commitment originating in one environment can actually affect the same and other domain outcomes such as tax payment obligations.

Fu and Shaffer (2001) studied the tug of work and family with an emphasis on direct and indirect domain-specific determinants of WFFC. They discovered that WFFC could be a bi-directional construct. For instance, work interference with the family environment (WIF) and the family in turns interferes with work (FIW). Each type or form of work-family financial commitment has its own unique environmental-specific antecedents. The specific antecedents of work interference with family financial commitment (WIFF) lie in the work environment, whereas the domain specific antecedents of the family interference with work financial commitment (FIFF) lie within the family environment. These all have significant effects on the taxpayer or owner of an SME or organization. Because the degree to which role responsibilities from the work environment and family domains are incompatible, the demands of either role may affect the performance of the other role (Katz & Kahn, 1978).

However, various researchers have investigated the relationship between WFFC and other variables. Akinboye (2003), Akinjide (2006), and Popoola (2008) affirmed that a significant relationship exists between WFFC and managerial efficiency of the managers, for instance, compliance to all organizational obligations, which may influence their future compliance levels. Similarly, Poele (2003) also reiterated that

efficiency in managing organizational resources for results could be better guaranteed when WFFC and motivation are jointly combined in the work setting by managers.

Adams, King, and King (1996), Grandey and Cropanzano (1999), and Netemeyer, Boles, and McMurrien (1996) posit that WFFC can affect work outcomes for individual obligations such as tax payments and family-to-work financial commitment can affect family outcomes.

Hence, Grandey, and Cropanzano (1999) were of the view that work-to-family financial commitment was positively related to job distress (such as psychological issues that can result in health-related problems, and, in turn, may lead to low commitment by an individual exhibited in tax payments and turnover intentions, whereas the family-to- work financial condition was positively associated with family distress. Thus, the resultant evidence for same domain versus opposite domain effects of inter-roles studies is inconclusive.

Although this researcher has yet to discover any published studies related to WFFC and tax compliance behaviour, some research has tied WFFC to individual organizational commitment or job performance in general. For example, Aryee (1992) and Frone, Yardley, and Markel (1997) examined the relationship between WFFC and job performance. The findings revealed a significant negative relationship. Additionally, Warokka and Febrilia (2015) studied the influence of

WFFC on job performance in Indonesia. The study, which examined 334 bank employees, revealed a negative significant relationship between WFFC and job performance. In the same vein, Kalliath and Kalliath (2013) and Shaffer and Joplin (2001) also found that family interference with work demands was associated with decreased job performance. Logically, the role conflict of employees in the work domain is seen as destructive, thereby creating job dissatisfaction in them. Greenhaus, Collins, Singh, and Parasuraman (1997) and Netemeyer et al. (1996) found no relationship between WFFC and job performance.

However, Kossek and Ozeki (1999) found that the presence of high work-life financial condition can lead to low individual and organizational commitment, for instance in the commitment of the organization to tax payment over the long term. Similarly, Shimazu, Bakker, Demerouti, and Peters (2010) deduced that extreme demands of job and home commitments could lead to an increased chance of adverse spillover effects between work and non-work domains. Consequently, a constant occurrence of this effect could possibly lead to psychological and/or physical health issues from unmanageable job and home demands. The resultant effect of this psychological stress may further increase when multiple roles exists between work and family as a result of job and home obligations.

The implication may be that, if WFFC increases, the chances of tax compliance issues will be increased in due course. For instance, Wickens (1996) found that stress resulted in attention tunnelling and that WFFC creates additional demands

associated, for example, with meeting financial obligations of family burdens, burdening already limited cognitive resources, which, in turn, may affect the tax payment and compliance behaviour of the taxpayer, and therefore interfere with the attention to detail of individuals or employers and information even when carrying out very routine tasks. These routine tasks can be in the form of tax payment. Moreover, Hobfoll (1989) opined that individuals are motivated to retain and protect their valued resources such as esteem, performance, and wellbeing. Hence, in a situation of high WFFC, attention to organizational obligation such as tax compliance and the perceived ability to devote discretionary energy to tax payments and other organizational obligations may not be a conscious priority. Therefore, this may result in a decrease in on-task activities such as tax payments and an increase in off-task activities such as a lack of complete task focus because of worries about family members. As such, studies have suggested that WFFC does affect different factors.

To this end, some studies have shown that WFFC is more associated with work, including job satisfaction and burnout (Bacharach, Bamberger, & Conley, 1991; Kossek & Ozeki, 1998), while others are more associated with measures of psychological stress (Frone et al., 1992; Klitzman, House, Israel, & Mero, 1990). For this reason, this current study is focusing on analysing the relationship of WFFC with the tax compliance behavior of SMEs owners/managers.

Given the limited number of studies in this direction, this current study extends this research to the influence of WFFC on tax compliance behaviour, which to the researcher's knowledge has yet to be established in the literature. The inclusion of this variable is necessitated as a result Stefura‘s (2011, 2012) suggestion of the need to incorporate more psychological and other noneconomic factors to gain a more insightful knowledge of the puzzle of tax compliance. On the basis of the above discussion and logic, WFFC and tax compliance behavior are expected to exhibit a reasonable level of correlation.

3.8.2 Studies on Fuel Subsidy Removal (FSR)

A subsidy may refer to the assistance provided by others, including, for instance, individuals or non-governmental institutions (Stephen, 2012). Majekodunmi (2013), who examines the political influence of fuel subsidy removal in Nigeria, sees a subsidy as a means of benefit given by the government to either individuals or businesses in terms of cash and tax reduction or by reducing the cost of goods. Lawal (2014) defined subsidy as a form of assistance the government normally pays to the entire economic sector or producers of goods and services to offset part of their production costs. He further noted that a fuel subsidy may be in the form of: a tax allowance, duty rebate, tax holiday, tax moratorium, tax exemptions, grant, or soft loan that is designed to maintain; desired prices of essential products, incomes of producers of critical or strategic products or employment levels or induce investments to reduce unemployment. Hence, understanding the political economy

at play in the fuel subsidy is therefore both necessary and expedient (Ikpeze, Soludo, & Elekwa, 2004).

Nwafor, Ogujiuba, and Asogwa (2006) and Iyobhebhe (2011), in separate but related studies, reported that FSR can be seen as a form of price manipulation whereby the government fixes the pump price of fuel for sale to consumers and pays the retailer the difference between the actual market price and the regulated or official price per litre. Plante (2014), who studied the long-run macroeconomic impacts of fuel subsidies, found that the basic features of all subsidies are targeted towards reducing the market price of an item below its cost of production. Ering and Akpan (2012) were of the view that, although Nigeria has derived its wealth largely from oil and gas, which contributed 99% of government revenue, the country was unable to use the oil wealth to significantly reduce poverty, or provide basic social and economic services to her citizens.

Fuel subsidy removal may be perceived as a price intervention policy wherein assistance that is supposed to be granted in the form of finance for the purpose of enhancing public welfare is withdrawn by the government (Odemero, 2013). Oseni (2013) also pointed out that subsidy removal without adequately tackling the security problems in Nigeria and decaying infrastructural facilities was like treating boils and leaving cancers and cardiac issues unattended. Based on the various evidence available, Majekodunmi (2013) was of the view that removal of fuel subsidies could compound the already the unbearable economic hardships that the Nigerian people

are currently experiencing. These hardships include: hikes in transport fares, rising prices of food and services, closure of local industries due to the high costs of production making it difficult for the industries to pay its taxes, job losses and unemployment, deepening of the poverty level and a poor standard of living. She further claimed that the businesses would face daunting challenges including tax obligations and other commitments to stay in business. Onyeizugbe and Onwuka (2012) found that a remarkable number of industries were closing down because of their inability to cope with the business challenges.

As evidenced in Nigeria, the effect of fuel subsidy removal by the president and his economic advisers on the infrastructural development of the country has not been clear (Ering & Akpan, 2012). Empirically, Kehinde et al. (2012) found that FSR would have both negative and positive effects on the agricultural sector. Such negative effects have brought about an increase in the cost of agricultural produce, as a result of the higher costs of agricultural inputs and transportation, which, of course, may affect SMEs owners.

The removal of the fuel subsidy has been seen as being in the long-term best interests of transforming the economy through diversification by using the proceeds to invest in other sectors such as agriculture. Nonetheless, Stephen (2012) also found FSR to be associated with the following consequences: inflation, untold hardships and an unprecedented crime upsurge that could make the lives of the ordinary people in Nigeria more miserable. Rice (2012) opined that rising world fuel prices have

caused the subsidy to increase significantly over recent years, damaging the country‘s fiscal health.

In another related study, Odemero (2013) studied the effects of FSR on profitability in frozen fish marketing; the findings revealed that FSR is assumed to translate into a general increase in the cost of business operations including production and compliance costs through tax payments. This has led to increased marketing costs, leading to a sudden drop in profitability. Hence, the removal of the fuel subsidy has affected the welfare of both fish marketers and fish consumers. Coady and Newhouse (2006) and Bacon and Kojima (2006) argued that fuel subsidies had been a very inefficient policy tool for poverty reduction because the better-off households had usually disproportionately benefited most from petroleum subsidies, thus undermining social equity. They further noticed that fuel subsidy removal has led to a persistent scarcity of fuel, resulting in long queues, wasted man-hours in queues, fuel adulteration resulting in fire incidences and the consequent loss of lives, loss of production facilities, and loss of production arising from increased cost of infrastructural facilities. Also, Shenoy (2009) pointed out that fuel subsidy removal had provided ample opportunity for rampant corruption.

Moreover, the Central Institute for Economic Management Vietnam (2013) conceived that an increase in fuel prices could have multiple effects on firms including low production and lower profits, which, in turn, would lead to low tax compliance. They further found that fuel subsidy removal could lead to two major

effects. First, it will directly affect firms or SMEs input prices including the cost of raw materials. Second, an increase in energy prices could lead to a rise in the prices of other inputs that may further increase pressure on tax obligations on a firm or SME.

Similarly, Taiwo (2012) also reported that FSR could result in higher costs for companies and individuals. This, he pointed out, would lower profits for companies and mean less disposable income for individuals. Also, companies and individuals will consume less and therefore pay less VAT (Taiwo, 2012). He added that, if the savings from subsidy removal were not adequately utilized to develop infrastructural facilities, and create employment, then the lower consumption by individuals would mean less income for businesses with attendant effects on productivity, profitability and income taxes. Individuals and households would experience a reduction in their disposable income, which in turn would result in a drop in savings and funds available for lending to businesses. The resulting consequence could lead to higher costs of funds for businesses and lower taxable profit for CIT purposes. Also firms may cut down on jobs, which will further result in a reduction in the collection of personal income tax. Under extreme pressures on disposable income and profitability, tax avoidance and evasion would likely intensify resulting in a further loss of tax revenue to the government and higher costs of enforcing compliance (Taiwo, 2012).

Conversely, Burniaux & Chateau (2011) believe that FSR would bring both economic and environmental benefits. In their study, they demonstrated that welfare gains associated with subsidy removal were accompanied, in most cases, by a more efficient allocation of resources across sectors. In Indonesia, this view seems to be plausible as subsidy removal reduced real output by 2% in the short-term (Clement, Jung, & Gupta, 2007). However, these research findings are in contrast with those of Hope and Singh (1995) who indicated that a reduction of fuel subsidy stimulates higher growth. Breisinger, Thomas, and Thurlow (2010) suggested that any exogenous shock would impose direct and indirect effects. Even though several studies have been conducted on FSR, a dearth of empirical evidence exists linking FSR and tax compliance behaviour in the literature.

These reasons together with Stefura's (2011, 2012) suggestions necessitated the need for the inclusion of this variable in relationship to tax compliance.

3.8.3 Studies on Tax Rates

Tax rates are normally seen as the actual rate of taxes that taxpayers are expected to remit to the relevant tax authorities. It is not surprising that taxpayer behaviour is influenced either positively or negatively by either increasing or decreasing the tax rate. Clotfelter (1983) investigated the relationship between tax evasion and the tax rate. The study cautioned that the reduction of the tax rate would not serve as the only effective mechanism in discouraging tax evasion. His results showed that tax compliance was negatively affected by the tax rate. However, his study depended on

secondary data of individuals; therefore, the results may not be a true reflection of the behaviour of taxpayers. The debate surrounding these findings is that taxpayers are always sensitive to their income. When the relevant tax authorities or the government is untrustworthy, some taxpayers may refrain from tax payments, especially when the penalty for avoidance is not stiff.

Palil et al. (2013) studied the tax compliance behaviour with emphasis on economic factors in Malaysia. The study, which relied heavily on a survey, discovered that the tax compliance behaviour of Malaysian taxpayers was negatively influenced by the tax rates. The import of their findings revealed that higher tax rates have the potential to increase tax evasion. Though a large sample size was used, the study had a limited scope because it focused on country specifics related to Malaysia, which cannot be generalized to other developed or emerging countries.

Recently, Mas'ud et al. (2014) employed simple regression to investigate the influence of tax rate on tax compliance in Africa for the period between 2012 and 2013. The results indicated a significant negative effect of tax rates on tax compliance. Though all 61 African countries were used, however, the study also had limited scope because only two years were covered. In addition, their findings have limited validity in other sectors such as SMEs sectors and other sets of taxpayers, and, as such, may not stand as a good yardstick in ascertaining the actual effect of the variable.

Hence, the imposition of high tax rates in relationship to SMEs owners/managers may not necessarily increase government revenues through tax collections; rather it may lead to the extinction of some businesses or even cause some SMEs to become informal (Rebecca & Benjamin, 2009). Although higher tax rates and weak tax administration in developing countries may cause low tax compliance, little is known of this relationship in the context of Nigerian SME taxpayers. However, it does seem likely that more businesses are opting out from the formal sector due to high tax rates. More evidence has also revealed that a higher tax rate increases tax evasion and reduces tax compliance (Ali et al., 2001; Torgler, 2007).

Several studies have examined how tax rates influence tax compliance in the negative direction. Yitzhaki (1974) found that as a penalty rate was imposed for tax evasion, tax evasion was reduced. Feinstein (1991) applied an econometric analysis of income tax evasion and its detection in 1991. The study relied heavily on IRS data from 1982 to 1985. The results indicated that a positive relationship existed between tax rates and tax reporting compliance. However, the secondary data utilised in the study and the incorporation of dummy variables in the model might have tilted the outcome of the findings. Alm, Sanchez, and De Juan (1995) studied the effect of the tax rate on tax compliance in Spain. The study found that a higher tax rate resulted in a decrease in tax evasion and a proportional increase in the compliance level. Other regions or developing countries were not included in the study, which might have made the findings much more interesting.

The actual impact of tax rates on compliance remains vague, unclear and debatable (Kirchler, 2007). Though most of the literature has revealed that tax rates are positively correlated with tax evasion as well as negatively related with tax compliance behaviour, other studies discovered either a positive impact or no relationship between tax rates and tax compliance. Recently, Modugu et al. (2012) conducted a study in Nigeria. They discovered that the tax rate failed to show either a positive or negative relationship with tax compliance.

Because of these conflicting findings, Freire-Serén and Panadés (2013) pointed out that more must be explored, especially in the relationship between tax evasion and tax rate. The numerous conflicting findings make the cause-and-effect relationship between tax rates and tax compliance more ambiguous and fascinating. Do higher tax rates result in a higher tax compliance level? Or, do lower tax rates result in a higher tax compliance level? These are substantive questions that need to be answered.

3.8.4 Studies on Probability of Detection

The probability of detection is seen as the likelihood that the relevant tax authorities will uncover an individual‘s noncompliance and seek to remedy the evasion (Chau & Leung, 2009). Therefore, the influence of the probability of detection on taxpayer's compliance has received considerable attention in recent years by researchers in developed and developing countries. For example, Bordignon (1993) examined the fairness approach to income tax evasion. The author discovered that the main reason

for taxpayers‘ avoidance or evasion was the non-zero probability of being detected because such taxpayers tend to avoid or evade their tax liabilities.

Palil and Mustapha (2011) investigated the determinants of tax behavior in Malaysia, using multiple regressions. The authors, who surveyed 1,073 individual taxpayers, found that if taxpayers believed that they would not be caught due to lack of investigations, they resorted to more complex tax evasion tactics and less traceable documentations in order to pay less tax. However, the probability of detection may encourage some taxpayers to declare their true income, which of course will invariably increase compliance. This study is encompassing, but failed to consider taxpayers such as SME owners/managers. In 1978, Mason and Calvin, as cited in Kirchler (2007) conducted a survey, which revealed that taxpayers who evaded taxes always perceived the chances of being caught or detected to be lower than the taxpayers who were found to be honest.

Indeed, Alm, Martinez-Vasquez, and Schneider (2004) considered the probability of being detected to have a significant dual deterrent effect on the taxpayers. These were the direct deterrent effects of taxpayers actually being audited, and the indirect deterrent effect on taxpayers of not actually being audited. As a result, as the probability of detection become higher, this may or may not encourage tax compliance. According to Allingham and Sandmo (1972), an increase in the probability of detection is associated with an increase in reported income. In the same vein, Stefura (2012) perceived that the probability of being detected was

correlated with tax compliance in the jurisdiction of her study. Her findings revealed that perceived chances of being detected were positively correlated with the amount of reported income, that is, as the perceived chances of being detected grew higher, the degree of compliance became higher too.

Similarly, Riahi-Belkaouni (2004) and Richardson (2008), in separate but related studies, opined that the probability of detection was a significant factor in reporting behaviour. Taxpayers were more honest in declaring their income due to the expectation that they would be audited during that particular year. In the same regard, Bergman‘s (1998) studied the tax compliance behaviour in Australia, it was concluded that the probability of taxpayers being detected played a substantial role in improving compliance behaviour. As pointed out earlier, a lack of audits and investigations by relevant tax authorities in the 1980s had driven taxpayers to behave more recklessly in Australia. In addition, Spicer and Lundstedt (1976) as cited in Spicer and Becker (1980) claimed that the tendency towards tax evasion is always reduced by increasing the probability of detection.

The probability of detection is seen as being controlled by the revenue service, whose obligatory mandate and objectives are geared towards revenue maximization. As a result, a kind of symbiotic or mutual relationship exists between the revenue service and taxpayers; that is, the revenue service reacts to the declarations of taxpayers, and taxpayers make declarations on the basis of the expected detection.

In the United States, Eisenhauer (2008) conducted a study to examine the determinants of tax compliance. The result revealed that self-employed individuals or SME owners have a higher opportunity to evade taxes than do other groups due to low probability of audits. The study further revealed that as tax evasion increased in the United States, tax audits have become a significant measure in curbing or decreasing tax noncompliance. Lewis, Carrera, Cullis, and Jones (2009) did a comparative study between the United Kingdom and Italy, and their findings showed that most participants declared more of their income as the probability of detection increased. As Hindriks and Myles (2006) pointed out, if the probability of detection is too small compared to the sanction rate, then the evasion will increase accordingly. On the other hand, Yaniv (2009) argued that a rise in enforcement by raising the probability of detection would subsequently have a deterrent effect on evasion. The general belief is that an increase in the probability of detection will have a resultant effect in decreasing tax evasion (Alm et al., 1992; Cummings, Martinez-Vazquez, McKee, & Torgler, 2009; Dubin & Wilde, 1988; Franzoni, 1999; Franzoni, 2000; Hindriks & Myles, 2006; Stefura, 2012). The rate of compliance will increase if a taxpayer or a SME owner perceives the probability of being detected to be high, which may result in a true declaration of their actual income.

However, other studies found mixed results. Andreoni, Erard, and Feinstein (1998) conceived that prior audit experiences and a continuous relationship or contact with the tax authority increased compliance among taxpayers. This finding was consistent with that of Slemrod et al. (2001) who found that the direction of the relationship

could be either positive or negative between the detection probability and taxpayers' compliance. Conversely, Young (1994) found the probability of being detected was negatively correlated with compliance behaviour.

In sum, the literature shows that different in the probability of detection levels or magnitudes provide different degrees of compliance. For instance, Bergman (1998) and Eisenhauer (2008) found that a higher probability of being detected potentially increased compliance. However, other authors found contradictory results due to the circumstances and the context in which the study was conducted (Slemrod et al., 2001; Young, 1994). Because of these mixed results, the variable will be subjected to further re-examination in this study to see how the nature of the relationship will be portrayed.

3.8.5 Studies on Tax Complexity

As tax regulations and other provisions become more complex over time, that complexity has become a significant factor related to tax evasion (Jackson & Milliron, 1986; Richardson & Sawyer, 2001). Before considering whether to comply, one fundamental element that taxpayers are confronted with is the tax system. Because of this, the structures of the tax system and its laws always have capabilities of hindering the willingness of the taxpayer to comply.

The complexity of a tax system takes different forms, including computational complexity, form complexity, compliance complexity, rule complexity, procedural

complexity or a low level of readability (Carnes & Cuccia, 1996; Cox & Eger, 2006; Pau, Sawyer, & Maples, 2007; Richardson & Sawyer, 1998; Saw & Sawyer, 2010). Thus, complexity arises when the equity of the entire tax system is being considered with the aim of reducing inconsistencies of a tax system (McKercher, Ingraham, & Karlinsky, 2005).

However, prior research on the relationship between tax complexity and tax compliance has been varied. McKerchar (2003) suggested that increasing complexity causes both monetary and non-monetary costs of compliance to increase, thereby causing a negative impact on taxpayers' perceptions of fairness, and, as a result, negatively impacts their respective commitments to compliance.

Similarly, Forest and Sheffrin (2002) conducted a research that laid emphasis on a broader population of taxpayers based on the impact of complexity on compliance behaviour. The result revealed that an increased perception of fairness on the part of the taxpayers led to improved compliance, whereas complexity did not necessarily influence perceptions of fairness and compliance. McKerchar et al. (2005) opined that in either United States or Australia the extent to which small business taxpayers are committed to compliance is unclear and ambiguous. In this comparison of Australian and United States practitioners, the findings revealed that the major causes of complexity were the result of the frequency of changes, the volume of legislative material and the effect on other aspects of changes among Australian practitioners.

Kirchler, Niemirowski, and Wearing (2006) conceived that an inverse relationship exists between complexity and perceptions of fairness. Reflecting on earlier findings that perceived tax fairness would stimulate taxpayers‘ compliance, tax complexity will negatively affect the tax compliance. As Kirchler et al. (2006) in Saad (2009) opined complexity in the relevant tax law would lead to a negative perception of the tax system and, in turn, encourage an unwillingness to comply with the tax law.

In order to gain further insight into the phenomenon of tax complexity, Strader and Fogliasso (1989) undertook a comparative study of tax complexity in seven countries. Their findings revealed that Japan, the United Kingdom, France, Italy and the United States were associated with a highly complex tax system. Sweden and the Netherlands had a moderately complex tax system. In New Zealand, for instance, the country witnessed many tax reforms dating as far back as the 1980s to reduce the magnitude of the complexity of the tax system (Hasseldine & Bebbington, 1991).

Mustafa (1997) studied the perception of taxpayers toward the introduction of a self-assessment system in Malaysia. The finding suggested the presence of tax complexity, particularly in the area of record keeping, as a result of so many details in the tax law and ambiguity. His findings were partly consistent with the six potential causes of complexity labelled as: 1) ambiguity, 2) calculations, 3) changes, 4) details, 5) forms and 6) record keeping, as identified by Long and Swingen (1987). Such complexity was also present in Australia, which forces taxpayers to engage tax agents to deal with their tax matters (McKerchar, 2001, 2003).

Others have examined how readable tax legislation is for taxpayers. Tan and Tower (1992) applied the Flesch Reading Ease Index to measure the readability level of tax legislation, Tax Information Bulletins (TIBs) and Tax Return Guides in New Zealand. The Flesch Reading Ease Index has a range of 0 to 100, which calculates a range from the most cumbersome to least difficult. Their results indicated that simplification was not in progress at that time, except for the Tax Return Guides. Based on the above findings, Tan and Tower (1992) recognized the importance of employing shorter and more appropriate sentences in the style of writing so as to improve the readability of tax legislation, which might invariably reduce the complexity of the tax law. Pau et al. (2007) found significant improvements of the tax simplicity using the Flesch Reading Ease Index, Flesch-Kincaid Grade Level Index, average sentence length and percentage of passive sentences. Their study found that the written Income Tax Act 2004 in New Zealand had improve in readability. Sawyer (2007) agreed that simplification has improved to a reasonable extent, but that the persistence changes in the legislation has delayed the rewrite of the program and the benefits contained therein.

In sum, the above studies about New Zealand found significant success for the review project undertaken by the New Zealand government in its tax simplicity goals in the context of improved readability. As a result of the rewrite project, the results of Saw and Sawyer (2010) also indicated that a remarkable percentage of people with an education level range from 11 to 13 years were able to understand the 2007 Income Tax Act 2007.

Nonetheless, Saad (2014) provided contrary evidence in relationship to the complexity of the income tax system in New Zealand. The study found that most of the taxpayers interviewed believed that the income tax system was generally too complex and technical for them to comprehend. Thus, these more recent findings seem to disprove what Saw and Sawyer claimed in 2010. Some of this may be due to differences in the metrics used. Saad (2014) measured complexity in terms of taxpayer‘s views of their actual experience in dealing with the income tax system, while Saw and Sawyer (2010) measured the phenomenon of complexity in relationship to the difficulty in reading and comprehending the various tax legislation and other tax regulations.

Richardson (2006) conducted a study of 45 countries, and the results revealed that, complexity was one of the most significant determinants of noncompliance, aside from education, income source, fairness and tax morale. The findings were consistent with those of Cox and Eger (2006) who focused on the State Road Funds in the state of Kentucky in the United States. The authors posited that procedural tax complexity contributes to an increase in tax noncompliance. In Australia, McKerchar (2005) noted that tax agents were unhappy with the increasing complexity of the tax law. The results further suggested that tax agents needed a simpler tax law, in relationship to less regulatory material and ad-hoc changes.

Gambo, Mas'ud, Nasidi, and Oyewole (2014) studied the influence of tax complexity on tax compliance in 41 African countries with regards to self-assessment. Using

Pearson correlation and regression methods as techniques of data analysis, the authors found tax complexity to significantly influence tax compliance negatively. Though the findings covered a remarkable number of African countries, however, they relied solely on secondary data, which failed to recognize the effect of individual country specifics that might have affected the entire findings. Moreover, Kirchler et al. (2006) also documented that taxpayers were more likely to comply when the tax law was perceived as less complex. However, Yankelovich and White (1984) found that no relationship existed between tax complexity and tax compliance of the taxpayers, even though Saad (2014) had outlined the possibility of investigating tax complexity as an important determinant of tax compliance.

Based on the mixed findings, suggestions for future research in this area, and most importantly, the fact that studies on tax complexity were mainly related to compliance costs not tax compliance in particular (Forest & Sheffrin, 2002; Guyton, Hare, Stavrianos, & Toder, 2003) further studies are needed. Additionally, most studies were conducted in either developed countries or in the Asian axis and not in the context of Nigeria. Therefore, further examination is needed.

3.8.6 Studies on Incentives (Positive Inducement)

Several studies that do concentrate on tax incentives of small firms mostly laid extensive emphasis on margin (Goolsbee, 1998; Cullen & Gordon, 2007; Gordon & Mackie-Mason, 1994). Moreover, several researchers have pointed the need for a good tax system that is capable of providing the taxpayers with the needed

incentives. Such incentives could be in the form of positive inducements to comply with the relevant tax laws or negative inducements such as penalties or sanctions where the probability of noncompliance is assumed to exist (Slemrod, 1992; Smith, 1992). Richardson and Sawyer (2001) recognised the effectiveness of positive reinforcements in encouraging compliance behaviour as evidence in other disciplines.

Various authors have studied positive inducements. Torgler (2002) recognized the importance of positive inducements in the area of tax compliance studies. Based on the importance to which the subject matter possessed in the area of taxation, the author suggested the need to recognize a number of different forms in which positive inducements could surface. Prominent researchers in this area have suggested many measures, among them is Alm et al. (1992a) suggested the use of monetary rewards for absolute compliance. They pointed out that rewards should be in the form of cash payments or discounts on tax.

Consistent with Alm et al. (1992b), Smith and Stalans (1991) were of the view that other monetary rewards in the form of monetary incentives for timely filing, as well as the issuance of lottery tickets to taxpayers who complies with tax laws and regulations. They further explained the circumstances surrounding the effectiveness of such incentives to be essentially that of operant conditioning. Much evidence in the literature also portrays the extent to which monetary incentives have impacted compliance behavior (Alm et al., 1992; Smith, 1992). The aforementioned authors

compared how positive inducements could encourage compliance behaviour and found that monetary rewards and lottery tickets were the most effective avenues of improving compliance.

Other measures were also examined as well. For example, Jackson (1986) outlined the need for a parsimonious means of improving the behaviours of taxpayers including the prompt issuance of tax refunds. Jackson (1986) and Smith (1992) suggested measures such as polite and helpful service by relevant tax authority staff. Others suggested measures such as an expression of thanks for compliant behaviour (Smith & Stalans, 1991).

In relationship to the standard economic theory, rewards are expected to change or alter the relative prices, such that paying taxes would be seen as more attractive compared to evading taxes (Feld et al., 2006). To further support the above assertions, Harju and Kosenen (2012) reported that provision of better tax incentives would help in boosting the economic activities of entrepreneurs.

Trivedi, Shehata and Mestelman (2004) studied attitudes and incentives, and tax compliance. The study, which utilised data from the Canada Revenue Agency, found that, if taxpayers focused only on incentives by playing an "audit lottery", increasing penalties and audit rates should go a long way in improving compliance. Thus, in relationship to the above findings, the deduction can be made that incentives, in most cases, have a positive relationship with tax compliance. Alm et al. (1992a) also

claimed that positive incentives are important instruments to enhance tax compliance. Supporting the above assertions, Alm et al. (1992b) further reiterated that rewards have a tendency to increase compliance, especially in altering the rate at which extreme behaviours may possibly shift individuals from a very low to a very high compliance rate.

Based on the above arguments, most findings are geared towards one direction; however, the variable incentive (positive inducement) seems to have been accorded little attention in the context of taxation, let alone tax compliance behaviour. To the best of this researcher‘s knowledge, apart from Manaf‘s (2004) work, no literature in other developing countries emphasizes incentives (positive inducement) and tax compliance behaviour. Therefore, this variable was included in this present study for further re-examination in the context of a developing country, Nigeria.

3.8.7 Studies on Tax Knowledge

According to Kasippilai (2000), tax knowledge is one of the most important ingredients in achieving voluntary compliance. Such knowledge is also one of the vital tools in determining an accurate tax liability (Palil, 2005). Hofmann, Hoelzl, and Kirchler (2008) studied the knowledge and evaluation of taxation, norms, fairness, and motivation to cooperate with the state and its institutions. Their study identified knowledge of taxation as one of the most essential factors influencing tax compliance. Though the study extensively reviewed the perceptions of the taxpayers, the study lacks empirical evidence to justify the import of their findings. However,

Loo et al. (2009) reported similar results, that tax knowledge under the regime of self-assessment was one of the most influential factors in determining compliance behavior of taxpayers.

In separate but related studies, Kasipillai and Jabbar (2003) and Kirchler et al. (2006) discovered a high correlation between compliance rates and the possession of tax knowledge. Based on the foregoing, even though, tax knowledge was discovered to enhance tax compliance; the absence of tax knowledge may result in either intentional or unintentional noncompliance behaviour among taxpayers.

The influence of tax knowledge on tax compliance behavior has been well established and proven in various researches (Ahmad, Hanefah, & Noor, 2007; Eriksen & Fallen, 1996; Palil, 2010; Palil & Mustapha, 2011; Saad, 2014). Christensen, Weihrich, and Gerbing (1994) were of the view that both understanding and acceptance of the tax law complexity can only be enhanced when the knowledge of the taxpayers has increased. In order to fully understand the subject of discussion, Harris (1989) categorised tax knowledge into two aspects, namely, 1) knowledge through common or formal education received as a matter of training, and 2) knowledge specifically directed at possible opportunities to evade tax.

Moreover, Eriksen and Fallan (1996) concluded that the level of knowledge received by taxpayers is an important factor that has contributed to the general understanding about taxation, especially in relationship to the knowledge and understanding of the

laws and regulations of taxation. In their study, they found that, when the knowledge of the taxpayers increased, taxpayers considered their own tax evasion as being more serious, which invariably might increase their compliance levels.

Additionally, general tax knowledge has been shown to have very close relationship with the ability of taxpayers to understand the laws and regulations of taxation, and their ability to comply with them (Singh, 2003). Ahmad et al. (2007) pointed out that a significant difference exists between taxpayers who have tax knowledge and an understanding of compliance and those who do not have tax knowledge and an understanding of compliance. Thus, insufficient knowledge possessed by the taxpayers may have a resulting effect on the interpretation and understanding of the tax law.

Given evidence that tax knowledge affects the knowledge of taxpayers, some authors such as Eriksen and Fallan (1996), Harris (1989), and Singh (2003) have attempted to examine whether the enhancement of tax knowledge would increase tax compliance. Eriksen and Fallan (1996) and Lewis (1982) examined whether a connection existed between attitudes towards taxation and specific tax knowledge, in part because these tax attitudes might enhance the tendency towards tax evasion or tax compliance. Lewis (1982) attempted to determine whether a connection was present between specific tax knowledge and attitudes during the completion of a tax return. His aim was to study any changes in the attitudes towards taxation that resulted from an increased knowledge about taxation, which might have a significant

impact on tax compliance. Lewis argued that insufficient knowledge about tax regulations could lead to negative economic effects.

In Malaysia, Palil, and Mustapha (2011) also identified the determinants of tax compliance through a survey of 1,073 respondents. Their study revealed a significant relationship between tax knowledge and tax compliance irrespective of the variation among the respondents. Though a large sample size was used, the study was limited because it did not consider the variations among the respondents. Their findings aligned with those of Fischer et al. (1992) who found a positive relationship between tax knowledge and compliance. This meant that as people become more informed or knowledgeable about the tax system, their attitudes and perceptions might also change either positively or negatively.

The following studies also established a positive relationship between tax knowledge and tax evasion (Dubin & Wilde, 1988; McGee, Basic & Tyler, 2009; Ritsema, Thomas & Ferrier, 2003). One consideration is that as people become more familiar with the tax system, they might seek to find weaknesses in the tax system and avoid paying taxes. However, most findings are mixed with regards to whether tax knowledge affects tax compliance either negatively or positively. As Devos (2008) has pointed out, the conflicting results may be due to the inability to ascertain what perspective of knowledge is being measured.

In the literature, the findings have shown mixed and inconsistent effects of tax knowledge on the compliance levels of taxpayers. While some studies found tax knowledge to positively influence tax compliance, others found a negative correlation between the variables. As a result, this current research is designed to further investigate their relationship in the context of a developing country.

3.8.8 Studies on Public Governance Quality (PGQ)

According to Huther & Shah (1999), PGQ is a multi-faceted concept that encompasses all aspects of exercising authority through formal and informal institutions in the management of the available resources of a state for the benefit of the masses. For example, Rotberg (2005) sees PGQ as the provision of efficient necessary quality political goods by the government to the taxpayers. Thus, the more government provides public services according to the preferences of taxpayers based on exchange for an adequate tax price, the more taxpayers are willing to comply (Alm et al., 1992b). Critically speaking, public governance is an issue of utmost importance to developed and developing countries.

International organizations have sought to define the construct. For example, the World Bank (2006) viewed PGQ as a process in which leaders are chosen, regimented, and replaced with the capacity of the government of a specific country in order to judiciously manage the resources of their respective country so as to further implement appropriate policies for the benefit of all. Similarly, Besancon (2003) said that public governance existed in order to make goods and services

available to the masses irrespective of class. Further buttressing the above assertions, Besancon (2003) claimed that, when a country provides its citizens with a high quality of predefined political goods, such a nation is assumed to have a sound quality public governance.

Alabede et al. (2011) studied the moderating effect of financial condition and risk preference on the relationship between public governance quality and tax compliance behaviour in Nigeria. The study was based on a survey of income tax payers and employed a hierarchical regression model. The authors discovered that a significant improvement in the quality of public governance had gone a long way in reawakening the culture of tax compliance among individual taxpayers. However, the findings might have been far more interesting, if the scope of the study was not limited to only taxpayers of the FCT Abuja.

Similarly, Levi (1988) revealed the presence of a vertical contract influencing tax compliance. The findings showed that the contract that exists between the taxpayers and the government was vertical in nature, which was termed as a *quid pro quo* for taxation. A vertical contract was established based on the fact that whether taxpayers receive public goods in exchange for the monetary value being paid as taxes is a bone of contention. Lassen (2003) shed further light on the meaning of *quid pro quo* in relationship to taxation, which was considered, according to his study, as whether the political goods provided by the government were adequately sufficient in relationship to the amount of tax paid.

The argument has been made that, if taxpayers perceive the rate of transformation from tax to political goods as low, then the taxpayers always feel cheated, such that the government fails in its obligatory duty to sustain its end of the agreement. This failure would consequently have a negative impact on tax compliance (Levi, 1998). Furthermore, Lassen (2003) posited that, if the political goods mixture issued by a responsible government was found to be distinct and uniquely different from the preferences of taxpayers, then the attractiveness of the vertical contract between the two parties would start to diminish. This diminution could, in turn, lead to lower tax compliance, which aligns the earlier thoughts of Alm et al. (1992b). In examining the relationship between PGQ and compliance behaviour, Akpo (2009) found that the term –good governance" refers to the ability of government to provide quality public goods to the citizens, but, in an instance in which the government failed in its duty to provide such an exchange, the result might, in turn, negatively affect the morale of citizens in paying their taxes.

Further emphasizing the above line of argument, Everest-Philips and Sandall (2009) pointed out that a linkage between PGQ and taxation exists, such that quality governance is seen as a product of a good tax system, which would produce a better tax system, and further promote good governance. Kaufmann, Kraay, and Mastruzzi, (2007) said that PGQ included the following indicators: political stability, government effectiveness in the provision of quality of public goods, adherence to the rule of law, control of corruption and participation in governance through democracy and accountability. Wallshutzky (1985) also found that a remarkable

number of people always made their decisions to comply in accordance with the level of public services the government supplied. Alm et al. (1992a) also found that the average rate of compliance was always higher when public goods were provided. Their findings were consistent with that of Alm and Gomez (2008).

In a related direction, Torgler (2003) was of the view that the more taxpayers engage in the political decision-making process through democratic means, the more the relationship of taxpayers and government is built on the basis of trust. As a result, this relationship will have a substantial influence on the ability and willingness of people to pay their taxes.

Joshua and Jinjarik (2005) theorized that the efficiency of tax collection is normally affected by polarization and political instability in a country, which invariably would reduce the efficiency of tax collection and thereby lower the compliance level. This was established by Alm and Torgler (2006) who studied the tax morale of United States, Austria and Switzerland. Their study found that the United States was associated with higher tax morale compared to Austria and Switzerland. Damania, Fredriksson, and Mani (2004) opined that a higher degree of compliance with regulation is achieved when the political situation of a country is normal. The above finding was consistent with those Tedds‘ (2007) reported. Torgler and Schneider (2009) also noted that a lack of efficient and effective administration of the rule of law might undermine the willingness of citizens to pay taxes. In support of Torgler and Schneider (2009), Bergman (2009) claimed that a country with a well-

established rule of law has better compliance than a country without an efficient rule of law.

In relationship to the above discussion, study of the relationship between PGQ and tax compliance is scanty, especially in developing countries, and most importantly, the literature only focuses on the direct relationship between these variables. This is true even though Alabede et al. (2011) suggested the need for examining further the indirect effects of PGQ in relationship to tax compliance behaviour in developing countries in order to validate their findings. In light of the above, such an examination is an excellent avenue by which to further explore its relationship with SME owners/managers, which for now has received little attention.

3.9 The Resultant Influence of the Predictors on Tax Compliance

The essence of this section is to recapitulate the key factors that have been identified as influencing the tax compliance behaviour of SME owners/managers. No doubt, many studies have examined the various factors that are capable of influencing tax compliance behaviour. Nonetheless, within the context of this study, WFFC, FSR, as well as economic and psychological factors that were identified and considered as the most important factors that may significantly and positively influence tax compliance behaviour of SMEs owners/managers, keeping other factors constant, are important to study.

Thus, the consideration of these factors in this current study was based on the suggestions made by past studies and, coupled with the fact that these variables would assist in addressing the research issues highlighted in Chapter One, is also in line with the research setting and environment in, Nigeria (Sekaran, Robert, & Brain, 2001).

To start with, the influence of WFFC and FSR has not, in any way, been established in relationship to tax compliance behaviour. Though some studies have linked WFFC with other constructs, such as job performance, organizational commitment, individual obligation, and psychological stress (Aryee, 1992; Frone et al., 1997; Kalliath & Kalliath, 2013; Kossek & Ozeki, 1999; Wickens, 1996). Similarly, FSR on its own has not received the much-needed attention in the literature, especially in relationship to tax compliance behavior, even though, FRS was found to be associated with the cost of production, the cost of transportation, the agricultural sector, and growth (Kehinde et al., 2012; Odemero, 2013). At present, scanty empirical research relates WFFC, FSR and tax compliance behaviours in the literature. Thus, the inclusion of these variables is in line with the call of Alm (2013) and Stefura (2011, 2012) to study more psychological and other noneconomic factors to gain an insight into the puzzle of tax compliance.

Furthermore, the significant role of either economic or psychological factors on tax compliance behaviour has long been established in the literature. For instance, Allingham and Sandmo (1972), Gambo et al. (2014), Alm (2013), Batrancea,

Nichita, Batrancea (2012), Mas'ud et al. (2014), Palil et al. (2013), Pau et al. (2007), Saad (2014), Sawyer (2007), and Stefura (2012) argued that these factors in one way or the other significantly affect tax compliance behaviour, while others failed to establish any relationship. However, Akpo, (2009), Alm (1999), Alm and Torgler (2006), and Jackson and Milliron (1986) further argued that other factors not considered in any of the previous studies, which by no means exhaustive, might influence tax noncompliance decisions

Several researchers have argued that no one set of factor(s) could predict a good relationship with tax compliance behaviour. Thus, the economic environment or situation tends to dictate which set of particular factor(s) could have the potential for predicting a taxpayer‘s behaviour. Hence, the consideration of WFFC, FSR, tax rates, the probability of detection, tax complexity, incentives (positive inducements), tax knowledge, and PGQ are variables that could significantly affect the tax compliance behaviour of SME owners/managers in the context of the Nigerian environment.

Furthermore, Allingham and Sandmo (1972), Alm (2013), Batrancea et al. (2012), Palil et al. (2013), and Stefura (2012) asserted that economic factors such as the tax rate or the probability of detection predict and significantly affect the tax compliance behaviour of taxpayers. Thus, these demonstrate how important economic factors are to the prediction of tax compliance of SME owners/managers. Nonetheless, the findings in relationship to these variables were mixed. Similarly, the current

environment in Nigeria required that the impact of economic factors must be checked. Hence, the inclusion of economic factors as independent variables in this study.

In addition, authors have equally documented evidence of the significant role of psychological factors such as positive inducements, tax knowledge, and PGQ on tax compliance behaviour. For instance, Alm et al. (1992a), Manaf (2004), and Manaf, Hasseldine, and Hodges (2005), in related but separate studies, argued that positive incentives have been recognized as one of the most important instruments for enhancing tax compliance behaviour, although little attention seems to have been paid to them in the literature. Authors such as Alabede et al. (2011), Maseko (2014), Bătrâncea et al. (2012), Palil et al. (2013, Palil and Mustapha (2011), Richardson (2006), and Saad (2014) also documented a significant influence of PGQ and tax knowledge on tax compliance behaviour, though contradictory findings are present in the literature. The inconsistency in the findings further prompted the need to re-examine the variables in relationship to a different geographical settings and taxpayers. Therefore, the consideration of these factors in this study is appropriately justified by their crucial significance.

3.10 The Resultant Effect of the Moderating Variables

3.10.1 Studies on Perceived Service Orientation (PSO): The Moderating Variable

Hogan, Hogan, and Busch (1984) conceived of service orientation as an attitude of being helpful, thoughtful, considerate and cooperative. The term service orientation was used in the area of personality traits (Solnet & Jay, 2008). Although the term has evolved over time, service orientation is now known as one dimension of strategic management (Schneider & White, 2004). For example, Solent and Jay (2008) divided the meaning of service orientation into two: 1) a perception of employees in relationship to practice, policies and procedures in an organization, and 2) a meaning focused on a dimension of an organization's overall strategy and culture. Though service orientation has been given due attention in the area of tax administration (OECD, 2010), studies on its actual effects are rare (Gangl et al., 2013). The OECD (2010) mainly focused on the usage rates of services on cost efficiency (Bird, 2004; Pieterson, 2009), while Smith and Stalans (1991) and Stalans and Lind (1997) emphasised satisfaction with services rendered.

Accordingly, Heintzman and Marson (2005) studied the interaction between people, service and trust with an emphasis on public sector service chain. They pointed out that PSO has a possibility not only for facilitating cooperation with citizens, but can also be an avenue for increasing the level of trust and confidence in government. As such Alm and Torgler (2011) and Kirchler et al. (2008), in related but separate studies, posited that relevant tax authorities should ensure that taxpayers are being

treated with the utmost respect, as well as being providing with all the needed services, in order to facilitate mutual participation, instead of creating a climate of deterrence and distrust that could warrant negative attitudes towards tax payment.

However, very few studies actually have looked at the interaction of this construct in relationship to the compliance behaviour of taxpayers. These included Cherry, Jones, and McKee (2010), while Gangl et al. (2013) carried out a more recent study on the perceived service orientation of tax authorities and tax compliance, with the aim of discovering how the relevant tax authorities could render a helping hand. They discovered PSO to significantly influence the tax compliance behaviour of private Dutch taxpayers. Though a large sample size was used, a market research agency collected the data on behalf of the NTCA because of which, some have questioned the authenticity and reliability of the data. Additionally, Alm and Torgler (2011), who conducted a multifaceted approach, found that service orientation was recognized as one of the important approaches in regulation, which should be equal to enforcement and trust in addressing tax noncompliance. Kirchler et al. (2006) found that the perceived support of the advice of the relevant tax officers was correlated with high self-reported compliance.

Moreover, the results of empirical research on the effects of economic factors on tax compliance behaviour remains mixed, including studies for instance tax rate (e.g., Allingham & Sandmo, 1972; Alm et al., 1992; Barbuta-Misu, 2011; Chau & Leung, 2009; Clotfelter, 1983; Dubin, Graetz, & Wilde, 1987; Dubin & Wilde, 1988;

Feinstein, 1991; Pommerehne & Weck-Hannemann, 1996; Porcano 1988), probability of detection (Allingham & Sandmo, 1972; Alm et al., 2004; Cummings et al., 2009; Kirchler, 2007; Palil & Mustapha, 2011; Slemrod et al., 2001; Stefura, 2012), tax complexity (Forest & Sheffrin, 2002; McKerchar, 2003; & Saad, 2014; Sawyer, 2007), psychological factors, for instance, incentives (Feld et al., 2006; Manaf, 2004; Trivedi et al., 2004), tax knowledge (Kasipillai & Jabbar, 2003; Kirchler et al., 2006; Palil & Mustapha, 2011; Saad, 2014), and PGQ (Alabede et al., 2011; Torgler & Schneider, 2009).

Neither individual nor firm compliance can be entirely explained by the influence of economic factors, even with the likelihood of low probabilities of detection because organisations and individuals still choose to comply based on non-economically base rationales. For example, Cuccia (1994) discussed the effects of noneconomic factors of compliance, and other contextual features. He noted that they often may moderate the influence of economic models. It is therefore pertinent to consider PSO and its potential moderating effect in this current study. In some measure, this is due to the mixed findings concerning the relationship between and among some factors and tax compliance, most especially the economic factors (Dubin et al., 1987; Dubin & Wilde, 1988). In addition, Alm, Kirchler, and Muehlbacker (2012) posited that an emphasis should be directed towards the relevant tax authorities, as a result of their direct relationship with the taxpayers in terms of service provisions and so on.

Similarly, Slemrod (2009), Torgler (2003), and Torgler and Schaffner (2007), in separate but related studies, empirically discovered that most countries cannot fully explain their actual compliance levels by taking into consideration the basic theory of tax compliance. The literature has suggested that certain variables may moderate this relationship (Alabede et al., 2011; Kirchler et al., 2007; Baron & Kenny, 1986). Baron and Kenny further revealed that, when a weak or inconsistent relationship exists between predictors and criterion variables, then a moderator is necessary. Hence, the use of PSO as a moderator in this current study is justified. Given the above trend in the literature, some important variables such as service orientation, which heretofore not been considered as a moderator in the literature, could moderate the relationship between economic factors, psychological factors, and the tax compliance behaviour of SMEs owners /managers.

Examining the moderating effect of PSO, which may either strengthen or weaken the relationship between economic factors, psychological factors, and tax compliance behaviour of SMEs owners/managers, is necessary. The essence of this examination is to establish an indirect relationship that will strengthen the relationship between these individual factors and tax compliance behaviour in order to make their relationship more directional.

In this case, the expectation is that service orientation would have a significant and positive effect on the relationship between the various factors highlighted above in relationship to tax compliance behaviour, so that the impact of individual factors and

tax compliance behaviour will be more effective and significant. With the presence of service orientation, the assumption is that the relationship between individual factors and tax compliance would become stronger and more effective. Hence, service orientation will play a crucial role in the effectiveness of economic factors, psychological factors and tax compliance behaviour, which to this researcher's knowledge, has not been studied. Thus, this current study intends to bridge the existing gap in the extant literature.

3.10.2 Studies on Perceived Corruption: The Moderating Variable

Several definitions exist for the concept of corruption. Habib and Zurawicki (2002) and LaPalombara (1994) defined corruption as an abuse of public power for private benefit. Corruption persists in countries in which law enforcement agencies are seen to be untruthful coupled with excessive power in administrative apparatuses (Braguinsky, 1996; Habib & Zurawicki, 2002). While Gilman (1989) defined corruption as ―bribery or dishonest dealings", what may not be viewed as corruption by one person may be absolutely classified as corruption by another.

Theoretically, Tanzi (1998) classified corruption into two different types: 1) small corruption and 2) grand corruption. The author viewed small corruption as that which had to do with the corruption of tax inspectors or tax officials, bureaucrats and policemen. Grand corruption, according to the author was linked to the attitude of politicians, representatives of the parliament and others.

Several studies that have been conducted in developing countries have shown that half or more of the tax revenues that were supposed to be collected cannot be traced by the government as a result of corruption and tax noncompliance (e.g., Krugman, Alm, Collins, & Remolina, 1992; Richupan, 1984). Aligning with the above authors, Coolidge (2012) pointed out that tax evasion and corruption seemed to be common issues in most developing countries. Some countries revealed more evidence of the problem than others, while in other countries tax officials seemly possess an excellent reputation for competence, helpfulness and integrity than other government officials.

Nonetheless, few limited studies have clearly outlined the problem of tax compliance in relationship to the effects of perceived corruption. Torgler (2003) studied people's perceptions of the likely reasons for not paying taxes. The results revealed that corruption was among the top three reasons coupled with people, lack of honesty and high rates of taxes that result in noncompliance. Nawaz (2010) also found that corruption within a tax administration had insidious and destructive effects on tax morale and compliance of taxpayers. In short, studies conducted in most developing countries found that half or more of the taxes targeted remain untraced by the government treasuries as a result of corruption and tax evasion (e.g., Alm, Bahl, & Murray, 1991; Krugman et al., 1992).

In addition, Fjeldstad and Tungodden (2003) analyzed the effect of corruption on taxable incomes with an emphasis on the effect of strengthening the bargaining

power of corrupt tax officers. The authors discovered that, in contrast to the belief that strengthening the bargaining power of corrupt tax officers could reduce tax noncompliance and increase tax revenues, corruption were perceived to attract more tax noncompliance. Thereby, tax revenues would be reduced in the long run, although they could lead to more tax revenues in the short run. In the same vein, Fan (2006) analysed the resultant effect of corruption in a kleptocracy. In a kleptocracy, the ruler often uses anti-corruption measures such as wage incentives and monitoring in order to discourage corrupt officials from rent-seeking for themselves. As a result, the leader sets an inefficiently high tax rate in order to discourage the officials from demanding bribes, which in turn improved tax compliance and more revenue. Similarly, Rahmani and Fallahi (2012) studied the effects of corruption and democracy in the formation of tax compliance. The authors discovered corruption to be one of the most significant factors influencing the willingness and ability of the people to pay taxes. They further inferred that more democracy and less corruption increased tax compliance and the willingness to pay taxes.

However, like PSO, perceived corruption is also an indispensable construct that may shape taxpayers' behaviour. Previous studies correlated the direct influenced of either economic factors or psychological factors on tax compliance behaviour (e.g., Allingham & Sandmo, 1972; Becker, 1968; Fischer et al., 1992; Alm, 2013; Batrancea et al., 2012; Manaf et al., 2005; Mustafa, 1997; Nur-tegin, 2008; Palil et al., 2013; Saad, 2014; Stefura, 2011, 2012).

Nonetheless, because of the inconsistent findings in the respective studies and coupled with the empirical evidence indicating the actual compliance levels in most countries, the basic theory of tax compliance is not very explanatory (Feld & Frey, 2003; Slemrod 2009; Torgler 2003; Torgler & Schaffner, 2007). Thus, the literature often suggests that certain variables may moderate the relationship (Alabede et al., 2011; Kirchler et al., 2008). Alabede et al. (2011) and Kirchler et al. (2008) strongly support this argument stating that, when the relationship between the dependent and independent variables is inconsistent or unexpectedly weak, then moderators should be introduced. The inconsistent findings may also indicate that previous studies have not given the needed attention to important variables such as perceived corruption.

Because of this, examining the role of perceived corruption as a moderator in influencing the relationship between economic and psychological factors of tax and tax compliance is necessary. Therefore, this current study argues that it is not only pertinent to consider the direct relationship between economic factors and psychological factors on tax compliance behaviour but also that connecting these factors with the perceived corruption would help strengthen tax compliance behaviour. To this researcher's knowledge, no study has looked at the moderating role of this variable in relationship to these factors and the tax compliance behaviour of SMEs owners/managers. Hence, the assumption in this study is that perceived corruption would play a vital role in strengthening or weakening the relationship between these factors and tax compliance behaviour.

3.11 Adopted Models of the Study

This current study derives its model from the Fischer et al.‘s (1992) model, and supported by Alabede et al. (2012) tax compliance model. The discussion of the models appears below.

3.11.1 Fischer’s Model

Fischer et al. (1992) conducted the first comprehensive review to expand and categorize Jackson and Milliron‘s fourteen key factors of tax compliance into four formidable groups, which later became known as the Fischer's model of tax compliance (Fischer et al., 1992). Their study was built on the foundation of Jackson and Milliron (1986) who introduced fourteen key factors of tax compliance. According to the authors, the fourteen key factors of tax compliance were: age, education, gender, compliant peer, ethics, fairness, occupation, withheld income source, income level, IRS contact, sanction, complexity, tax rate, and probability of detection. As such Fischer's model is one of the most comprehensive model, incorporating the economic, sociological and psychological factors of tax compliance behaviour and has enjoyed wide acceptance in the area of tax compliance research.

The model is structured as the following: 1) demographic constructs, comprising age, gender, and education; 2) the tax system structure, comprising tax rate, penalty rate, probability of detection, tax authority contact, and complexity of the tax system; 3) the noncompliance opportunity construct comprising income source, income

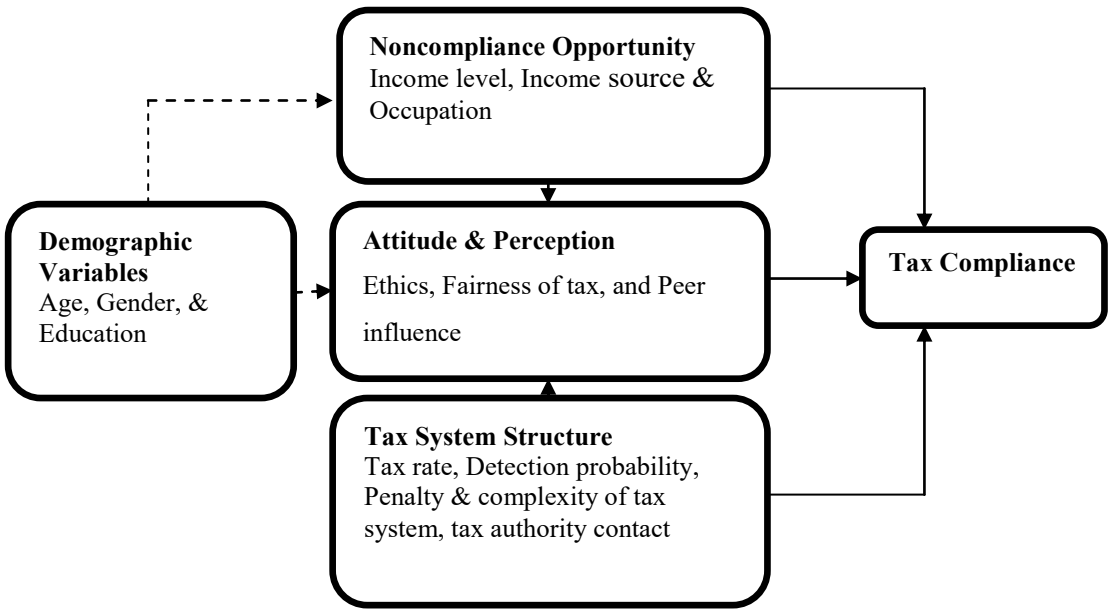
level, and occupation; and 4) the attitude and the perception construct comprising ethics, fairness, and peer influence. In Fischer's model, the variables under the constructs of the tax system structure, attitude and perception, and noncompliance opportunity are the direct factors that influence tax compliance, while demographic variables comprise antecedent variables connecting noncompliance opportunity as well as attitude and perception. While the coverage of this model is argued to be more encompassing compared to others, it is limited in some aspects.

Nonetheless, the model indicates the importance of noneconomic factors in relationship to tax compliance, about which the current study is concerned. The model also offers a framework linking most of the important variables to tax compliance, with an emphasis on the compliance behaviour of taxpayers. The framework could not be adopted totally, but some aspects of economic and psychological factors were adapted and incorporated into this study‘s framework.

The dimensions offered in Fischer et al.‘s model are viewed as not totally suitable for the development of this research framework, due to the fact that factors such as demographic variables, attitudes and perception, noncompliance opportunities will not be considered in this study. The reason was because these factors have been extensively studied in the literature and the relationship between these factors has been established in the context of Nigerian environment (e.g., Alabede, 2012; Atawodi & Ojeka, 2012; Aronmwan, Imobhio & Izedonmi, 2015; Modugu & Anyaduba, 2014; Oladipupo & Obazee, 2016). For instance, Alabede et al. only

studied the salaried income earners of the Federal Capital Territory Abuja. Their study only concentrated in one state and does not looked at the compliance behaviour of SMEs owners/managers, as such lack in scope to make a reasonable generalisation. Likewise, Atawodi and Ojeka (2012) who actually studied the tax compliance behaviour of SMEs taxpayers, their study only covered one local government area (Zaria) in Kaduna State Nigeria, hence the study is limited in scope and the findings of a single local government cannot help in revealing the puzzle surrounding tax compliance behaviour of SMEs taxpayers in Nigeria.

However, the model provided some variables that will be used and that were adopted and incorporated into the proposed new framework. These variables include: tax rate, the probability of detection, and tax complexity. Hence, like any other model of tax compliance (for instance, Manaf, 2004; Mustafa, 1997; Tayib, 1998; Chau & Leung, 2009; Alabede, 2012), Fischer‘s model also did not incorporate many other factors of tax compliance behavior. Despite its shortcomings, the model serves as the basis for this study, but was expanded with two exogenous constructs (WFFC and FSR), and two moderating constructs (PSO and perceived corruption). Therefore, Fischer et al.‘s (1992) was adapted as the basis for the foundation of this study as shown below in Figure 3.1.



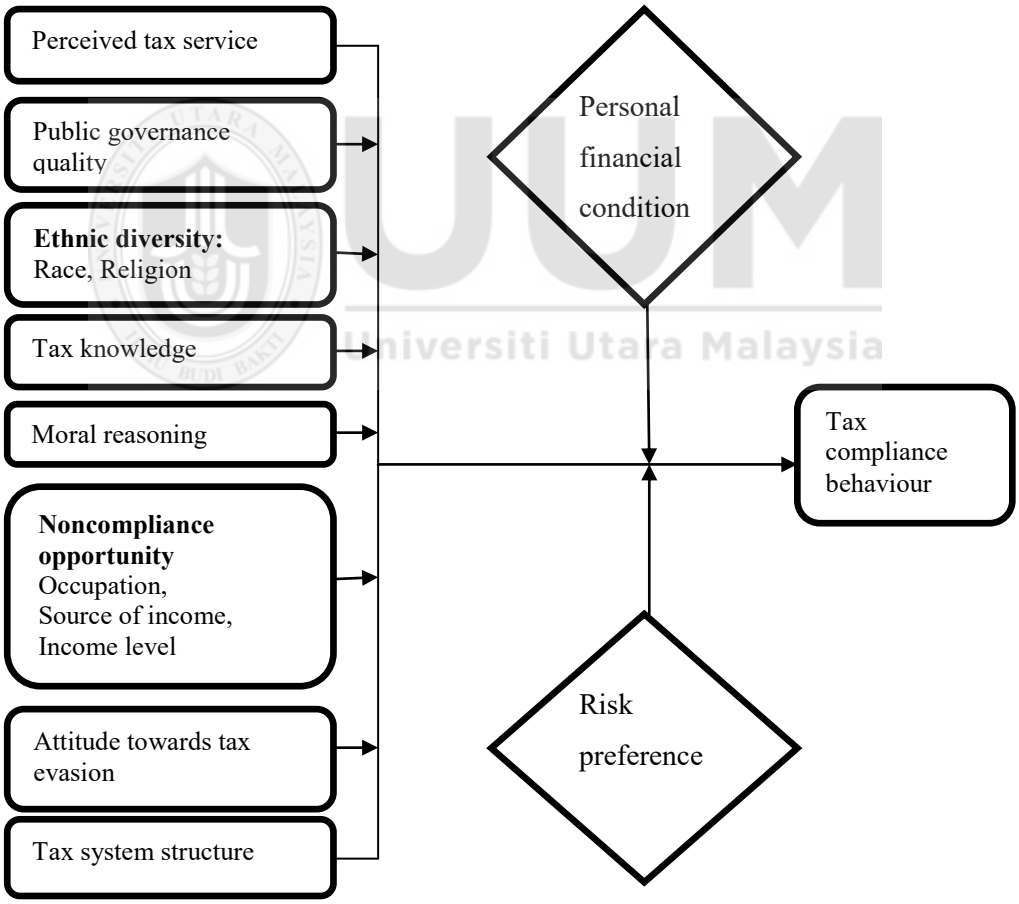
Source: Adapted from C.M. Fischer (1992), *Perceived detection probability and taxpayer compliance: A conceptual and empirical examination* (p. 33), Ann Arbour: UMI.

Figure 3. 1. Fischer's Model of Tax Compliance Behaviour.

3.11.2 Personal Income Based Tax Compliance Model

Supporting the model of this study, Alabede (2012) conducted one of the most recent studies on the tax compliance behaviour of personal income taxpayers in the FCT Abuja, Nigeria. The researchers also made use of the Fischer et al.'s (1992) model as a reference point for their model. The study introduced the three new variables of PGQ, risk preference, and personal financial condition as independent and moderating variables to the tax compliance model based on the objectives of their research. This model provided a variable that was used in the current study. The variable was PGQ, and the authors suggested a further re-examination in order to reconfirm their previous findings. The Alabede et al. model was adapted in this study, because is the first model to be deployed in the Nigerian environment, which

the current study was built upon in other to unveil other factors capable of influencing the tax compliance behaviour of the taxpayers. This was necessitated because even in other countries, in Malaysia for instance, Manaf (2004) made reference and adapted some of the variables that were earlier studied by Mustafa (1997) being the pioneering tax compliance study even though she made reference to Fischer's et al. (1992) model. As such this current study follow suit. Hence, like other models of tax compliance, the Alabede's model also did not incorporate many other factors of tax compliance. The Alabede et al. (2012) model is shown in Figure 3.2.



Source: Adapted from Alabede (2012), *An investigation of factors influencing taxpayers' compliance behavior: Evidence from Nigeria* (Unpublished PhD Thesis), Sintok: Universiti Utara Malaysia.

Figure 3.2. Alabede's Personal Income Based Tax Model.

3.12 Other Research Models

Researchers have made reasonable contributions to tax compliance literature, which led to the development of different models in relationship to tax compliance. Some of these models include Allingham and Sandmo‘s A-S model, Wiegel, Hessing, and Elffers‘s social, psychological model, and Lewis‘s revised model. Within the scope of this study that emphasizes the effect of WFFC, FSR, and the importance of PSO, and perceived corruption on the tax compliance behaviour of SME owners/managers, the following models were reviewed.

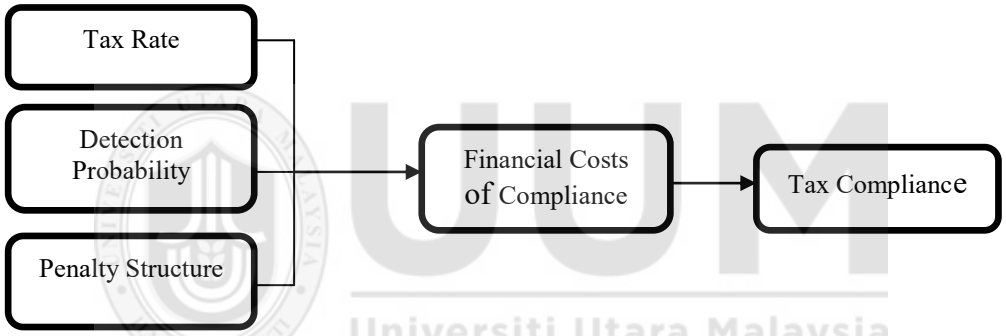
3.12.1 Financial Self Interest Model

The Financial Self-interest Model of Allingham and Sandmo (1972), which is also known as the A-S model, was derived from Becker's (1968) economic of crime approach seminar work. The model was developed on the premise of deterrence theory. Within the framework of the model; tax rate, the probability of detection and the penalty structure are factors of monetary compliance costs influencing taxpayers‘ behaviour in complying with tax obligations.

Fischer et al. (1992) had opined that most empirical studies of taxpayers have shown that numerous factors that may influence tax compliance behaviour, which the financial self-interest model, failed to take into consideration. They further revealed that the relationships among the factors were vague as depicted in the model. The model specifically focuses on economic factors, which are just a few factors that

influence compliance behaviour of taxpayers. Therefore, the coverage of this model is argued to be limited.

However, the model indicates the importance of economic factors, which the current study used as control variables. The model offers a framework linking economic factors to tax compliance. The framework could not be totally adopted because it only focuses on economic factors, thereby undermining the importance of psychological, sociological, and political factors. The financial self-interest model is depicted in Figure 3.3.



Source: Adapted from C.M. Fischer (1992), *Perceived detection probability and taxpayer compliance: A conceptual and empirical examination* (p. 23), Ann Arbor: UMI.

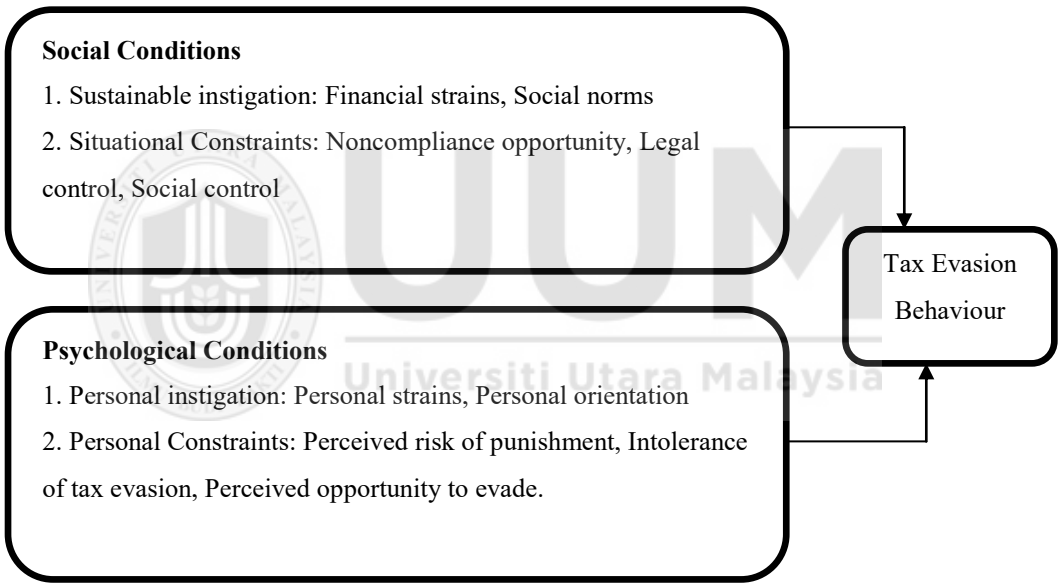
Figure 3.3. Financial Self Interest Model.

3.12.2 Social and Psychological Model

Due to the deficiency of the financial self-interest model, and in an effort to incorporate all other factors in the tax compliance model, Weigel, Hessing and Elffer (1978) developed tax compliance models incorporating both social and psychological factors. As pointed out by the authors, the inclusion of these factors was important because they could influence the taxpayer‘s compliance behaviour.

Thus, they developed the tax compliance model, which incorporates social and psychological factors. The model undermines the importance of economic factors. Therefore, the dimension offered is viewed as not totally suitable for the development of the research framework of this study.

The framework could not be adopted in this current study because of its shortcomings in articulating some elements of economic factors. Weigel et al.'s social and psychological model is shown in Figure 3.4.



Source: Weigel, Hessing and Elffers (1978). Adapted from *Perception of taxation, A comparative study of different population in South Africa*. University of Pretoria.

Figure 3.4. Wiegel's Social and Psychological Model.

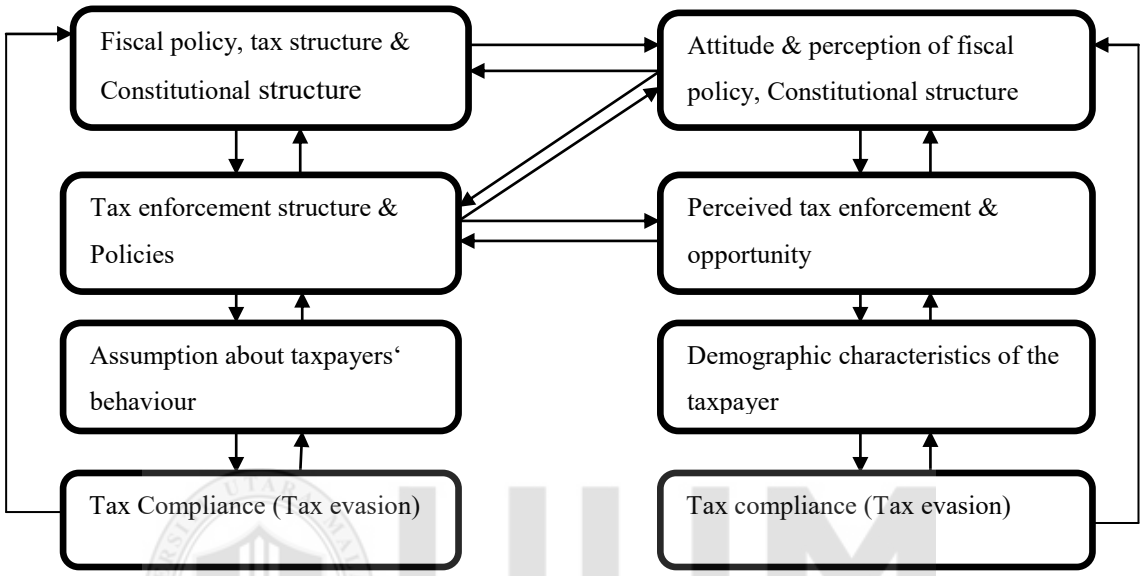
3.12.3 Lewi's Revised Model of Tax Compliance

From all indications, Lewi's model is an upgraded version of Weigel et al.'s (1978) model. The model was structured with two parallel lines taken into consideration, the economic, social and psychological factors of tax compliance. As depicted in the model, each of the parallel lines has four dialogue squares.

The first parallel structure comprises economic and political factors (tax structure and fiscal policy of the government, tax enforcement structure and policy (tax audit, tax penalty), assumptions about taxpayers' behaviour (risk averse) and taxpayer compliance or noncompliance, which is the dependent variable).

The second parallel structure focuses on the social and psychological variables. It contains the taxpayer's attitude and perception (attitudes towards the tax system, government, perceptions about fiscal accountability and the tax system (Fischer, 1993), perceived tax enforcement and opportunity and taxpayer's demographic variables (age, gender, education, and occupation). Perceived tax enforcement and taxpayer's attitude were perceived as influencing each other, while other factors and demographic variables were perceived as interacting with each other. In the model, arrows also link the tax enforcement structure to tax attitudes and perceived tax enforcement, revealing that the actual result influences the attitudes and perception of the taxpayers (Fischer, 1993). As reported in Oberholzer (2007), the contribution of Lewi's model is that it includes variables on government fiscal policy, tax enforcement policy and policy makers' assumptions about taxpayer behaviour.

Nonetheless, Lewi‘s model is not broad enough to capture many other variables. The framework could not be adopted. Figure 3.5 shows Lewi‘s revised model.



Source: Adapted from C.M. Fischer (1993), *Perceived detection probability and taxpayer compliance: A conceptual and empirical examination* (p. 29*)*. Ann Arbor: UMI.

Figure 3.5. Lewi’s Revised Model of Tax Compliance.

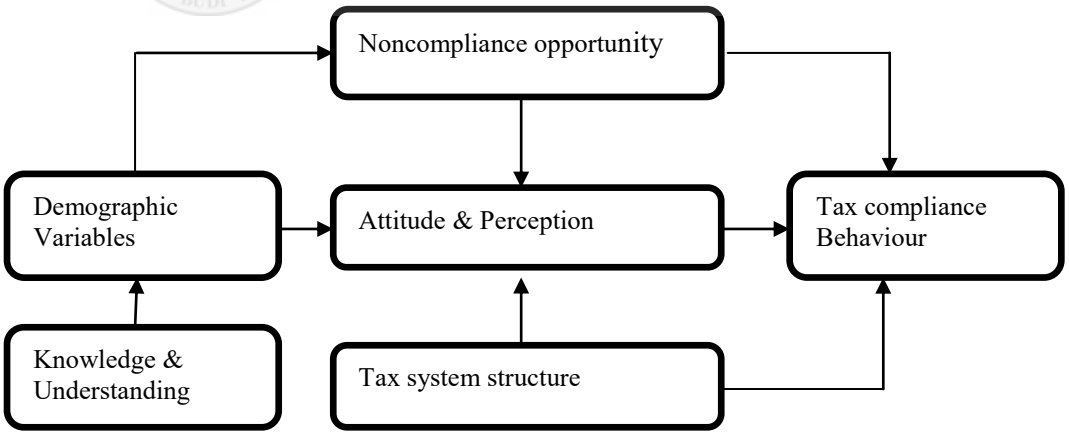
3.13 Expanded Model of Tax Compliance

In order to contribute to the existing knowledge, bearing in mind Fischer's et al.‘s (1992) model, researchers have added one or more variables to the tax compliance model to fulfil their research objectives. Some of the expanded models are discussed below.

3.13.1 Knowledge Based Model

Mustafa (1997) evaluated taxpayers‘ perceptions of the tax administration system under the self-assessment system with respect to tax law fairness and complexity in Malaysia. His study used Fischer‘s model as a basis, but added only knowledge and understanding of the tax system as a new variable. Mustafa claimed that the correct knowledge and understanding of the tax system was one of the fundamental ingredients in enhancing taxpayers‘ compliance behaviour (Mustafa, 1997).

The model provided a variable that has been used in the current study. The variable is knowledge and understanding. The variable is further modified to tax knowledge in order to suit the current study. Mustafa's study only used a single itemized statement in measuring tax knowledge and understanding of the taxpayers, which seems to be one of the limitations of his model. The model is shown in Figure 3.6.

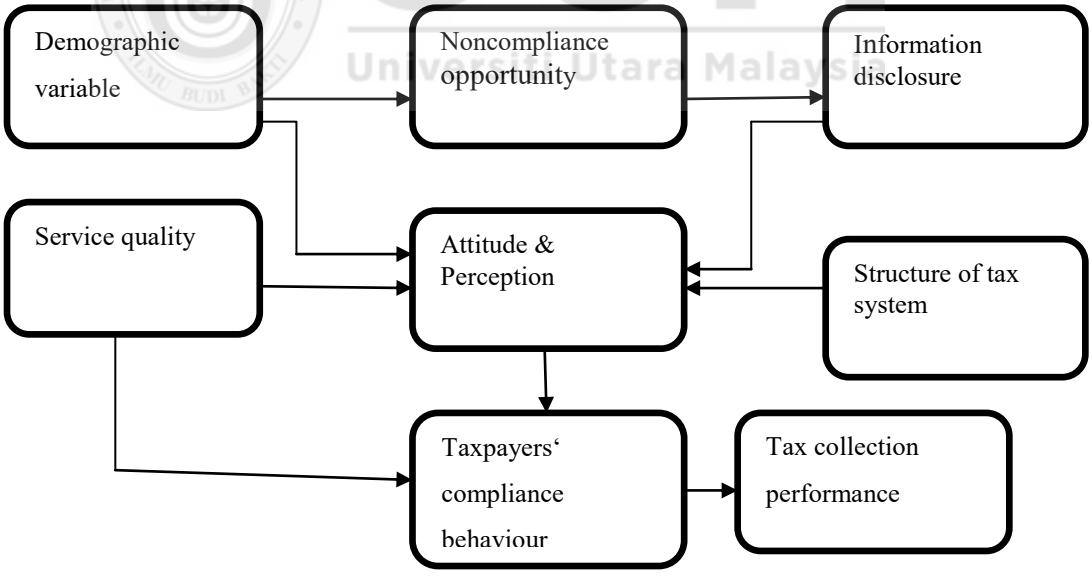


Source: Adapted from M.H. Mustafa (1997), *An evaluation of the Malaysian tax administrative system & taxpayer's perceptions towards assessment system, tax law, fairness, and tax law complexity* (Unpublished PhD Dissertation), Sintok: Universiti Utara Malaysia.

Figure 3.6. Mustafa’s Knowledge Based Model of Tax Compliance.

3.13.2 Local Based Model of Tax Compliance

Tayib (1998) developed a locally based model of tax compliance. His study focuses on the assessment of tax collection in Malaysia. Tayib also adapted and expanded part of the Fischer's (1992) model by incorporating three variables, i.e., quality of service provided by the local government, financial information disclosure, and tax collection performance as the independents and dependent variables respectively. These variables, according to Tayib, depend solely or directly on tax compliance behaviour. The author based his argument on the premise that the quality of public service provided by the local government may have a direct influence on taxpayers' compliance behaviour. As a result, the study failed to use an appropriate quality service model in measuring quality of public service. The model is presented in Figure 3.7.

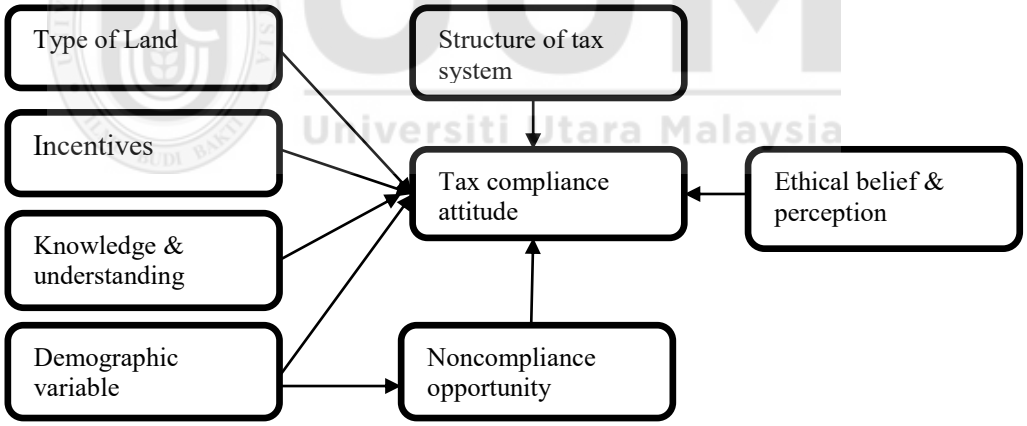


Source: Adapted from M.B. Tayib (1998), *The determinants of assessment tax collection: The Malaysian local authority experience* (p. 108), Cardiff, University of Glamorgan.

Figure 3.7. Tayib's Local Tax Based Model of Compliance Behavior.

3.13.3 Land Based Tax Compliance Model

Manaf (2004) conducted a study of land tax administration and compliance attitudes in Malaysia. The study, which was also based on Fischer's model, also extends the work of Mustafa (1997). In relationship to the needs and the objectives of her study, incentives and land type were incorporated into the model as new variables. In addition, the study also added race to the demographic construct in order to capture the resultant effect of culture on the behaviour of land taxpayers. The model provided a variable that will be used in the current study by adapting and incorporating it into the proposed model. The variable is incentives (positive inducement); it is fully adopted without any modifications in order to suit the current study. Manaf's model is shown in Figure 3.8.

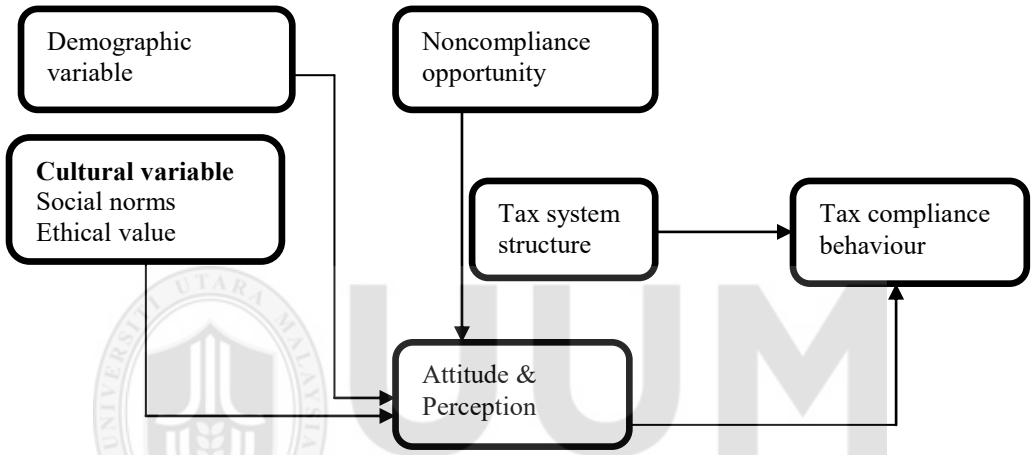


Source: Adapted from N.A. Manaf (2004), *Land tax administration and compliance attitude in Malaysia*. (Unpublished doctoral thesis), Nottingham: University of Nottingham.

Figure 3.8. Manaf's Land Based Tax Model.

3.13.4 Culture Based Tax Compliance Model

Chau and Leung (2009) also expanded Fischer's model as the basis for developing their framework. The study added culture as a new variable, which was based on a modification of Fischer's model. Chau and Leung (2009) argued that tax compliance behaviour might be influenced by environmental factors such as culture. Chau and Leung‘s model is presented in Figure 3.9.

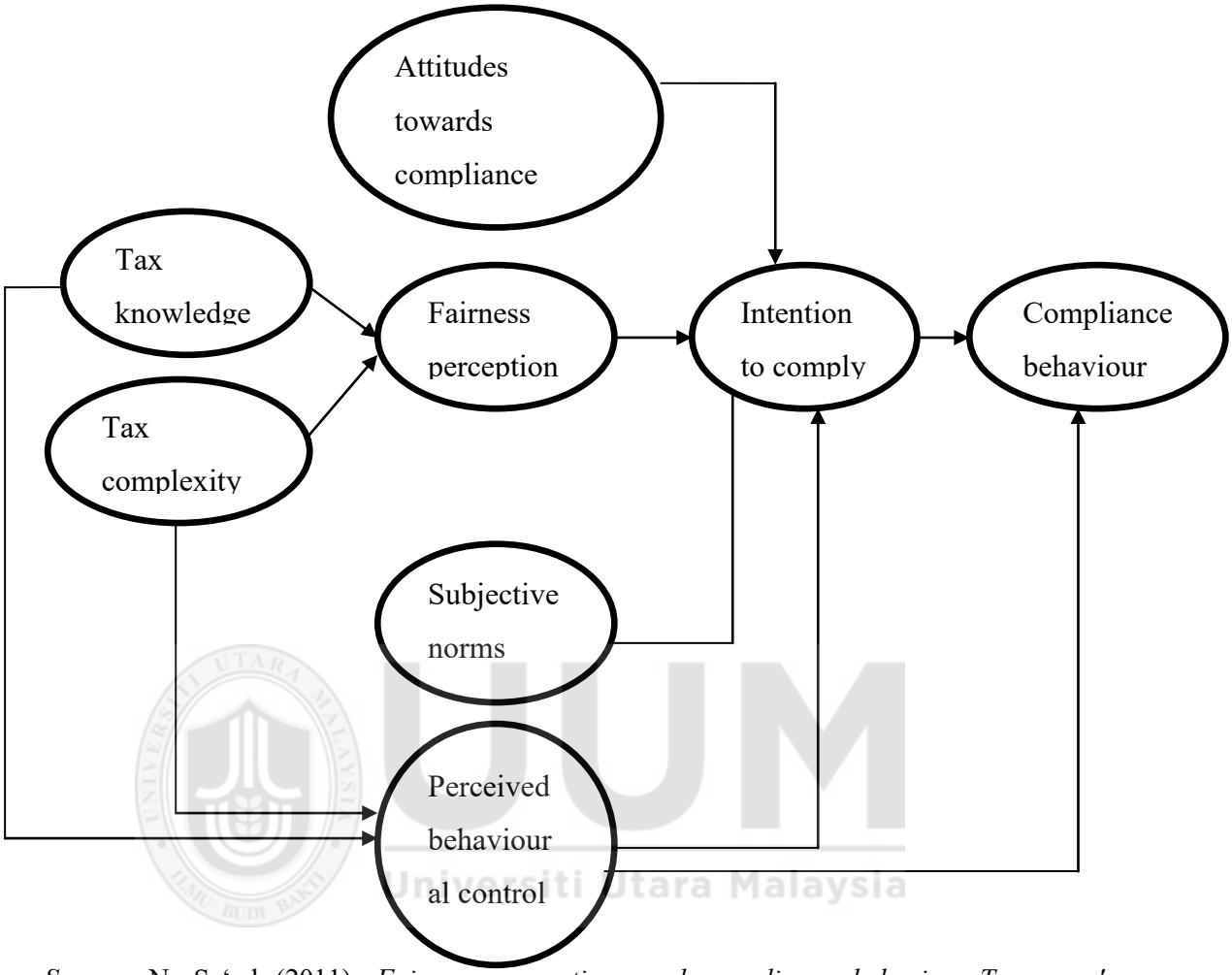


Source: Adopted from C. Chau & P. Lenug (2009), A critical review of Fischer's tax compliance model: A research synthesis*, Journal of Accounting & Taxation, 1*(2)*,* 34-40.

Figure 3.9. Chan and Leung’s Culture Based Model of Tax Compliance.

3.13.5 Fairness Perception Based Tax Compliance Model

Saad (2011) also expanded the tax compliance model by focusing on the fairness perception, which served as a moderating factor between tax knowledge, tax complexity and tax compliance behaviour. The model attempted to confirm the various dimensions of fairness that are important to taxpayers‘ judgments. It is the first model to combine all the dimension of fairness (Saad, 2011). The fairness perception tax compliance model is shown in Figure 3.10.



Source: N. Sa'ad (2011), *Fairness perceptions and compliance behavior: Taxpayers' judgment in self-assessment environments* (Unpublished PHD thesis), Christchurch, New Zealand. University of Canterbury.

Figure 3.10. Saad's Fairness Perception Tax Model.

3.14 Summary of Tax Compliance Models

Table 3.5 shows the summary of the reviewed tax compliance models.

Table 3.5
Summary of Tax Compliance Models

Researcher(s)	Model	Variable(s)
Becker (1968)	Financial self-interest model	Tax rate, detection probability, penalty rate & financial cost of compliance
Allingham & Sandmo (1972)	A-S model	Tax rate, Detection probability, Penalty & income
Weigel, Hessing & Elffer (1978)	Social and Psychological model	**Social conditions** Financial strain, Social norms, Opportunity, Legal control, Social norm **Psychological condition** Personal strains, Personal orientation, Perceived opportunity, Perceived risk of punishment, Intolerance of tax evasion
Fischer, Wartick, & Mark (1992)	Expanded model	**Demographic factors** Gender, age, & education **Noncompliance opportunities** Income source, income level, & occupation **Attitudes and Perception** Ethic & perceived fairness of tax system, peer influence **Tax system structure** Complexity of tax system, IRS contact, tax rate, Detection probability, & penalty
Tayib (1998)	Expanded model (**Local taxation based)**	Noncompliance opportunity, Attitude & perception, Tax system structure, **Quality of service,** **Financial information** **Disclosure, Tax collection performance**

Table 3.5 (continued)

Researcher(s)	Model	Variable(s)
Manaf (2004)	Expanded model (**Land taxation based**)	Demographic factors (**Race**), Attitude & perception, Tax system structure **Incentive,** **Land location/type**
Chau & Leung (2009)	Expanded model (**Culture**)	Demographic factors, Noncompliance opportunities, Attitude & perception, Tax system structure, **Culture**
Saad (2011)	Expanded model (**Fairness compliance tax model)**	Attitudes towards compliance, Tax knowledge, Tax complexity, Subjective norm, Perceived behavioral, Intention to comply, **Fairness perception**
Alabede, J.O. (2012)	Expanded model (**Personal income based tax model**)	**Risk preference,** **Personal financial condition,** Perceived tax service, Public governance quality, Ethnic diversity: (Race, Religion) Tax knowledge, Moral reasoning, Noncompliance opportunity: Occupation, Source of income, Income level Attitude towards tax evasion, Tax system structure
Mustafa (1997)	Expanded model (**Knowledge Based Tax Model**)	Demographic variables, **Knowledge and understanding**, Non-compliance opportunity, Attitude and perception, Tax system structure

Source: Compiled by the author (2014).

3.15 Summary

This chapter presented relevant theories and literature in relationship to the study. It reviewed the concept of SMEs from an international perspective, cutting across

developed to developing countries, which were further narrowed down to the Nigerian scenario. Furthermore, the study also explored the concept of tax compliance and noncompliance of taxpayer from various perspectives. In addition, the underpinning theory and other theories supported by the study were also discussed. The review conducted in these theories revealed that no single theory has the capability to explain the factors that affect tax compliance behavior of SME owners/managers. Researchers employed theories from different disciplines such as psychology, sociology, anthropology and other fields in order to achieve their research objectives in relationship to tax compliance research.

Consequently, a review of past studies on the factors influencing tax compliance behaviour of SMEs owners/managers was provided. In reviewing the factors influencing tax compliance and noncompliance, attention was particularly focused on WFFC, FSR, PSO and perceived corruption. Earlier studies have identified that economic and psychological factors are significant in explaining taxpayer compliance behaviour.

Similarly, in order to gain an in-depth understanding into the phenomenon of tax compliance studies, previous research was examined. The models of several researchers were reviewed with an emphasis on Fischer‘s model, which provided a basis for the theoretical model of this study. The proposed model of this study was developed based on the expanded model of Fischer et al. (1992) and supported with the Alabede‘s (2012) personal income tax model with four additional variables

discussed in the next chapter so as to identify the factors that will relate to tax compliance behaviour of SME owners/managers. As revealed from the review of the past models, a single model does not have the capability to incorporate all the factors that may influence tax compliance. Based on these limitations, the need for an expansion of the model to incorporate new factors is recommended in the future. The next chapter outlines the research framework and hypotheses development.

CHAPTER FOUR
RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

4.1 Introduction

The previous chapter dealt with the related literature, tax compliance theories and a review of other researcher's tax compliance models. This chapter focuses on the detailed development and presentation of the research framework. This discussion is followed by the development of the research hypotheses. The chapter ends with a summary.

4.2 The Research Theoretical Framework

In this study, the framework comprises Work - Family Financial Commitment, Fuel Subsidy Removal, tax rates, the probability of detection, tax complexity, incentives (positive inducements), tax knowledge, Public Governance Quality, Perceived Service Orientation, perceived corruption, and tax compliance behaviour that were sourced from the literature.

To meet the contextual needs of Nigeria and other developing countries, the tax compliance model was expanded with Work - Family Financial Commitment and Fuel Subsidy Removal as independent variables, while Perceived Service Orientation and perceived corruption were incorporated into the model as moderating variables as suggested in the literature (Alabede et al., 2011; Alm, 2013;

Stefura, 2011, 2012). That is because WFFC may influence the perceptions of taxpayers in relationship to their respective compliance behaviours.

Nzotta (2007) and Odinkonigbo (2009) affirmed that poverty and extended family burdens including, for instance, financial commitment, may be one of the causes of the low level of tax compliance in Nigeria. This burden may result in many conflicts that might affect the ability of individuals to fulfil their business obligations, such as tax payments. Wickens (1996) also said that stress, which manifests itself in attention tunnelling and other WFFC issues, might create additional demands with respect to financial obligations to meet family pressure, which, in turn, may affect the tax payment and compliance behaviour of taxpayers.

The Work Family Spillover Theory (WFST) states that either family or work systems might produce spillover effects or influences on each other (Staines, 1980). The theory further proposes that satisfaction or dissatisfaction in one area of life might extend to the other domain in that financial commitment in the family might affect individual financial business obligations such as tax payments or that individual business obligations might affect the family (George & Brief, 1990). Therefore, excess work may have an effect on the family (Kelly & Voydanoff, 1985).

Furthermore, FSR may also influence the perceptions of the Nigerian taxpayers in shaping their compliance behaviours. Taiwo (2012) reported that FSR in Nigeria will

be transmitted through higher costs, for instance, the costs of production, raw materials, overheads, and transportation cost, which may affect taxpayers' compliance behaviour and companies as well as individuals. Because the transportation system in Nigeria is in a sorry state, private transport owners are free to fix whatever price they so wish to the general public. By its very nature and because the hardship experienced by fuel subsidy removal is mostly attributed to the masses, the result may be a compounding effect that may be ultimately shifted to the SME owners. This is due to the fact that owners rely on the commercial transportation system to transport their raw materials and to dispatch their finished products to wholesalers and retailers.

Odemero (2013) also affirmed that FSR was assumed to translate to a general increase in the cost of business operations including overhead costs, production costs and costs of compliance, which may, in turn, affect tax compliance behaviour. The cost of business operations is a key factor that consumes business resources, especially when the business is in its early stage of development. To that end, taxpayers' vis-á-vis SME owners will always be subjected to many pressures in order to balance expenditures on raw materials, rentage, and staff salaries mainly because the prices of every aspect of their business were affected by the resultant effect of fuel subsidy withdrawal.

The social exchange theory supports these assertions, stating, that a relationship is absolutely built on the basis of costs and benefits, and for a business to continue or

survive, it must be beneficial to all parties (Blau, 1964). Fundamentally, the revenue derived from the fuel subsidy removal was supposed to be used to finance infrastructural facilities, which by extension might encourage taxpayer to keep the covenant of reciprocity. Conversely, in a situation in which such a contract is void, a taxpayer might not be encouraged to abide by the covenant of reciprocity, adversely influencing his/her compliance behaviour. On the basis of the above analogy and logic, WFFC, FSR and tax compliance behaviour are expected to show some reasonable level of correlation.

In addition, the direct relationship between tax rates, the probability of detection, tax complexity, incentives, tax knowledge, PGQ, and tax compliance behaviour have been established in the literature (e.g., Alabede et al., 2012; Fischer, 1993; Gangl et al., 2013; Manaf, 2004; Mustafa, 1997; Richardson, 2006; Saad, 2014; Tayib, 1998), even though some of these variables were borrowed from the Fischer et al.'s (1992) and Alabede's (2012) model which served as a basis for the model in this current study. Higher tax rates may have negative connotations on the tax compliance behaviours of taxpayers. Aligning with Economic Deterrence Theory (EDT), an increase in tax rates will have corresponding negative effects on compliance levels (Allingham & Sandmo, 1972).

Furthermore, several tax compliance studies (for instance, Mustafa, 1997; Tayip, 1998, Manaf, 2004, and Alabede et al., 2012) have resorted to relying on using Economic Deterrence Theory (EDT) which is said to be a well-studied model and it

has been found hugely successful in describing and predicting behavior of taxpayers in different contextual setup. Therefore, the authors suggested that the model is in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in the compliance behavior of the taxpayers after the theory s current variables have been taken into account. In the theoretical framework as depicted in (Figure 4.1) of this study, underpinned with the theory of EDT, the tax rates and probability of detection are proposed to influence the behavior of the taxpayers.

Similarly, equity theory has been used to explain the complexity of the tax system by some researchers (Fjeldstad, Schulz-Herzenberg, & Sjursen, 2012). Equity theory suggests that individuals will be in a position to comply with certain rules or standards, only if they perceive such rules to be impartial (McKerchar & Evans, 2009). Hence, the more complex the tax system is, the more inequity the taxpayers perceive in the system. Furthermore, social exchange theory has been identified as being suitable in aligning the relationships among incentives, PGQ and the compliance behaviour of the taxpayers (Alabede et al., 2011; Manaf, 2004).

Therefore, according to Blau (1964) social exchange theory suggests that people are always psychologically indebted and hence compelled to return the material or other benefits they have received from the person who helped them. According to Kelmans (1958), the social influence theory states that behaviour is one of the most important ingredients influenced by others in the environment either intentionally or

otherwise. When incentives and public goods and services are provided to the taxpayers, they will, in turn, reciprocate the gesture in the form of tax payments. In short, all these constructs were further tested in the context of the developing country of Nigeria for the purpose of validating the new model.

The effects of PSO and perceived corruption as they moderate the compliance behaviour of taxpayers are also of the utmost significance. This is interesting given Nigeria's quality of service delivery and service orientation in the country's public settings as well as tax offices, which fall below the reported minimum acceptable standard (Ewepu, 2010; Thomson, 2004). For example, Gangl et al. (2013) reiterated that taxpayers who perceived service orientation to be greater would be more willing to pay their taxes. They further affirmed that service orientation was seen as one of the fundamental elements of building trust as well as of strengthening and enhancing the compliance behaviour of the taxpayers. Service orientation can be in the form of educating taxpayers, the provision of service either in the form of phone advice, the simplification of the tax law and procedure and other ancillary services, especially for taxpayers who are willing to pay their taxes, but have challenges with the provisions of the law (Alm & Torgler, 2011).

Social influence theory supports the above discussion and states that individuals learn from each other as well as through observation, imitation, and orientations, and explains human behaviour in relationship to the continuous exchange interaction between cognitive and behavioural environmental influences. Hogg and Vaughan

(2005) were of the view that social influence could be aligned to conformity, compliance and obedience, which, according to the authors, could be influenced by the persuasive ways individuals use in seeking consent and the power that individuals perceived to have at their disposal. The ability to exert influence by an individual or authority is regarded as power in relationship to this study.

However, Madueke (2008) reported that the inadequate control mechanism with regards to corruption and the rule of law poses a general problem in Nigeria. Similarly, Nzotta (1995) also affirmed that corruption is manifest throughout the legal system of the country, such that conviction of tax offenders has become very difficult despite the appropriate mechanisms put in place by the government to curb the extremely high cases of tax evasion and avoidance. A low level of compliance still persists in the respective states (Shekari, 2014; Tanko, 2014). On the other hand, Rahmani and Fallahi (2012) have inferred that more democracy and less corruption would increase both tax compliance and the willingness to pay taxes. This assertion is supported by the social exchange theory.

The theory states that, relationship is absolutely built on the basis of trust, and, for it to continue or survive, the relationship must be beneficial to all parties. Therefore, if the taxpayers perceive the government as being corrupt and that even the least amount of tax paid is not judiciously utilized in the form of service provision, taxpayers will feel being cheated, which in turn may affect their compliance behaviour.

In general, this research model adapted the well-established Fischer‘s et al., (1992) model, even though not all the variables in the model were adopted. Nonetheless, the model indicates the importance of noneconomic factors in relationship to tax compliance, about which the current study is concerned. The model also offers a framework linking most of the important variables to tax compliance, with an emphasis on the compliance behaviour of taxpayers. The framework could not be adopted totally, but some aspects of economic and psychological factors were adapted and incorporated into this study‘s framework.

The dimensions offered in Fischer et al.‘s model were viewed as not totally suitable for the development of this research framework, due to the fact that factors such as demographic variables, attitudes and perception, noncompliance opportunities will not be considered in this study. The reason was because these factors have been extensively studied in the literature and the relationship between these factors has been established in the context of Nigerian environment (e.g., Alabede, 2012; Aronmwan, Imobhio & Izedonmi, 2015; Atawodi & Ojeka, 2012, Modugu & Anyaduba, 2014; Oladipupo & Obazee, 2016). However, in the Fischer‘s model the researchers adopted and incorporated some constructs into the proposed new framework. These variables include: tax rates, the probability of detection, and tax complexity. Hence, like any other model of tax compliance (for instance, Manaf, 2004; Mustafa, 1997; Tayib, 1998; Chau & Leung, 2009; Alabede, 2012), Fischer‘s model also did not incorporate many other factors of tax compliance behaviour. Furthermore, both the economic and behavioural approaches have contributed to the

understanding of tax compliance behavior (Hasseldine & Bebbington, 1991). A study designed on a blend of both approaches seems most appropriate as a single approach is not likely to be totally effective in explaining the compliance behaviour of taxpayers. In addition, examining taxpayer behaviour is complex and challenging as the relevant literature emanates from a variety of disciplines including economics, psychology, and sociology (McKerchar, Hodgson & Datt, 2008). However, despite some limitations of the Fischer's model, it served as the basis for this study, but was expanded with two exogenous constructs (WFFC and FSR), and two moderating constructs (PSO and perceived corruption). Therefore, Fischer et al.'s (1992) was adapted as the basis for the foundation of this study. Hence, the model of this study is shown in Figure 4.1.

As shown in Figure 4.1, a critical review of the relevant variables in connection with the research questions and research objectives would provide possible insights for developing the framework of this study. Therefore, establishing the relationship that exists among these variables is necessary. As shown in Figure 4.1, the framework identifies eleven constructs in the research model and establishes the relationships that exist between these constructs.

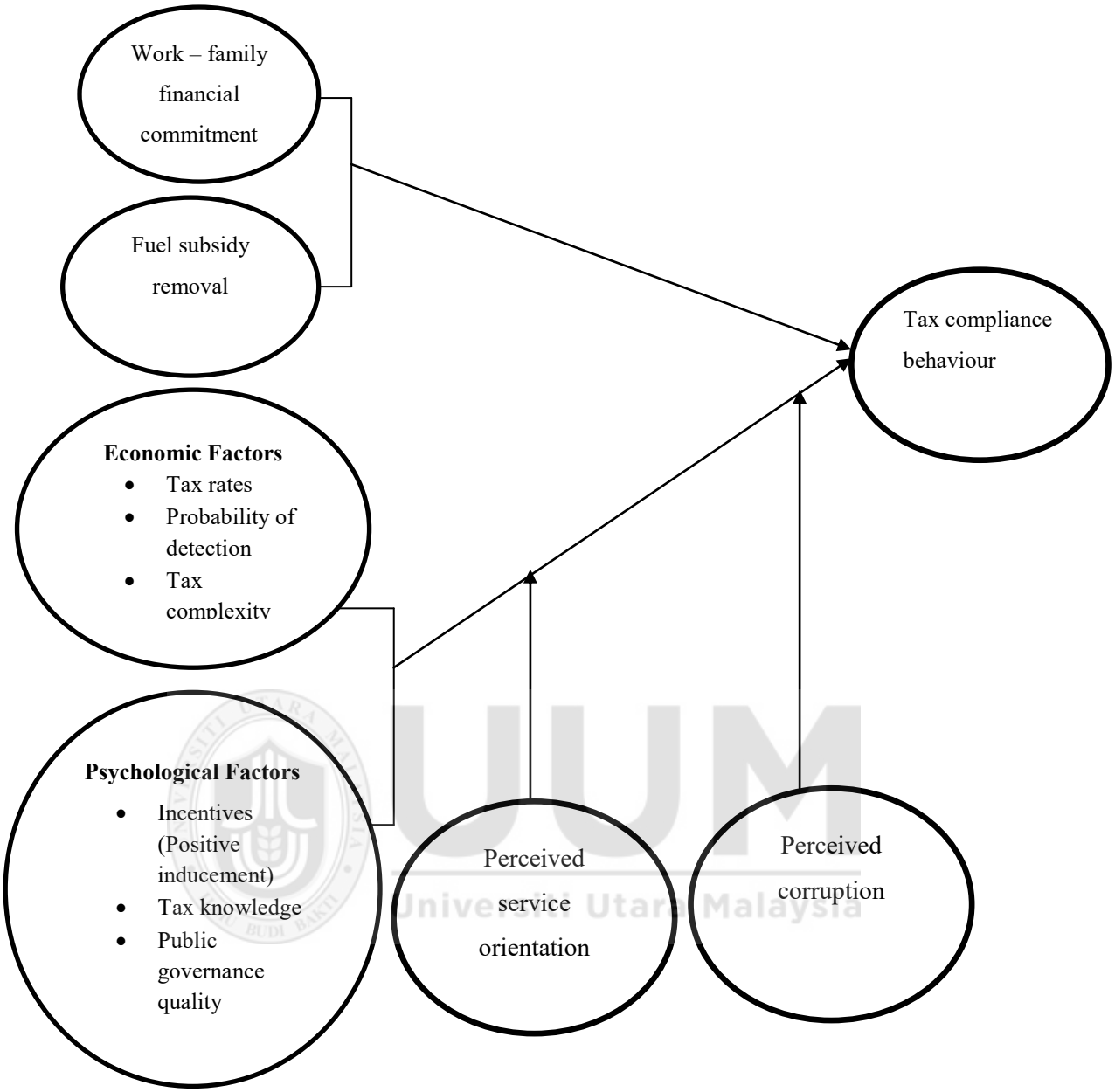


Figure 4.1. Proposed Research Framework.

The framework has further indicated that tax compliance behaviour is the endogenous construct, whereas WFFC, FSR, tax rates, the probability of detection, tax complexity, incentives (positive inducement), tax knowledge, and PGQ are the exogenous constructs. This study is primarily concerned with the direct relationship (WFFC and FSR) and the indirect relationship (the moderating role of PSO and

perceived corruption), which will be tested in the current framework. Even though the direct relationships related to tax rate, the probability of detection, tax complexity, incentives, tax knowledge, and the PGQ have been tested before now, but they were subjected to further tests based on the suggestion of Khlif and Achek (2015) for the need of accounting for previous significant determinants before exploring new ones' in order to further re-establish their relationships in another environment and in relationship to SMEs.

Moreover, the framework also shows two lines of relationships among the variables. First, it establishes direct relationships between the exogenous variables of WFC, FSR and the endogenous variable, tax compliance behaviour. Second, the indirect relationship between the exogenous variables (tax rate, the probability of detection, tax complexity, incentives (positive inducement), tax knowledge, and PGQ), and the endogenous variable (tax compliance behaviour) in the presence of PSO and perceived corruption is also shown in the framework. These variables served as potential moderators in this study. Therefore, the influence of WFFC and FSR on tax compliance behaviour is to be examined. For instance, if the influence of either WFFC or FSR leads to an increase in tax compliance behaviour, then they will be considered to have a positive influence, and, if the influence of WFFC or FSR leads to a low level of tax compliance, they will be said to influence tax compliance negatively.

On this note, SME owners/managers must show some lower or higher level of WFFC or FSR in order to affect the tax compliance behaviour either positively or negatively. Moreover, the presence of PSO and perceived corruption has been outlined as another avenue for moderators. A moderator is normally perceived as an exogenous variable that can influence the strength and/or the direction of the relationship between another exogenous variable and the endogenous variable (Wilken, Jacob, & Prime, 2013). A moderator is further seen as a variable that alters the association between the exogenous and endogenous variable (Sekaran & Bougie, 2010). Hence, a moderating variable may: 1) change the strength of a relationship and/or 2) change the form of the relationship. Therefore, the inclusion of PSO and perceived corruption as moderators in the research framework is assumed to have the ability to improve or predict the relationship between economic factors and psychological factors on tax compliance behaviour of SME owners/managers.

Within the purview of this study, the expectation is that WFFC, and FSR would negatively and significantly affect tax compliance behaviour. A possibility also exists that the two exogenous variables would influence tax compliance behaviour positively. For instance, in countries in which the WFFC is very low (i.e., the family obligations are very low) and where the resources derived from the FSR are further re-invested in the critical areas, this will go a long way in aiding SME owners to boost their businesses which, in turn, may influence their tax compliance behaviour positively. If the opposite is true, then their tax compliance behaviour may be influenced negatively.

Moreover, the presence of PSO and perceived corruption is posted to affect the strength of the relationship either positively or negatively with respect to economic factors, psychological factors and tax compliance behaviour. For instance, if proper services in the form of orientation are not adequately provided by the relevant tax authorities, likelihood exists of a very low compliance. If on the other hand, the services in the form of orientation are timely and adequately provided by the relevant tax authorities, such an SME owner/manager is bound to achieve high performance, which invariably will lead to a high compliance level.

In the same vein, the presence of perceived corruption in the relationship between these factors and tax compliance reveals that corruption influences tax compliance and thus affects the compliance behaviour of an SME owner/manager either in a positive or negative manner as the case may be. Thus, the higher the corruption perceived by the taxpayers, the lower the compliance, and the lower the corruption perceived by the taxpayers, the higher the compliance.

Thus, the framework suggested the need for incorporating WFFC, FSR and the moderating role of PSO and perceived corruption based on the above argument as WFFC, FSR, PSO and perceived corruption are capable of influencing the tax compliance behaviour of SME owners/managers. Meanwhile, in the context of this study, the expectation is that all these factors will influence tax compliance behaviour. The possibility exists that these factors could positively or negatively

affect tax compliance. In countries with weak regulatory authorities, high rates of nepotism and poverty, low levels of technical knowledge and professional incompetency, bribery, and environmental issues such as political instability may hinder the tax compliance performance of SMEs. In contrast, if the environment is favourable, the policies that will aid or improve business activities of SMEs are provided by the relevant tax authorities or the government, SMEs perform very well, and, by extension, compliance may be increased.

These relationships will be examined in the presence of PSO and perceived corruption as the moderating effect. Hence, this suggests the direct significant effect of WFFC and FSR, as well as the moderating role of PSO and perceived corruption in the relationship between economic factors, psychological factors, and tax compliance behaviour. As such, the relationship between these factors and tax compliance behaviour will either be strengthened or weakened by these moderators. Thus, PSO and perceived corruption may moderate the resultant effects of the relationship between economic factors, psychological factors, and tax compliance behaviour. The inclusion of service-oriented programs and the restructuring the tax system in an effort to reduce the magnitude of corruption would be a welcome development, so as to improve the level of tax compliance. In a nutshell, consistent with the work family spillover theory, social exchange theory, economic deterrence theory, social influence theory, and equity theory, the current model of tax compliance comprises eleven constructs; Figure 4.1 demonstrates the postulated relationships.

4.3 Hypotheses Development

With the help of literature and other theoretical justifications, the hypotheses for this study were formulated for empirical testing and validation. This study has eleven major variables, namely, WFFC, FSR, tax rate, the probability of detection, tax complexity, incentives (positive inducement), tax knowledge, PGQ, as exogenous variables and PSO and perceived corruption as the moderating variables, and tax compliance behaviour as the endogenous variable.

Testing the proposed model in the real world is essential. In establishing this objective, eight direct and twelve sub-hypotheses (moderating) were developed, making a total of twenty hypotheses to assess the validity of the model and the strength of the proposed relationships.

4.3.1 The Relationship between WFFC and Tax Compliance

Theoretically, satisfaction or dissatisfaction in one domain of the work-family life balance may extend to other domains. That is, financial commitment in the family may affect individual business obligations such as tax payments and business-related problems might impact family life. Individuals with more family commitment would be considered as having more work-to-family financial obligations than those with little or no family pressures. In this regard, a larger family burden in terms of meeting the needs of the immediate or extended family would affect a person‘s business resources in dealing with their tax obligations, including whether to comply

or not to comply. Hence, in a situation in which the WFFC is perceived to be high, attention to organizational obligations, for instance tax compliance and the perceived ability to devote discretionary energy to tax payment and other organizational obligations may not be a conscious priority. On the basis of the above argument and drawing from the work family spillover theory, the following hypothesis is formulated:

H1: There is a significant relationship between WFFC and tax compliance behaviour.

4.3.2 The Relationship between FSR and Tax Compliance

According to Blau (1964), social exchange theory suggests that individuals in any commitment always direct their reciprocation or symbiotic efforts directly to the sources of any rewards they receive. For instance, if taxpayers perceive that the government is being fair by re - investing the proceeds derived from the FSR, their behaviour towards tax compliance may change positively. On the contrary, if the taxpayers perceive that the government is not being fair and not reinvesting the proceeds derived from the FSR, the level of compliance may be affected negatively. Therefore, SMEs taxpayers who experience more hardship in terms of trying to run their respective businesses may perceive the government as being responsible for causing the misery. As a consequence, their compliance behaviour may be affected negatively. This line of argument is consistent with the tenets of social exchange theory and its relationship with FSR and tax compliance behaviour. Hence, the following hypothesis is hypothesised:

H2: There is a significant relationship between the fuel subsidy removal and tax compliance behaviour.

4.3.3 The Relationship between Tax Rates and Tax Compliance in the Presence of PSO and Perceived Corruption

Previous studies on the relationship between tax rates and tax compliance show that an increase in the tax rates influences tax compliance. Some studies have shown that an increase in tax rates increased tax compliance (Allingham & Sandmo, 1972; Alm, Mcclelland, & Schulze, 1992; 1995; Hai & See, 2011; Yitzhaki, 1974). These studies suggested that a resultant increase in tax rates leads to a positive effect on tax compliance, such that an increase in tax rate makes taxpayers more truthful in declaring their income. Conversely, Clotfelter (1983), Pommerehne and Weck-Hannemann, (1996), Porcano (1988), and Slemrod (1985) claimed that increasing the tax rate led to a decrease in the level of compliance. Consistent with this, Chau and Leung (2009), and Mas'ud et al. (2014) also revealed a negative relationship between tax rates and tax compliance. More evidence has also revealed that a high tax rate was positively related to tax evasion as well as negatively related to tax compliance (Ali et al., 2001; Christian & Gupta, 1993, Freire-Seren & Panades, 2013; Modugu et al., 2012; Richardson, 2006). Thus, while much literature has shown that a higher tax rate was positively related to tax compliance while others have shown a negative and no relationship with tax compliance.

Perceived service orientation and perceived corruption may moderate the relationship between tax rates and tax compliance behaviour. As stated in Gangl et al. (2013), taxpayers who perceive a greater service orientation will be more willing to pay their taxes. Similarly, Kirchler et al. (2008) discovered that the possible way relevant tax authorities could enhance compliance was by providing the required services so as to promote mutual and cordial participation, instead of creating a climate of deterrence and distrust which could warrant negative attitudes towards tax payment. The important part of these arguments is that, if both tax authorities and taxpayers see themselves as partners in progress, this shared viewpoint will go a long way in strengthening the relationship between the two parties.

Similarly, the effects of corruption were emphasized in relationship to monitoring measures such as wage incentives and an inefficiently set high tax rate designed to discourage the relevant tax officials from demanding bribes, which, in turn, improved tax compliance and increased revenue. Hence, PSO and perceived corruption could moderate these relationships. Though previous studies have tested the direct relationship existing between tax rates and the compliance behaviour of taxpayers, to this researcher's knowledge such a moderating relationship has yet to be investigated.

Thus, drawing from the economic deterrence theory, social influence theory and social exchange theory, the moderating effect of PSO and perceived corruption are taken into account in the following hypotheses:

H3: There is a significant relationship between tax rates and tax compliance behaviour.

H3a: Perceived service orientation will moderate the relationship between tax rates and tax compliance behaviour.

H3b: Perceived corruption will moderate the relationship between tax rates and tax compliance behaviour.

4.3.4 The Relationship between the Probability of Detection and Tax Compliance in the Presence of PSO and Perceived Corruption

Several researchers have examined the chances of being detected from various perspectives. Carnes and Englebrecht (1995) emphasized perceived detection risk, while the proponents of Allingham and Sandmo's model (1972) as well as the proponent of the Fischer's model, lay more weight on the probability of being detected as being guilty of noncompliance (Bosco & Mittone, 1997).

The perceived risk of being detected has a positive relationship with tax compliance (Carnes & Englebrecht, 1995; Eisenhauer, 2008; Lewis et al., 2009). Thus, when the probability of detection is high, tax compliance may also be high (Alm, 1991). Slemrod et al. (2001 and Young (1994) separately revealed that the probability of being detected was negatively correlated with compliance behaviour. Although these studies all found that the probability of detection was an influential determinant of taxpayer compliance. Slemrod et al. (1988) found the nature of the relationship between detection probability and tax compliance was vague. However, even though

studies linking the probability of detection and tax compliance behaviour were mixed, the detection probability is expected to influence the compliance behaviour of taxpayers either negatively or positively.

Because of these contradicting findings, a promising avenue for research is examining the moderating effects of PSO and perceived corruption on their relationship. As Alm and Torgler (2011) pointed out, if both taxpayers and relevant tax authorities considered themselves to be partners in progress in terms of service provision, then the climate of deterrence and distrust will fail to exist. To support further this viewpoint, Rahmani and Fallahi (2012) also inferred that more democracy and less corruption might increase the willingness and ability to pay tax. Therefore, drawing from social influence theory, social exchange theory, as well as the economic deterrence theory, the following hypotheses are proposed:

H4: There is a significant relationship between the probability of detection and tax compliance behaviour.

H4a: Perceived service orientation will moderate the relationship between the probability of detection and tax compliance behaviour.

H4b: Perceived corruption will moderate the relationship between the probability of detection and tax compliance behaviour.

4.3.5 The Relationship between Tax Complexity and Tax Compliance in the Presence of PSO and Perceived Corruption

Complexity arises when the relevant tax authorities try to improve the equity of the tax system and, at the same time, reduce its ambiguity (McKercher et al., 2005). In relationship to tax compliance, past studies (for example, Cox and Eger, 2006; Gambo et al., 2014; McKerchar, 2003) have discovered a statistically significant negative relationship between tax complexity and tax compliance. Conversely, Kirchler et al. (2006) found a positive relationship between tax complexity and tax compliance. Forest and Sheffrin (2002) failed to discover the influence of complexity on taxpayers' perceptions of fairness and compliance.

Aligning with equity theory, Fjeldstad et al. (2012) stated that, when the tax system is perceived to be complex, taxpayers might question its fairness. Thus, the more complex a tax system is, the more taxpayers perceive inequity in the whole system. Based on this judgment, tax complexity may portray some element of negativity on tax compliance behaviour. This means that, when the tax system is found to be complex or cumbersome, taxpayers may perceive a lack of equity in the system, which may then result in low compliance.

Because the literature has been inconsistent in this regard, the relationship between tax complexity and tax compliance behaviour might be moderated by the affects of PSO and perceived corruption. As a result, as Gangl et al. (2013) pointed out, taxpayers who perceive a greater service orientation will be more willing to pay their taxes. To

reiterate further, Alm et al. (2010) and Eichfelder and Kegels (2010) are of the view that a service-oriented approach will aid in reducing the administrative burdens taxpayers feel, which, in turn, will cut down the costs of compliance. That means that the services being provided by relevant tax authorities could go a long way in reducing the complexity of the tax system. Intrinsically, if a country is also characterized by more democracy and less corruption, tax compliance may improve as well as the willingness to pay taxes (Rahmani & Fallahi, 2012). Hence, drawing from the tenets of equity, social influence and social exchange theories coupled with the above discussion, the following propositions are posited:

H5: There is a significant relationship between tax complexity and tax compliance behaviour.

H5a: Perceived service orientation will moderate the relationship between tax complexity and tax compliance behaviour.

H5b: Perceived corruption will moderate the relationship between tax complexity and tax compliance behaviour.

4.3.6 The Relationship between Incentives (Positive inducement) and Tax Compliance in the Presence of PSO and Perceived Corruption

Quite a number of scholars have pointed out that a good tax system needs to provide taxpayers with the proper incentives. These incentives may be in the form of positive inducements that encourage taxpayers to comply with the relevant tax laws and regulations, as well as negative inducements like penalties or sanctions in situations in which a likelihood of noncompliance exists (Slemrod, 1992; Smith, 1992).

Richardson and Sawyer (2001) were of the view that effective positive reinforcements should be encouraged in all aspects in order to increase compliance behaviour.

In the literature, Harju and Kosonen (2012) pointed that providing better tax incentives will help in boosting the economic activities of entrepreneurs. A direct relationship between positive inducements and tax compliance behaviour has been documented in the literature (e.g., Manaf, 2004). These positive inducements could be in different forms, including polite and helpful services provided by the staff of the relevant tax authority

Thus, the direct effects of positive inducements will be further tested in this study because this variable has witnessed less attention in the literature, especially in the African region. In addition, the affects of PSO and perceived corruption may moderate the relationship between incentives (positive inducement) and tax compliance behaviour. This is because service orientation has been conceived of as the attitudes of being helpful, thoughtful, considerate and cooperative, which may serve as a form of positive inducement so as to encourage compliance (Hogan et al., 1984). Rahmani and Fallahi (2012) reiterated that more democracy and less corruption increases tax compliance and willingness to pay taxes. On the basis of the foregoing discussion and drawing upon the social exchange and social influence theories, the following hypotheses were formulated:

H6: There is a significant relationship between incentives (positive inducement) and tax compliance behaviour.

H6a: Perceived service orientation will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.

H6b: Perceived corruption will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.

4.3.7 The Relationship between Tax knowledge and Tax Compliance in the Presence of PSO and Perceived Corruption

The importance of tax knowledge cannot be underestimated in shaping the compliance behaviour of taxpayers (Eriksen & Fallan, 1996; Fallan, 1999; Mustafa, 1997; Saad, 2014). Hofmann et al. (2008) identified knowledge of taxation as an essential factor in influencing tax compliance. However, no consistent findings relating to tax knowledge and tax compliance behaviour exist in the literature. Previous studies, for example, Kasipillai and Jabbar (2003), Kirchler et al. (2006), Manaf et al. (2005), Milliron (1985), and Palil and Mustapha (2011) have investigated the relationship between tax knowledge and tax compliance. These studies found a positive and significant relationship between tax knowledge and tax compliance irrespective among the respondents. In short, these studies found that higher tax knowledge had a high correlation with compliance rates. Conversely, Dubin and Wilde (1988), McGee et al. (2009), McKerchar (1995), and Ritsema et al. (2003) documented a negative relationship between tax knowledge and taxpayer‘s compliance behaviour.

Theoretically, an individual with high level of good tax knowledge should enhance their behaviours in dealing with their tax obligations. However, the findings with respect to this variable have been mixed. One explanation might be that the effects of PSO and perceived corruption might moderate the influence of taxpayers' knowledge on compliance behaviour. That is because a taxpayer may possess the requisite knowledge of tax, but may not be oriented on the need to pay his/her tax.

Gang et al. (2013) revealed that service orientation was recognized as an important approach in addressing tax noncompliance of taxpayers. Rahmani and Fallahi (2012) also opined that perceived corruption was more significant in influencing the willingness and ability of taxpayers to pay taxes. In line with the above discussion and drawing from the social influence and social exchange theories, the following hypotheses are formulated:

H7: There is a significant relationship between tax knowledge and tax compliance behaviour.

H7b: Perceived service orientation will moderate the relationship between tax knowledge and tax compliance behaviour.

H7c: Perceived corruption will moderate the relationship between tax knowledge and tax compliance behaviour.

4.3.8 The Relationship between PGQ and Tax Compliance in the Presence of PSO and Perceived Corruption

When government provides public services matching the preferences of taxpayers as a result of an exchange for an adequate tax price, taxpayers will be more willing to comply with their tax obligations. In an attempt to relate PGQ and tax compliance behaviour, Alabade et al. (2011), Everest-Philips and Sandall (2009), and Lassen (2003) said that, if the political goods mix that the government provides is determined as being distinct and unique from that which taxpayers prefer, then the attractiveness of the vertical contract between the two parties will start to diminish, which, in turn, could lead to lower tax compliance.

This is because the average rate of compliance is always rated higher when public goods and services are provided to taxpayers. Torgler and Schneider (2009) also noted that the lack of efficient and effective administration of the rule of law might undermine the willingness of the taxpayers to comply with their tax obligations. They related this variable with social exchange theory, which states that individuals in any commitment always direct their reciprocal or symbiotic efforts directly towards the sources of the rewards they have received. Therefore, if taxpayers perceive the government to be fair in providing quality goods and services to the public, the behaviour of those taxpayers towards tax compliance may tend to change positively. Conversely, if taxpayers perceive the government to be unfair in providing quality goods and services to the public, the behaviour of those taxpayers towards tax compliance may tend to change negatively.

Moreover, the effect of PSO and perceived corruption may moderate the relationship between the PGQ and tax compliance behaviour. Therefore, as Braithwaite (2009) opined, the major obligation of the relevant tax authorities is seen as providing relevant service-oriented programs to the taxpayer in order to improve their compliance levels. Thus, if services are adequately supplied to the taxpayers either in the form of orientations or awareness, such provisions will go far in encouraging taxpayers to fulfil their tax obligation. Similarly, Uslaner (2007) also pointed out that corruption in developing countries is far worse than in the developed countries of the West. Such corruption invariably sweeps the government treasury of the desired resources for the execution of public projects and also erodes people's trust in government. This simply means that corruption is a tool that reduces tax revenues as well as tax compliance, which, in return, makes public expenditure policies ineffective for achieving social objectives.

Based on the foregoing discussion and drawing from the social exchange theory as well as the social influence theory, the following hypotheses are formulated:

H8: There is a significant relationship between PGQ and tax compliance behaviour.

H8a: Perceived service orientation will moderate the relationship between PGQ and tax compliance behaviour.

H8b: Perceived corruption will moderate the relationship between PGQ and tax compliance behaviour.

4.4 Summary

This chapter outlined the study's theoretical framework, which is used to investigate the determinants of tax compliance behaviour in relationship to SMEs. This theoretical framework adds to the extant literature of tax compliance as shown in the previous sections. In the context of this study, eight direct and twelve indirect hypotheses have been developed. Table 4.1 presents a summary of the research hypotheses to be tested later.

Table 4.1
Summary of Research Hypotheses

Hypothesis	Statement
H1	There is a significant relationship between work - family financial commitment and tax compliance behaviour.
H2	There is a significant relationship between fuel subsidy removal and tax compliance behaviour
H3	There is a significant relationship between tax rates and tax compliance behaviour
H3a	Perceived service orientation will moderate the relationship between tax rates and tax compliance behaviour.
H3b	Perceived corruption will moderate the relationship between tax rates and tax compliance behaviour.
H4	There is a significant relationship between probability of detection and tax compliance behaviour.
H4a	Perceived service orientation will moderate the relationship between the probability of detection and tax compliance behaviour.
H4b	Perceived corruption will moderate the relationship between the probability of detection and tax compliance behaviour.
H5	There is a significant relationship between tax complexity and tax compliance behaviour.
H5a	Perceived service orientation will moderate the relationship between tax complexity and tax compliance behaviour.
H5b	Perceived corruption will moderate the relationship between tax complexity and tax compliance behaviour.

H6	There is a significant relationship between incentives (positive inducement) and tax compliance behaviour.
H6a	Perceived service orientation will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.

Table 4.1 (continued)

Hypothesis	Statement
H6b	Perceived corruption will moderate relationship between incentives (positive inducement) and tax compliance behaviour.
H7	There is a significant positive relationship between tax knowledge and tax compliance behaviour.
H7a	Perceived service orientation will moderate the relationship between tax knowledge and tax compliance behaviour.
H7b	Perceived corruption will moderate the relationship between tax knowledge and tax compliance behaviour.
H8	There is a significant relationship between public governance quality and tax compliance behaviour.
H8a	Perceived service orientation will moderate the relationship between public governance quality and tax compliance behaviour.
H8b	Perceived corruption will moderate the relationship between public governance quality and tax compliance behaviour.

CHAPTER FIVE
RESEARCH METHODOLOGY

5.1 Introduction

The preceding chapter discussed the research framework and hypotheses development for the study constructs. This current chapter discusses the research methodology and procedures undertaken to achieve the objectives of this study. In particular, this chapter covers the research paradigm followed by the research design. Furthermore, the population and sampling techniques and the operational definitions of the construct are given. Additionally, the result of the pilot test, and the various methods used for data analysis were also presented.

5.2 Research Paradigm

According to Gummesson (2000), a research paradigm is referred to as "theories, ideologies, myths, standards, frames of reference, perspectives, norms, approved procedures, and peoples value judgment that drive's individuals thinking and action" (p. 18). The design of a good research starts with the proper identification of a topic and a research paradigm (Creswell, 2003). Guba and Lincoln (1989) viewed paradigm as "a basic set of beliefs individuals are willing to make that eventually serve as touchstones upon which one's activities are guided" (pp. 107-108). For their part, researchers generally have their perceptions about the nature of a specific social reality or knowledge based on their own philosophical paradigm. It is expedient to

know that quantitative research using empirical methods and empirical statements (Cohen & Manion, 1980) was employed in this study.

Furthermore, Chisick (2008) suggested that, for research to be accorded the highest level of acceptance or respect, it must be built on the basis of good scientific method, especially in the field of social sciences. Scientific methods apply to "quantitative research" that is anchored on "positivism paradigm". Creswell (1994) was of the view that quantitative research was a type of research, in which phenomena are explained by collecting and analysing numerical data using statistically based methods.

However, other schools of thought think differently about the "positivism paradigm". Onwuegbuzie (2002) argued that the positivism paradigm was an effective approach when issues were properly known and regarded as facts or other measurable entities. This school of thought that social science research dealt with actions and behaviour, derived from the human mind, and these actions and behaviours required interpretation.

Therefore, another prototype known as "constructivism model" evolved (Guba & Lincoln, 2005). Subsequently, social science scholars have adopted what is referred to as "qualitative research" that is based on a ~~–e~~onstructivism paradigm". According to Othman (2012), constructive norms are based upon and use a sociological perspective, such as grounded theory, phenomenology, narrative, case study, and

ethnography. In essence, Shank (2002) saw qualitative research "as a form of systematic empirical inquiry into meaning" (p. 5), and Denzin and Lincoln (2000) affirmed that "qualitative research involves an interpretive and naturalistic approach; in short, it means qualitative scholars study things in their natural form" (p. 3).

As Hartini (2012) and Othman (2012) pointed out, quantitative scholars are always obsessed with discovering the answers to questions of "how often" and "to what magnitude?" On the other hand, qualitative scholars are always keen to find the answers to the questions of "how" and "why".

Nowadays, both models have become widely accepted for research in the social sciences by advocates of mixed-mode approaches (Creswell & Clark, 2007; Creswell, 2012). Although researchers have adopted the mixed mode approach, its application sometimes is a bone of contention (Creswell & Tashakkori, 2007). Table 5.1 shows the features of the Quantitative and Qualitative paradigms.

Table 5.1
Key Characteristics of Quantitative and Qualitative Paradigms

Characteristic	**Quantitative**	**Qualitative**
Focus	Quantity	Quality (nature, essence)
Philosophical roots	Positivism logical empiricism	Phenomenology, symbolic, interactivism
Associated phase	Experimental, empirical, statistical	Field work, ethnographic, naturalistic, grounded constructivist

Table 5.1 (continued)

Characteristic	Quantitative	Qualitative
Goal of investigation	Prediction, control, description, confirmation, hypotheses testing	Understanding, descriptive, discovery, meaning, hypotheses generating
Design Characteristics	Predetermined, structured	Flexible, evolving, emergent
Sample	Large, random, representative	Small, non-random, purposeful, theoretical
Data Collection	Inanimate instrument (scale, tests, surveys, questionnaires, computers)	Researcher as primary instrument, interviews, observations, documents
Mode of analysis	Deductive (by statistical methods)	Inductive (by researchers)
Findings	Precise, numerical	Comprehensive, holistic, expansive, richly descriptive

Source: Othman (2012, pp. 29-30).

5.2.1 Justification for the Choice of Quantitative Approach

This research adopts the positivist ontology, which is the quantitative methodology. The main reasons for doing so are the following:

1. Scientific — quantitative data lend themselves to different forms of statistical techniques;
2. Confidence — as statistical tests of significance give a researcher added credibility in its findings;
3. Measurement — the analysis of quantitative data are based on measured quantities rather than impressions;
4. Analysis of large quantitative data becomes easy and simple; and
5. Presentation and communicating the findings to others in desired way (Denscombe, 2010).

Another reason for employing the quantitative approach stems from the audience or respondent. In the literature, a remarkable number of past studies in the area of tax compliance have employed quantitative approach, for instance (Alabede et al., 2011; Alm, 2013; Alm & Torgler, 2006; Manaf, 2004; Mustafa, 1997; Palil and Mustafa, 2011; Palil et al., 2013; Richardson, 2006; Stefura, 2011, 2012; Tayib, 1998).

Creswell (1994) is of the view that quantitative research is seen as research in which phenomena are explained by analyzing data that have been collected via statistical methods. Hence, this current study is among those that are quantitative in nature and judiciously employs statistical tools to understand relationships existing among WFFC, FSR, economic factors (i.e., tax rates, the probability of detection and tax complexity), the psychological factors (incentives via positive inducement, tax knowledge, and PGQ), PSO, and perceived corruption on tax compliance behaviour.

Primarily, this study sought to causally predict, confirm, support or disagree with the findings of other authors in different contextual settings. For the above reasons, this research employed the quantitative paradigm. However, quantitative research is not devoid of some setbacks, which include: 1) quality of data; 2) data overload, and 3) quantitative analysis is as scientifically objective as it might appear. Thus, the researcher acknowledges that all these may influence the outcomes of the research in the aspects of reliability, generalisation, and the validity of the results.

5.3 Research Design

The quantitative research design was adopted in this study because it was considered to be more suitable by allowing for the testing of the relationship between variables using statistical methods. This design achieves the primary objective of this study, which was to examine the relationship between WFFC, FSR, and the moderating role of PSO and perceived corruption between economic factors, psychological factors, and tax compliance behaviour. In addition, the design allows for the analysis to be conducted on a sample, which can be generalized to an entire population. It also permits the use of a standard and formal set of questions contained in survey to be distributed to every respondent.

This research was conducted in a natural environment in which the researcher's interference was minimal. Conducting a study in a natural environment helps creates high external validity, and the findings will be more robust, relevant and comprehensive (Hair, Money, Samuoel, & Page, 2007; Zikmund, 2003). In addition, the unit of analysis of this study was at individual level (i.e., SME owners/managers), and the primary data for this study were collected through the administration of questionnaires. Respondents‘ perceptions about WFFC, FSR, and the remaining variables became the basis for understanding the influence of their behaviours on tax compliance. This study was cross sectional in nature, whereby data were collected at a point in time. A cross-sectional design is simple, inexpensive and allows for the collection of data in a relatively short period of time.

5.4 Population and Sampling Techniques

This section discusses the population of the study, followed by the discussion of the sample size, determination of the sample size, sampling frame, and the sampling technique. The section ends with a discussion on estimating the expected response rate.

5.4.1 Population of the Study

A population of a study refers to the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran & Bougie, 2010). In this study, the population included all the SMEs owners / or proxy by the managers in Nigeria who were licensed by the SMEDAN operating as of 31 December 2014.

The total number of SMEs operating and carrying out business activities in Nigeria as of 31 December 2014 was 3,273 (SMEDAN, 2014), constituting the population for this research. The population was further narrowed down to 472 SMEs in Kaduna and Kano States located in the North West, geopolitical zone of Nigeria, whose incomes are taxable under the Personal Income Tax Cap P8 of 1993, as amended in 2004 and 2011. The two States in the North West geopolitical zone was selected for this study for the following reasons:

First, the North West geopolitical zone had the second highest number of SMEs among the six geopolitical zones of the country (National MSMEs Collaborative Survey, 2010; SMEDAN, 2014), as shown in Table 5.2. Second, it is the most

populated as well as the commercial nerve centre of the country with an estimated human population of 35, 915, 467 out of the total estimated Nigerian population of 140, 431, 790 (NPC, 2006; National MSMEs Collaborative Survey, 2010). The two States were reported to have the highest number of SMEs among the seven states located in the zone (National MSMEs Collaborative Survey, 2010; SMEDAN, 2014).

Table 5.2
Number of SMEs across the Country as of 31 December 2014

S/n	Geopolitical Zone	State	Number of SMEs	Total
1	North West	Jigawa	34	
		Kaduna	**185**	
		Kano	**287**	
		Katsina	84	
		Kebbi	40	
		Sokoto	84	
		Zamfara	57	771
2	North East	Adamawa	39	
		Bauchi	79	
		Borno	24	
		Gombe	53	
		Taraba	29	
		Yobe	23	247

Table 5.2 (continued)

S/n	Geopolitical Zone	State	Number of SMEs	Total
3	North Central	Benue	53	
		FCT	82	
		Kogi	46	
		Kwara	52	
		Nassarawa	64	
		Niger	70	
		Plateau	98	465
4	South West	Ekiti	37	
		Lagos	526	
		Ogun	75	
		Odo	90	
		Osun	16	
		Oyo	210	954
5	South East	Abia	85	
		Anambra	104	
		Ebonyi	48	
		Enugu	65	
		Imo	82	384
6	South South	Cross - River	55	
		Delta	78	
		Edo	156	
		Rivers	98	
		Akwa-Ibom	46	
		Bayelsa	19	452
				3,273

Source: SMEDAN (2014).

Second, other geopolitical zones of Nigeria, particularly the North East geopolitical zone, comprising Adamawa, Bauchi, Borno, Gombe, Yobe, Taraba, and the remaining States in the North West (Jigawa, Katsina, Kebbi, Zamfara and Sokoto States) were not covered by this study due to the activities of the Boko Haram insurgency. Boko Haram, which literally means "Western Education is Forbidden", is an Islamic extremist sect in Nigeria that has created havoc in terms of human life

and economic activities across the northern part of the country as well as the Federal Capital Territory, Abuja. It conducts violent attacks and bomb explosions on individual businesses, individual residential houses, government offices, and places of worship on a daily basis (Gwamna, 2011). Due to this unfortunate situation in the country, business activities were shut down in most of the affected areas until further notice as the leader of Boko Haram has called for more attacks in the country (Omomia, 2015).

Third, the present study did not cover the South East, South South, South West, or North Central geopolitical zones of the country. That was because of their vulnerability and inaccessibility for the researcher due to the Niger Delta Militancy and the BIAFRA struggle for self-independence that is agitating for a new country to be carved out from Nigeria. Attacks on innocent individuals and their businesses in those regions make them off limits (Mohammed, 2014). Thus, the population covered 472 SMEs in the remaining two States, comprising 185 SMEs in Kaduna State and 287 SMEs in Kano State, of North West Nigeria (see Table 5.2).

Because the study under review examined the influence of WFC, FSR and the moderating role of PSO and perceived corruption on the relationship between economic factors, psychological factors and the tax compliance behaviour of SMEs owners/managers, the unit of analysis for this study was naturally the individual. To that end, SMEs owners/managers were considered appropriate as the unit of analysis.

5.4.2 Sampling Frame

Sekaran and Bougie (2013) defined a sampling frame as a set of elements that are available for selection in some predefined stage of the sampling process. Similarly, Popoola (2014) also posited that a sample frame comprised the list of all entire elements in the population from which the sample is drawn. Because the study concentrates on the determinants of tax compliance in relationship to SME owners/managers in Kaduna and Kano states, Nigeria. The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) list was employed. The SMEDAN contained a list of all SMEs operating and doing businesses in the country at a particular point in time.

The authenticated list included a total of 472 SMEs that were reported to have been registered in Kaduna and Kano States as at 31 December 2014 (SMEDAN, 2014). Those SMEs who registered with SMEDAN were the main focus of this study. Those SMEs who were not registered with the regulator were excluded from the study due to the lack of business addresses. Table 5.2 shows the sample frame of this study.

5.4.3 Sample Size

The general norm is to use a sample in order to ensure generalisation of the study population in research because collecting data from an entire population is impractical, especially if the population is large (Zikmund, 2003). Therefore, a

sampling process must be carried out to determine a sampling size. Hence, not all the elements in the population comprise the sample (Sekaran & Bougie, 2010).

The literature has documented that a reasonable sample size is needed to enhance the robustness of the overall estimates as well as to reduce the standard errors of models (Chin & Newsted, 1999; Marcoulides & Saunders, 2006). Chin and Newsted (1999) were of the view that a given small sample size of (N = 20), if employed in a large complicated models, would not definitely isolate low valued structural path coefficient (β = 0.20) but that a larger sample size of (N = 50) should be considered. As Salkind (2003) posited, it is of utmost important to consider an appropriate sample size when conducting any research so as to avoid committing a Type I error. When the sample is low, the sample may not portray a good representation of the entire population.

According to Sekaran and Bougie (2013), a type I error has to do with the probability of accepting inappropriate or wrong findings instead of rejecting them. A large sample size may not be too good either, for that large size may result in a problem associated with a Type II error, accepting a finding that should be rejected. Additionally, statistical precision, practical issues, and availability of resources are the top priorities to be considered before any choice of sample size. In the context of this study, 321 numbers were drawn from a given population of 472 SMEs owners/managers, comprising the desired sample size of this study.

5.4.4 Sample Size Determination

Ascertaining an appropriate sample size that is independent of any given population under consideration is necessary. In this regard, Barlett, Kotrlik, and Higgins (2001) outlined two critical flaws that always accompany any sample selection. These flaws include: 1) disregarding sampling error when determining the sample size; and 2) disregarding problems emanating from both response and non-response biases.

Bruin (2006), Cavana, Delahaye, and Sekaran (2001), Hau and Marsh (2004), and Krejcie and Morgan (1970) pointed that one important aim of carrying out quantitative research is to gather data that will speak for the overall population under investigation. A remarkable number of scholars have employed information generated from the field to make generalizations based on the findings drawn from the sample of the population in relationship to a given acceptable limit of a random error (Cavana et al., 2001; Barlett et al, 2001).

Going by the above discourse and in relationship to the sample size determination, the recommendation has been made that a sample of 15 participants for an individual predictor is appropriate in order to ensure the reliability of the equation. Hence, in this current study, the formula for the number of needed participants is:

N = 15*(Number of predictors) (5.1)

= 15*(8)

= 120 needed participants

Another method of determining the appropriate sample size is the power of a statistical test. This method focuses on the ability to minimize the total costs of sampling error. Cohen (1988) and Faul, Erdfelder, Lang, and Buchner (2007) defined the power of a statistical test as the probability that the null hypothesis (which predicts no significant relationship between variables) will be rejected when it is in fact not true. However, general norm is that, the larger the sample size, the greater the power of a statistical test (Borenstein, Rothstein, & Cohen, 2001; Kelley & Maxwell, 2003; Snijders, 2005).

Therefore, power analysis is a statistical procedure for determining an appropriate and adequate sample size for a research (Bruin, 2006). In the application of power analysis, an *a priori* power analysis was conducted using G*Power 3.1 software (Faul, Erdfelder, Buchner, & Lang, 2009; Faul et al., 2007). In applying the following predefined parameters; Power (1-β err prob; 0.95), an alpha significance level (α err prob; 0.05), medium effect size f^2 (0.15) and eight main predictor variables (WFFC, FSR, TR, PD, TC, IPI, TK, and PGQ), a minimum sample of 160 would be required to test a regression based models (Figure 5.1) (Cohen, 1992; Faul et al., 2009; Faul et al., 2007).

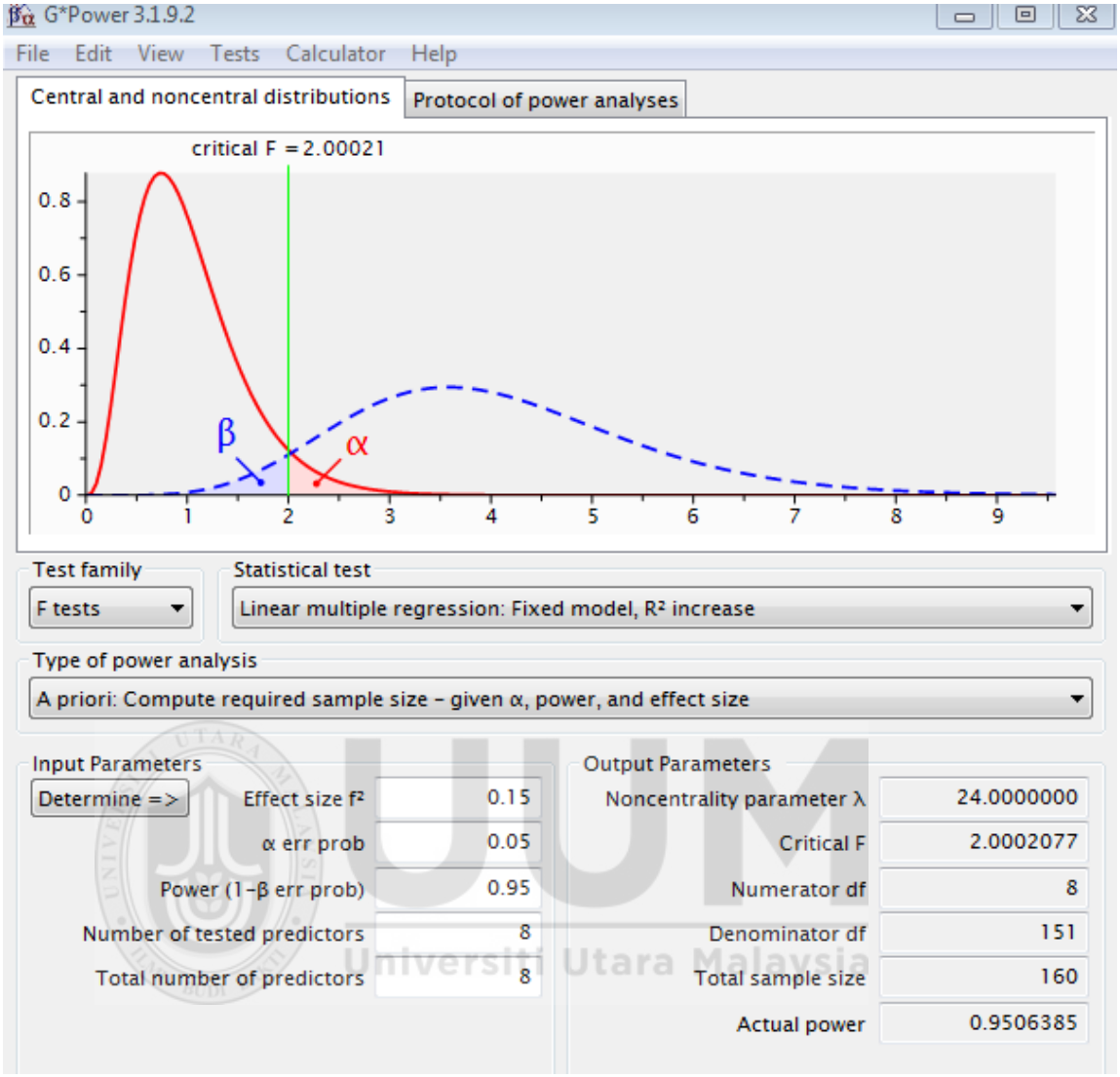


Figure 5.1. The Output of A Priori Power Analysis.

As shown in Figure 5.1, the output of the *a priori* power analysis shows that a minimum of 160 respondents would be appropriate for the present study. However, the response rate among Nigerians is typically poor (Adomi, Ayo, & Nakpodia, 2007; Ofo, 1994). Based on the above argument, the sample size derived using *a priori* power analysis appears to be inadequate for the present study. Therefore,

considering other methods in order to determine an appropriate and adequate sample size for a given population was necessary.

Krejcie and Morgan (1970) created a sample size table. This table is aimed at ensuring a good yardstick for arriving at a sample that is a true representation of the entire population. Thus, Krejcie and Morgan‘s (1970) sample size determination is therefore derived at thusly:

$s = X^2 NP (1 - P) / d^2 (N - 1) + X^2 P (1 - P)$ (5.2)

Where;

s = required sample size,

X^2 = the tabulated value of chi-square for 1 degree of freedom at the desired confidence level (3.841),

N = population size,

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size), and

d = the degree of accuracy expressed as a proportion of (0.05).

Therefore, at a population of 472 SMEs owners/managers, a sample size of 214 was arrived at.

In the same vein, Dillman (2000) identified another vigorous method of sample size determination for social science research to ensure an appropriate sample size that is

capable of representing a given population of interest. Dillman created the following formula:

$$n = (N)\ (p)\ (1 - p)\ /\ (N - 1)\ (b/c)^2 + (p)\ (1 - p) \quad (5.3)$$

Where;

n = required sample size for the desired level of precision,

N = population of interest,

p = proportion of population expected (assume to be 0.50 for maximum sample size),

b = acceptable amount of sampling error (which can be set at 0.10; 0.05; or 0.3) at 10%; 5%; or 3% accordingly), and

c = z statistics related with a confidence level of 1.96 at the 95% significance level.

In the context of this study, a proportion of 5% was employed for an appropriate sample size, which is in line with Biemer and Lyberg's (2003) guidelines to ensure an adequate sample size for either larger or smaller population. Hence:

N = 472; p = 0.5; b = 0.05; and c = 1.96

$n = [(472)\ (0.5)\ (1 - 0.5)]\ /\ [(472 - 1)\ (0.05/1.96)^2] + [(0.5)\ (1 - 0.5)]$

$n = [(472)(0.5)(0.5)\ /\ [(471)(0.0255102)^2] + [(0.5)(0.5)]$

$n = 118\ /\ [(471)\ (0.0006507703)] + 0.25$

$n = 118\ /\ 0.55651281$

n = 212

Drawing from the above results from computations based on Bruin (2006) Cavana et al. (2001), Dillman (2000), and Krejcie and Morgan (1970), the suggested sample size of 214 determined based on Krejcie and Morgan (1970) was a little bit higher than others. Furthermore, this computation accounted for the level of confidence and precision, ensuring that sampling error was minimized. Based on the above discussion, this study adopted a sample size of 214 as computed using Krejcie and Morgan (1970).

Other guidelines were taken into consideration as well. Roscoe's (1975) rule of thumb suggested that sample sizes between 30 and 500 are appropriate for most research. In addition, Hair, Black, Babin, and Anderson (2010) stated that, for multivariate research, the sample size should be 10 or more times larger than the number of the research variables. The present study had eleven variables and the required sample should, therefore, be 110 or more. Similarly, Hoyle (2005) also suggested that a sample size ranging from 100 to 200 was usually a good starting point in conducting path modeling.

However, in order to compensate for non-response, a remarkable number of researchers have increased the sample size so as to obtain adequate data (Sekaran & Bougie, 2010; Israel, 2009; Salkind, 1997). In particular, Salkind (1997) revealed that, in order to compensate for the possible non-response, researchers increased the

sample size by at least 40%. Considering the above argument, and taking into consideration the population of this study, the sample size of 214 was increased by 50% as Salkind (1997) suggested. Adding this number to 214 gave a total of 321 in order to account for uncooperative respondents and unusable questionnaires. This was done because people in Nigeria are reluctant to complete questionnaires (Adomi et al., 2007). Thus, a final sample size of 321 was used in this study.

5.4.5 Sampling Techniques

Many types of sampling techniques exist in the area of academic research, but they are fundamentally classified into probability and non-probability sampling. Probability sampling is a sampling technique in which all individuals in a population have an equal chance of being selected (Sekaran & Bougie, 2014). The most commonly used probability techniques include simple random sampling, stratified random sampling, cluster sampling and systematic sampling.

Briefly, random sampling is founded on the principle of randomization thereby providing for every component in the population an equal chance of being selected for a survey. A simple random sample is based on the proposition that each individual has the sample probability of being chosen (Bryman & Bell, 2007). Similarly, stratified sampling is concerned with splitting up the entire population into sub-groups called ―strata" as relevant to the researcher's study (Sekaran & Bougie, 2014). Stratified sampling has the advantage of providing more accurate data because it guarantees that all strata are duly represented in the sample (Awang,

2012). Cluster sampling deals with the choice of the group instead of individuals and is mostly used when a large and widely spread population is present. A systematic random sample is a variation of a simple random sample.

The probability sampling technique was used in this research. The technique provides every individual an equal opportunity/chance of being selected as the sample object (Sekaran, 2003). One major benefit of this sampling technique is that no bias of the researcher is present with respect to the choice of sample objects (Salkind, 2003). The technique is also highly regarded for purposes of generalizability (Cavana et al., 2001).

This study aimed at drawing samples from two states; hence, the need existed for stratified random sampling. A simple random sampling entails selecting a sample at random by the researcher from the sampling frame (Saunders, Lewis, & Thornhill, 2009). The random selection can be executed or achieved by the computer, or through an online number generator or manually using a random number table. A stratified random sampling involves classifying sample elements into strata, and then selecting the elements from each stratum using a simple random sampling procedure (Sekaran, 2003). A stratified random sampling can either be proportionate or disproportionate. It is proportionate when the subjects are drawn from each stratum according to a specific or predetermined percentage. It is disproportionate when the subjects are drawn from each stratum without taking care of any specific percentage,

but a number of the elements contained in each stratum. This study adopted the proportionate sampling procedure.

First, SMEs were categorized into two strata: 1) SMEs in Kaduna State with a population of 185; 2) SMEs in Kano State with a population of 287. Information about the population elements, sampling frame and the actual sample are shown in Table 5.3 below. The lists of the population elements for the SMEs in the respective states were obtained from the SMEDAN directory (2014). The population elements for SMEs in Kaduna and Kano states were 185 and 287 respectively, totalling 472 SMEs as shown in Table 5.3.

The proportionate stratified random sampling is seen as the best technique for the present study because the aim of this study is to have samples drawn from the SMEs located in the two states. Therefore, the stratified random sampling according to Sekaran (2003) is appropriate for a study when a researcher has a subdivided population that demands treating each subdivision as a stratum in order to obtain estimates of known precision. Based on the above justification, proportionate stratified random sampling was used in this study.

Furthermore, the selection of the prospective respondents from the population frame was done without any bias. After the list was verified, the questionnaires were distributed to the respondents based on a simple random sampling. Random numbers were generated using a computer system. Specifically, Microsoft excel software with

the following mathematical formula {= Rand ()} was employed in the process of the sample selection.

Table 5.3
Proportionate Stratified Random Sampling

State	Population	Sample Size
Kaduna	185	126
Kano	287	195
Total	472	321

5.4.6 Estimating Expected Response Rate

In the current study, the researcher distributed a total of 450 survey questionnaires to the SME owners/managers in Kaduna and Kano States, Nigeria. The first reason behind the oversampling questionnaires instead of the required sample size of 321 was to account for the loss that may have arisen from unpredicted behaviours of the respondents as well as damaged questionnaires (Salkind, 1997).

Second, oversampling, according to Phokhwang (2008) and Ringim, Razalli, and Hassan (2012), was necessary to further account for non-response bias and non-response rate that may alter the result of the survey. Furthermore, in Nigeria it has been established that a response rate for survey researches typically ranges from 45% to 73% (Nakpodia, Ayo, & Adomi, 2007) and this study aimed at achieving the higher end of the response rate. The period for data collection lasted for approximately four months from 9 March 2015 to 11 July 2015.

5.5 Operational Definitions and Measurements of Variables

As show in Figure 4.1 in the previous chapter, the present study has eleven major constructs to be measured, namely, WFFC, FSR, tax rates, the probability of detection, tax complexity, incentives (positive inducements), tax knowledge, PGQ, PSO, perceived corruption and tax compliance behaviour. Before a thorough discussion of the measurement of these constructs, this section explores the differences between formative and reflective measures.

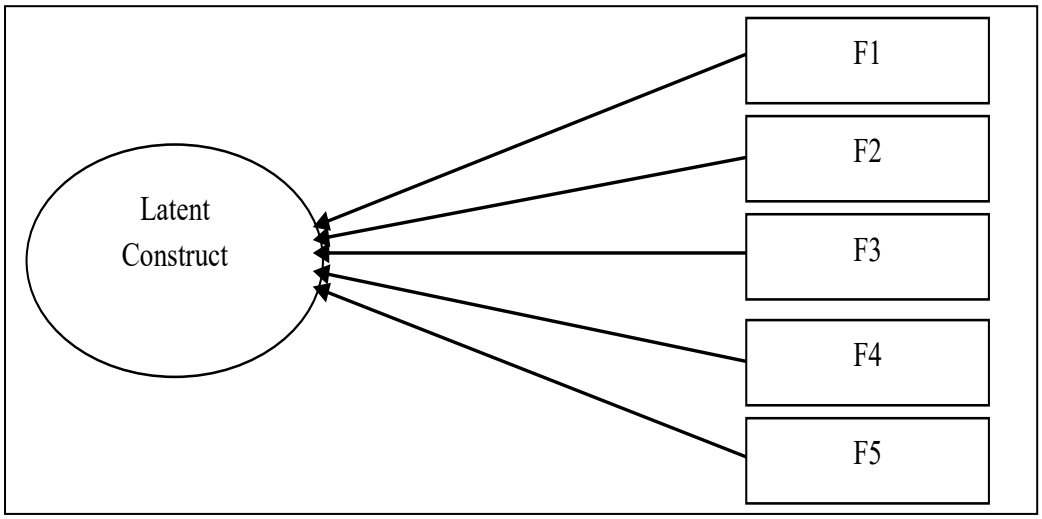
5.5.1 Formative versus Reflective Measures

Formative measures are measures that cause the creation or change in the underlying construct (Blalock, 1964). They are illustrated in Figure 5.2 below. Formative measures arise in cases in which the measures jointly influence the construct and the full meaning of the construct is derived from its measures (Saad, 2011). This suggests that the measures are not expected to correlate with one another because they are not determined by the construct, therefore reliability may not be a yardstick for validating formative measures.

Additionally, formative measures capture the conceptual domain of the study constructs as a group. In particular, this demonstrates that formative measures are dynamic (not redundant) in the process of capturing the varied aspects of the conceptual domain. The implication is that dropping one formative indicator from a measurement model could be disastrous because the model may then omit a unique element of the conceptual domain (MacKenzie, Podsakoff, & Jarvis, 2005).

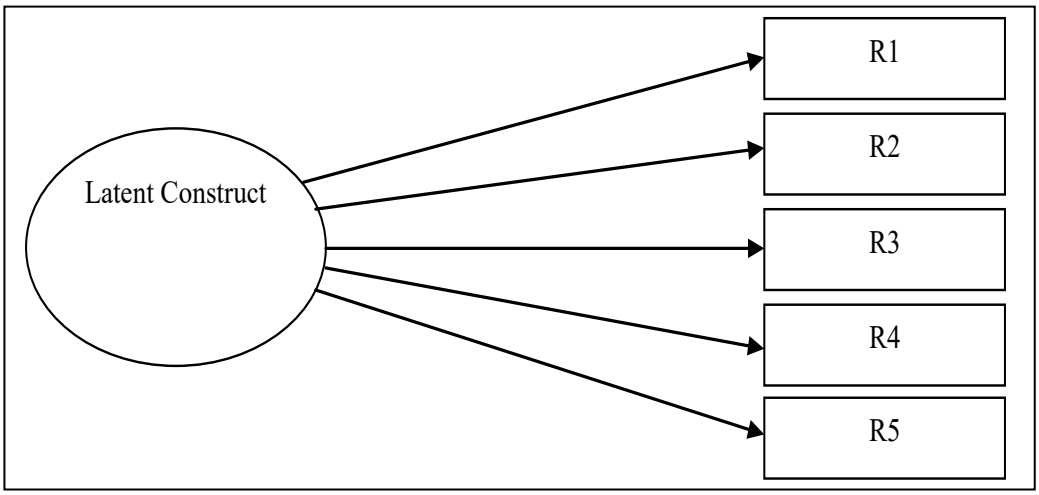
The opposite of formative measures are reflective measures that are commonly referred to as ~~–e~~effect indicators." These measures are regarded as effect indicators because they reflect the said construct that they represent (MacKenzie et al., 2005). In Figure 5.3 below, the reflective measures are illustrated in the instance in which the direction of causality flows from the construct to the measures. Unlike formative measures, reflective measures are expected to highly correlate because they reflect the same underlying construct.

They are capable of showing a high level of internal consistency reliability. Reflective measures are assumed to be one-dimensional whereby the measures are seen as individually tapping the entire conceptual domain. This feature reveals that the damages derived from dropping a reflective indicator are less than dropping a formative indicator because they do not change the meaning of the construct.



Source: Adapted from Bollen and Lennox (1991, p. 306).

Figure 5.2. Formative Measures.



Source: Adapted from Bollen and Lennox (1991, p. 306).

Figure 5.3. Reflective Measures.

In order to differentiate between the formative and reflective measures, Jarvis, MacKenzie, and Podsakoff (2003) provided several guidelines, which are shown in Table 5.3. The guidelines suggest that formative and reflective measures can be identified subject to four criteria: 1) direction of causality between the constructs/variables and their measures; 2) interchange ability of the measures; 3) co-variation among the measures; and 4) similarity in antecedents and consequences.

Table 5.4
Decision Rules to Differentiate Between Formative and Reflective Construct

		Formative	**Reflective**
1	Direction of causality from the construct to measure implied by the conceptual definition	Direction of causality is from items to construct	Direction of causality from construct to items
2	Interchangeability of the indicators	Indicators need not be interchangeable	Indicators should be interchangeable
3	Covariation among the indicators	Not necessary for indicators to covary with each other	Indicators are expected to covary with each other
4	Are the indicators expected to have the same antecedents and consequences?	Indicators are not required to have the same antecedents and consequences	Indicators are required to have the same antecedents and consequences

Source: Jarvis et al. (2003, p. 203).

In order to illustrate the differences between formative and reflective measures, Chin (1998a) provided the example of mental inebriation as a construct. In his illustration, the formative measures of mental inebriation represented the quantity of beer, wine and hard liquor consumed, while the reflective measures might be the blood alcohol level, driving ability, MRI brain scan and performance on mental calculations.

In relationship to the reflective measures, an improvement in the blood alcohol level measure would also imply an improvement in MRI activity and other measures, because they are all meant to tap into the same concept. In contrast, a change in the formative measures, for example, an increase in beer consumption, does not indicate an increase in wine or hard liquor consumption (Chin, 1998a). Therefore, based on the theoretical framework, and the review of related literature conducted in this study, all the eleven constructs in this current study contains only reflective indicators. As a result, the following section discusses how the variables were defined and measured in the context of this study.

5.5.2 Dependent Variable / Construct

Literature has documented that tax compliance is one critical factor to the fiscal viability of any government (Joulfaian, 2009). Presently, tax compliance issues are of concern to academics, institutions and policy makers. Therefore, the endogenous variable for this study is tax compliance behaviour (TCB).

5.5.2.1 Tax Compliance Measures

Tax compliance is seen as the willingness of the taxpayers to abide by the tax laws, declare the correct income, claim the correct deductions, relief and rebates and pay all taxes on time (Palil & Mustapha, 2011). In the context of this study, tax compliance is operationalized as the willingness and ability of the taxpayers to obey the tax laws, declare their actual income and pay the correct amount of taxes on the due date to the appropriate relevant authority or jurisdiction. Any behaviour exhibited by the SME owners/managers contrary to the above is regarded as noncompliance.

Several methods exist to measure compliance Alabede et al. (2012), Kasipillai et al. (2003), Chan et al. (2000), Kasipillai, Mat-Udin, and Ariffin (2003), Kirchler and Maciejovsky (2001), Reckers, Sanders, & Roark (1994), and Saad (2011) used scenario cases to measure tax compliance behaviour in their studies. However, Yankelovich, Skelly, and White (1984) developed and refined a 15-item tax compliance list was therefore adapted in this study. These items were rated on a minimum score of 1 and a maximum score of 5. Richardson (2005) has reported that, this scale had adequate internal consistency and reliability with Cronbach‘s alphas ranging from 0.78 in Australia to 0.89 in Hong Kong, indicating a satisfactory level of reliability. That is because these values exceeded the minimum acceptable threshold of 0.70 as Hair et al. (2010 and Nunnally (1978) recommended. Richardson (2005) in Australia and Hong Kong utilized an interval scale with a 5-point Likert-type scale, ranging from (1 = strongly disagree to 5 = strongly agree).

Because the refined Yankelovich et al. (1984) version is simple, and bearing in mind the characteristics of the SMEs and the low level of literacy in the Northern part of the country (World Bank, 2011), this 15-item scale was adapted in this current study. See Table 5.5 below.

Table 5.5
Distribution of Items used to Measure Tax Compliance Behaviour

Construct	Code	Indicator	Source
Tax Compliance Behaviour	TCB01	Trading or exchanging goods or services from one SME to another without reporting it in a tax return is permissible.	Yankelovich, Skelly, and White (1984)
	TCB02	Reporting income fully by SMEs, but not including a little extra amount of income is accepted.	
	TCB03	Being paid cash to an SME for a job and then not reporting it in the tax returns is permissible.	
	TCB04	Not reporting some earnings by the SME from interest earn or investment, which the government would not be able to find out, is allowed.	
	TCB05	Adding a little bit of what the SME actually spent when reporting in the business is permissible.	
	TCB06	Since a lot of rich people pay no taxes at all, if SMEs underpay a little, it‘s not a big deal.	
	TCB07	Tax rates are just too high, so it is not really cheating when SMEs find ways to pay less tax than they are supposed to.	

Table 5.5 (continued)

Code	Indicator
TCB08	When SMEs are not really sure, whether or not they deserve a tax deduction, it makes sense to take a chance and take a deduction anyway.
TCB09	With the rising cost of living these days, it is okay for SMEs to cut a few corners on its tax returns just to help pay the bills.
TCB10	It is not wrong for SMEs to hold back a little bit on taxes since the government spends too much anyway.
TCB11	When a SME knows it deserves a deduction that the government will not let it take, it makes sense to take it some other place where they will not know.
TCB12	It is not so wrong to under-report certain income since it does not really hurt anyone.
TCB13	The chances of getting caught are so low that, it is worthwhile trying to cut corners by the SME.
TCB14	It is all right to occasionally under-report certain income or claim an undeserved deduction if the SMEs are generally law abiding.
TCB15	Stretching self-relief deductions by the SME owner/manager to include some deductions that are not really self-relief deductions.

5.5.3 Independent Variables / Constructs

In relationship to the exogenous constructs, the following subsections discuss work - family financial commitment, fuel subsidy removal, tax rates, probability of detection, tax complexity, incentives (positive inducement), tax knowledge, as well as public governance quality.

5.5.3.1 Work - Family Financial Commitment (WFFC) Measures

Work - family financial commitment is seen as a form of inter-role obligation in which either commitment to work makes it difficult to have valuable time with the family or when commitment to family makes it difficult to be engaged fully at work or to meet individual or organisational responsibilities and obligations (Greenhaus & Beutel, 1985).

The construct is operationalized in the context of this study as an inter-role conflict in which role pressures from work and family environment are mutually incompatible. Carlson, Kacmar, and William's (2000) 18-item was adapted in the course of this study to measure this construct. The items have shown to be reliable and valid for measuring WFFC related issues affecting individuals. The scale has been reported to possess adequate internal consistency, with Cronbach's alphas ranging from 0.78 to 0.87 (Carlson et al., 2000), indicating a satisfactory level of reliability exceeding the minimum acceptable level 0.70 as Hair et al. (2010) and Nunnally (1978) recommended.

The items as shown in Table 5.6 are interval scale using a 5-point Likert-type scale whereby, 1 = strongly disagree, and 5 = strongly agree, with a minimum score of 1 and maximum score of 5. Participants are expected to rate their degree of agreement with the WFFC statements.

Table 5.6

Distribution of Items used to Measure Work - Family Financial Commitment

Construct	Code	Indicator	Source
Work - family financial commitment	WFFC01	SME work keeps me from my family activities more than I would like.	Carlson, Kacmar, and Williams (2000)
	WFFC02	The time I must devote to my business keeps me from participating equally in household responsibilities and activities.	
	WFFC03	I have to miss family activities due to the amount of time I must spend on work responsibilities.	
	WFFC04	The time I spend on family responsibilities often interferes with my business responsibilities.	
	WFFC05	The time I spend with my family often causes me not to spend time in activities at work that could be helpful to the SME.	
	WFFC06	I have to miss business activities due to the amount of time I must spend on family responsibilities.	
	WFFC07	When I get home from work, I am often too exhausted to participate in family activities/ responsibilities.	
	WFFC08	I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.	
	WFFC09	Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	
	WFFC10	Due to stress at home, I am often preoccupied with family matters at work.	
	WFFC11	Because I am often stressed from family responsibilities, I have a hard time concentrating on my business.	
	WFFC12	Tension and anxiety from my family life often weakens my ability to fulfil my business obligation.	
	WFFC13	The problem-solving behaviours I use in my business are not effective in resolving problems at home.	

Table 5.6 (continued)

Code	Indicator	Source
WFFC14	Behaviour that is effective and necessary for me at home would be counterproductive at my business domain.	
WFFC15	The behaviours I perform that make me effective at work do not help me to be a better parent and spouse.	
WFFC16	The behaviours that work for me at home do not seem to be effective at work.	
WFFC17	Behaviour that is effective and necessary for me at home would be counterproductive at work.	
WFFC18	The problem-solving behaviour that works for me at home does not seem to be as useful at work.	

5.5.3.2 Fuel Subsidy Removal (FSR) Measures

Fuel subsidy removal is defined as a form of price manipulation in which the government fixes the pump price of fuel for sale to consumers without paying the retailer the difference between the actual market price and the regulated or official price per litre (Iyobhebhe, 2011). Fuel subsidy removal is operationalized in this study as a unit of price that consumers are supposed to pay to enjoy the use of fuel that is not paid by the government resulting in a compounding of the price burden to the consumer. To measure the FSR, the 13 items Abdelrahim (2014) developed were adapted.

The items have been shown to be reliable and valid for measuring the influence of FSR. As shown in Table 5.7, the scale has been reported to have an adequate internal consistency with a Cronbach‘s alpha of 0.83 (Abdelrahim, 2014). This indicates a

recommended satisfactory level of reliability, which is above the minimum acceptable threshold of 0.70 (Hair et al., 2010; Nunnally, 1978). The items were rephrased in order to suit the context of the study and bearing in mind the level of literacy in the North West Nigeria which falls below the minimum standard (World Bank, 2011). In this study, the extent of the participants‘ agreement was rated with a minimum score of 1 and a maximum score of 5 anchored on a 5-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree.

Table 5.7

Distribution of Items used to Measure Fuel Subsidy Removal

Construct	Code	Indicator	Source
Fuel subsidy removal	FSR01	Fuel subsidy removal increases the cost of energy consumption to SMEs.	Abdelrahim (2014)
	FSR02	Fuel subsidy removal increases the cost of electricity consumption to SMEs.	
	FSR03	Fuel subsidy removal has a positive impact on SMEs production.	
	FSR04	Fuel subsidy removal has a negative impact on the cost of raw materials used by the SMEs.	
	FSR05	Fuel subsidy removal has a positive impact on SMEs disposable income.	
	FSR06	Fuel subsidy withdrawal has stimulated a general increase in the prices of goods and services.	
	FSR07	Fuel subsidy removal has improved comparative advantage of exports.	
	FSR08	Fuel subsidy removal has improved the comparative advantage of trading by a local SME and other SMEs outside the country.	
	FSR09	Fuel subsidy removal has negative impact on the SMEs internal cost of transportation.	

Table 5.7 (continued)

Code	Indicator	Source
FSR10	Fuel subsidy withdrawal has a negative impact on the public budget in Nigeria.	
FSR11	Fuel subsidy removal has a negative impact on national investment in renewable energy.	
FSR12	Fuel subsidy removal has brought untold hardship to the masses and the SMEs.	
FSR13	Fuel subsidy removal poses an obstacle to SMEs in obtaining credit facilities from the commercial banks.	

5.5.3.3 The Tax Rates (TR) Measures

Tax rate is defined as a percentage of taxes to be paid to the relevant tax authorities. It is operationalized in this study as a percentage of taxes to be paid to the relevant tax authorities. The 6 items used in measuring tax rates were adapted from Gilligan and Richardson (2005) with a minimum score of 1 and maximum score of 5. These items were shown to be reliable and valid for measuring tax rates. Respondents were asked to indicate their responses to statements relating to tax rates anchored by 1 = strongly disagree and 5 = strongly agree as shown in Table 5.8. A high score suggests that the tax rate is perceived to be fair and a low score suggests that the tax rate is perceived to be unfair.

Table 5.8

Distribution of Items used to Measure Tax rates

Construct	Code	Indicator	Source
Tax rates	TR01	It is absolutely okay that the higher the profit declared by the SMEs the higher the rate of income tax.	Gilligan & Richardson (2005)
	TR02	It is not okay that a SME which earned higher returns on its investment proportionately pay higher taxes compared to those who earned less.	
	TR03	An appropriate tax rate should be the same for every SME regardless of their income.	
	TR04	The share of the total income taxes paid by SMEs who declared higher profit is not too high.	
	TR05	SMEs who declared moderate profits typically pay more than a fair share of the income tax burden.	
	TR06	The share of total income taxes paid by the SMEs who declared lower profit is not too high.	

5.5.3.4 The Probability of Detection (PD) Measures

The probability of detection is defined as the likelihood the relevant tax authorities will uncover an individual's noncompliance and seek to remedy the evasion (Chau & Leung, 2009). In this study, this is operationalised as the likelihood that the relevant tax authorities will uncover an individual's noncompliance. The perceived detection probability was measured with 8 hypothetical scenario item statements developed by Wenzel (2004a) and adapted in this research.

These items have been shown to be reliable and valid (Alabede et al., 2012). The items were shown to possess adequate internal consistency, with Cronbach's alphas ranging from 0.70 to 0.91 (Alabede et al., 2012). The items were interval scale which was ranked on a 5-point Likert-type whereby, 1 = strongly disagree, and 5 = strongly

agree with a minimum score of 1 and a maximum score of 5. Small and Medium Enterprises, owners/managers were asked to indicate their degree of agreement with the detection probability statements concerning the chances that someone would be caught in an attempt to underreport income or overstate tax claims. The highest score was 5 showing that a high chance of being caught exists; whereas the lowest score was 1, indicating a low chance of being caught by the relevant tax authority as shown in Table 5.9.

Table 5.9
Distribution of Items used to Measure Probability of Detection

Construct	Indicator	Source
Probability of detection	Detection of underreporting of large amount	Wenzel (2004a)
	Detection of overstating of large deductions	
	Detection of underreporting of small amount	
	Detection of overstating of small deductions	

5.5.3.5 Tax Complexity (TC) Measures

The complexity of the tax system can simply be referred to the process of improving the equity of the tax system by the relevant tax authorities, which, in turn, reduces its ambiguity (McKercher et al., 2005). In this study, complexity is operationalized as a process whereby the relevant tax authorities try to improve the equity of the tax system as well as simultaneously reduce its ambiguity. Saad (2011) developed and used 7 items for tax complexity, and these items were adapted from Saad (2011) and used in this study as shown in Table 5.10.

The items were shown to be reliable and valid for measuring the perception of the taxpayers in relation to tax complexity. Saad (2011) reported that the scale had adequate internal consistency, which was within the required threshold of .70. Thus, respondents indicated the extent of their responses to the statements in relationship to the complexity of the Nigerian SMEs tax system.

Saad (2011) used a 7-point Likert-type scale in measuring the items. However, in this study, the 7-point interval scale was reduced to 5 points whereby, 1 = strongly disagree, and 5 = strongly agree with a minimum score of 1 and a maximum score of 5. This was done for several reasons. Previous researchers have indicated that a 5-point scale is just as good as any other and that an increase from 5 to 7 or even 9 points or a reduction from 7 to 5 points does not necessarily improve the reliability of the ratings (Elmore & Beggs, 1975). A long scale of 7 to 9 points may be cognitively difficult for respondents and, while a short scale of 3 points may be cognitively easy, such a scale may not adequately differentiate the opinions of respondents (Weisberg, Krosnick, & Bowen, 1996). In this current study, a high score suggests that the SME owners/managers perceived the tax system to be more complex, while low scores suggest that SME owners/managers perceived the system to be less complex.

Table 5.10

Distribution of Items used to Measure Tax complexity

Construct	Code	Indicator	Source
Tax Complexity	TC01	I think the terms used in tax publications (e.g., SIRS guide books) and in tax return forms are difficult for SME owner like me to understand.	Saad (2011)
	TC02	The sentences and wording in the SMEs Income Tax Return Guide are lengthy and not user-friendly.	
	TC03	The rules related to SMEs income tax are clear.	
	TC04	Most times our SME does refer to others for assistance in dealing with tax matters.	
	TC05	Our SME does not always have a problem with completing and filing the tax return form(s).	
	TC06	As an SME, we find it tedious to maintain all our relevant records for the whole year for tax purposes.	
	TC07	As an SME we do not have to make a lot of effort to understand the explanations given in the State Internal Revenue Service (SIRS) guide books and other similar explanatory material.	

5.5.3.6 Incentives (Positive Inducement) (IPI) Measures

Incentives may be seen as a form of positive inducement that encourages taxpayers to comply with the relevant tax laws and regulations, as well as the penalties or sanctions where there is a likelihood of noncompliant (Slemrod, 1992; Smith, 1992). In the context of this study, incentives (positive inducements) are operationalized as monetary rewards, in the form of monetary incentives for timely filing, as well as other forms of incentives to the taxpayers who comply with the tax laws and regulations in relationship to tax payment.

Incentives (positive inducements) were measured by adapting the 2 items that Manaf (2004) developed. The 2 items were sufficient because, there is evidence suggesting that even a single-item can be very reliable in measuring a construct (e.g. de Boer et al, 2004; Shamir & Kark, 2004). As far as internal consistency reliability is concerned, there is substantial evidence indicating acceptable reliability values for single-item scales (e.g., Ginns and Barrie, 2004; Wanous, Reichers, & Hudy, 1997; Kwon & Trail, 2005), hence 2 items to measure incentives are sufficient.

A 5-point Likert-type scale was used for ranking the items (i.e., interval scale), where 1 = strongly disagree, and 5 = strongly agree comprising the scale with a minimum score of 1 and a maximum score of 5. The measures are shown in Table 5.11. Higher scores indicate their absolute agreement that a higher positive inducement increases compliance and lower scores indicate their absolute agreement that a lower inducement decreases compliance.

Table 5.11
Distribution of Items used to Measure Incentives (positive inducement)

Construct	Code	Indicator	Source
Incentives (positive inducement)	IPI01	Tax collection for SMEs would increase, if incentives were given to SME taxpayers who are honest.	Manaf (2004)
	IPI02	If government plans to give positive inducement to compliant SMEs, the inducement should be given both in kind and cash.	

5.5.3.7 Tax Knowledge (TK) Measures

Tax knowledge is another exogenous construct. According to Loo et al. (2009), tax knowledge can be defined as the ability of the taxpayer to easily understand the tax

laws and regulations in order to fulfil their tax statutory obligations. In the context of this study, tax knowledge is operationalized as the ability of the taxpayer to fully understand the tax law and compute his/her tax liability.

Ahmad et al. (2007), Kasipillai (1997), Manaf (2004), and Mustafa (1997) measured taxpayers‘ knowledge based on the tax laws and concepts, while Eriksen & Fallan (1996), measured taxpayer understanding in relationship to tax laws and computations of tax liabilities.

To measure tax knowledge, the 6 items that Eriksen and Fallan (1996) and Kasipillai (1997) developed were adapted for this study. The items, which are shown in Table 5.12, have been demonstrated to be valid and reliable in measuring taxpayers' knowledge (Alabede, 2012; Kasipillai, 1997).

The items were ranked on a scale of (Yes = 3, No = 2, and I don't know = 1). The interpretation of the scores is as follows: a score of 3 suggests that the respondents are aware and well informed about tax issues; a score of 2 shows they are not informed about the tax issues; while a score of 1 means the respondents are misinformed about the tax issues.

Table 5.12

Distribution of Items used to Measure Tax Knowledge

Construct	Code	Indicator	Sources
Tax knowledge	TK01	Is interest on savings account taxable under the SMEs income tax law?	Eriksen and Fallan (1996); Kasipillai (1997)
	TK02	Rent received from sub-letting part of the SME building is taxable under the Nigerian	

	income tax law
TK03	Dividends received by the SME from another investment are taxable under the Nigerian income tax law.
TK04	Are provisions for doubtful debt and other business/personal expenses allowed for deduction under the Nigerian SMEs income tax law?
TK05	Medical expenses and other business expenses allow for deduction under the Nigerian SMEs income tax law.
TK06	Loss on sale of assets and other business/personal expenses are allowed for deductions under the Nigerian SMEs income tax law.

5.5.3.8 Public Governance Quality (PGQ) Measures

Public governance quality is an exogenous construct. According to Rotberg (2005), public governance quality can be defined as the provision of efficient necessary quality political goods by the government to the taxpayers. In this study, PGQ is operationalized as the efficient provision of desired public goods and services by the government to the taxpayers.

In the context of this study, PGQ was measured with 13 items that Alabede et al. (2011) developed and was adapted in this study. The scales have been shown to be reliable and valid for measuring governance quality. Alabede et al. (2011) also reported that the scale has adequate internal consistency with a Cronbach‘s alpha of 0.87, indicating a satisfactory level of reliability that exceeded the minimum acceptable level 0.70 as Hair et al. (2010) and Nunnally (1978) recommended.

A 5-point Likert-type scale interval scale was used in which responses of the respondents ranged from 1 = strongly disagree to 5 = strongly agree with a minimum score of 1 and a maximum score of 5. A high score indicates that the respondents perceived that PGQ was high, while a low score meant the respondents perceived that PGQ was low.

Table 5.13

Distribution of Items used to Measure Public Governance Quality

Construct	Code	Indicator	Source
Public governance quality	PGQ01	I trust the National Assembly in making good laws for Nigeria.	Alabede et al. (2011)
	PGQ02	There is no free and fair election in Nigeria.	
	PGQ03	I have access to the published accounts and annual report of Federal Government.	
	PGQ04	I am not satisfied with the quality of general infrastructure in Nigeria.	
	PGQ05	I am satisfied with the manner in which the government is handling the health services.	
	PGQ06	I am not satisfied with the manner in which the government is handling the education system.	
	PGQ07	I trust the financial honesty of Nigerian politicians.	
	PGQ08	The diversion of public funds due to corruption is common in Nigeria.	

Table 5.13 (continued)

	Code	Indicator
	PGQ09	Political stability is not declining in Nigeria.
	PGQ10	Ethnic and religious conflict is not a threat to stability in Nigeria.
	PGQ11	Nigeria‘s Judiciary is free of interference of other arms of government.
	PGQ12	Justice is not fairly administered in Nigeria.
	PGQ13	The Nigerian police force is effective in combating crime.

5.5.4 Moderating Variables/Constructs

A moderating variable is seen as a variable/construct that alters the strength and direction of the relationship between dependent and independent variables (Baron & Kenny, 1986). As such, a moderating variable enhances the relationship between two variables. Perceived service orientation and perceived corruption were used as moderating variables in this study and are measured as shown below.

5.5.4.1 Perceived Service Orientation (PSO) Measures

Perceived service orientation can be defined as comprising attitudes of being helpful, thoughtful, considerate and cooperative (Hogan et al., 1984). In this study, PSO is operationalized as the opportunity to increase trust and confidence, through facilitating cooperation with citizens in public administration and governance. The concept is measured with the 5 items that Gangl et al. (2013) developed that were adapted in this study as shown in Table 5.14. The items were rated on an interval scale ranked using a 5-point Likert-type scale with a range of 1 = completely

disagree to 5 = completely agree with a minimum score of 1 and a maximum score of 5.

Past studies have reported that the scale has adequate internal consistency with Cronbach‘s alphas ranging from 0.81 to 0.83 with factor loadings of 0.68 and 0.73 respectively (Gangl et al., 2013). These indicate a satisfactory level of reliability, which exceeded the minimum acceptable level of 0.70 as Hair et al. (2010) and Nunnally (1978) recommended.

Table 5.14
Distribution of Items used to Measure Perceived Service Orientation

Construct	Code	Indicator	Source
Perceived service orientation	PSO01	The tax authority does everything possible to serve SMEs and other people in general.	Gangl et al. (2013)
	PSO02	The tax authority treats SMEs and their businesses with respect.	
	PSO03	The tax authority keeps its promises in relation to SME‘s	
	PSO04	The tax authority treats every SME fairly.	
	PSO05	The tax authority takes SMEs circumstances sufficiently into account.	

5.5.4.2 Perceived Corruption (PC) Measures

Perceived corruption can be seen as an abuse of public power for private benefit (Habib & Zurawicki, 2002). In this study, it is operationalized as bribery or dishonest dealings. Perceived corruption was measured by 4 items that Gbadamosi and Joubert (2005) developed and was adopted in measuring the entire Nigerian system.

The scale has been shown to be reliable and valid with a Cronbach's alpha of 0.72. Gbadamosi and Bello (2009) also reported that the scale has adequate internal consistency, with a Cronbach's alpha of 0.62 indicating a satisfactory level of reliability that exceeded the minimum acceptable level 0.60 that Juul, Rensburg, and Steyn (2012) recommended.

The items were rated on a 5-point Likert-type scale (interval scale) anchored by 1 = strongly disagree, to 5 = strongly agree with a minimum score of 1 and a maximum score of 5. Respondents rated their degree of agreement with respect to how they perceived corruption in the country. Higher numbers indicate greater levels of corruption and lower numbers indicated lower levels of corruption.

Table 5.15
Distribution of Items used to Measure Perceived Corruption

Construct	Code	Indicator	Source
Perceived corruption	PC01	Individuals pay bribes and tips to get things done.	Gbadamosi and Joubert (2005)
	PC02	Organizations pay bribes and tips to get things done.	
	PC03	If public officials act against rules, help can be obtained elsewhere.	
	PC04	Bribery and corruption is common in Nigeria.	

5.5.5 Demographic Variables

In the course of this research, the demographic variables related to the respondents were incorporated. These variables included: gender, age, educational qualification, years of experience, and the length of existence of the SMEs. Gender was measured as a categorical variable, while age, educational qualifications, years of experience,

and the length of existence of SMEs were treated as continuous variables. Gender was coded with a categorical variable ~~–1~~" for male and ~~–2~~" for female.

The respondents were required to indicate their age. Therefore, age was also coded using dummy variables with "1" = less than 30 years, ~~–2~~" = 31-40 years, ~~–3~~" = 41-50 years, and ~~–4~~" = above 50 years.

Similarly, the educational qualifications of the respondents were also assessed using categorical variables with ~~–1~~" = Doctorate Degree, ~~–2~~" = Master's Degree, ~~–3~~" = Bachelor degree or equivalent, ~~–4~~" Diploma or A - level equivalent, and ~~–1~~" GCE or O - level equivalent. Years of experience of the respondents was also anchored using dummy variables with ~~–1~~" = 1-5 years, ~~–2~~" = 6-10 years, and ~~–3~~" = above 10 years.

Furthermore, the same coding system was also applied to the years of existence of the SMEs with ~~–1~~" = Less than 5 years, ~~–2~~" = 6-10 years, ~~–3~~" = 11 -15 years, ~~–4~~" = 16-20 years, and ~~–5~~" = More than 20 years.

5.6 Research Ethical Considerations

Research ethic is normally seen as a set of behaviours, norms or standards that must be conformed to by researchers. Ethical behaviour should be adhered to by researchers to avoid infringement on the rights of the participants (Bryman & Bell, 2003). Researchers should not force respondents in any way to partake in the research. Respondents have the right to withdraw from participating in the research

and should also have access to the results of the research at any point in time. Additionally, objectivity in terms of reporting is maintained when emphasis is laid on the ethical considerations of research (Zikmund, 2005).

In the conduct of this study, this research addresses the following ethical issues with regards to the development of questionnaire, and data collection and analysis stages as well as the whole research. The ethical issues employed and treated in this study are as follows:

1. **Voluntary Participation**: In compliance with this, the researcher provided an introductory letter from Universiti Utara Malaysia and the Department of Accounting, Kaduna State University, Nigeria with the research questionnaire indicating to the respondents that they were free to answer any question at their convenience.
2. **Adequate information:** The letter furnished the respondents with the required information on the aims and objectives of the research.
3. **Privacy and confidentiality:** The participants were assured of the confidentiality of the information provided in the course of the research. Assurance was also given to the respondents that the information provided would only be used for research purposes.

This research adhered to ethical consideration in line with the rules that Bouma (2000) highlighted including: 1) respondents‘ dignity, 2) the benefits of the research outweighed the potential harm of the research, 3) no one was forced to participate, 4) the safety of the respondents, while participating in the research, and 5) the right to

access the results of the research to ensure that their interests were not misrepresented.

5.7 Pilot Study

Carrying out a pilot study before actual data collection is always necessary. A pilot study is not necessarily seen as a pre-test, but is used more formatively to help the researcher in constructing pertinent lines of questioning (Yin, 1994). Sekaran (2000) noted that a pilot study is normally conducted to correct any inadequacies in the instrument and the method prior to data collection. This is because the researcher has ample time to check the reliability, validity and viability of the research instrument as well as to determine the time needed for conducting the actual study.

Consequently, this study underwent a pilot test on SME owners/managers in Katsina state, Nigeria. The purpose of conducting the pilot study was to achieve a flawless questionnaire, so that the researcher could make all necessary modifications afterwards. In the process, the pilot study incorporated two stages including: 1) question development and 2) questionnaire development after the pilot study. The purpose of these stages is to establish how to rephrase each question, to evaluate how respondents interpreted the meaning of the questions, and to also check whether the range of response alternatives was sufficient (De Vaus, 1995).

In summary, the reasons behind the pilot study can be summarized into: 1) examining the items in the questionnaire in terms of their validity and reliability, 2) assessing

the adequacy of item wording, phrasing and construction for producing accurate results; 3) evaluating whether questions are framed in a way that would yield a better response; and 4) determining if the respondents could supply the needed data (Bambale, 2013). By and large, a pilot test provides an avenue for the researcher to address technical issues and the interpretation of the questions in terms of ambiguity and to avoid potential errors (Hair et al., 2007).

An appropriate sample size for a pilot study according to Malhotra (1999) normally comprises 15 to 30 elements, which, however, can be increased depending on the situation. In this study, one hundred and ten questionnaires were issued for the purpose of conducting the pilot test. The number of questionnaires was increased to one hundred and ten to account for a low response rate.

The questionnaires were distributed to SMEs in Katsina State, Nigeria, which was not part of the two states considered for this study. Primarily, the SMEs owners/managers were the target respondents of this study. However, in some SMEs visited, the owners were not in situ; instead, some had their managers in situ. Because of this, either the owners or the managers were accepted as respondents in all the SME branches visited because their operational procedures and structures were similar.

Of the one hundred and ten questionnaires issued for the pilot test, seventy-four were actually returned within the stipulated time frame of three weeks during the month of

February 2015. This was a response rate of 67%. However, eight questionnaires were rejected due to improper filling. Thus, the usable questionnaires stood at sixty-six, which comprised a usable response rate of about 60%. In the course of the pilot test, some SMEs out rightly rejected the questionnaires whereas others politely received the questionnaires.

In the literature, different tests of reliability exist. Nevertheless, the most commonly used method that scholars employ is "the internal consistency reliability" test that Litwin (1995) proposed. Internal consistency has to do with the extent to which items of a particular construct/variable align together and are capable of measuring the said construct and are correlated with one another. Traditionally Cronbach's alpha is used to measure internal consistency and reliability in the area of social science research, but this tends to provide a too conservative measurement for PLS-SEM, which was not used in this current study. Prior studies have suggested using composite reliability as a replacement (Bagozzi & Yi, 1988; Hair, Sarstedt, Ringle, & Mena, 2012), and composite reliability was employed in this study.

PLS path modeling (Wold, 1974; 1985) using Smart PLS 2.0 M3 software (Ringle, Wende, & Will, 2005) was used to assess the internal consistency reliability of the constructs used in the pilot study. Specifically, the PLS algorithm, as recommended by Geladi and Kowalski (1986), was calculated to ascertain the values of the average variance extracted (AVE) and the composite reliability coefficients of the constructs as shown in Table 5.16.

Table 5.16
Reliability and Validity of Constructs (n = 66)

S/N	Construct	No. of Indicators	Average Variance Extracted (AVE)	Cronbach's alpha	Composite Reliability
1	Tax compliance behaviour	5	0.72	0.896	0.926
2	Work family financial commitment	10	0.516	0.907	0.913
3	Fuel subsidy removal	6	0.744	0.928	0.945
4	Tax rates	4	0.558	0.753	0.834
5	Probability of detection	4	0.626	0.807	0.869
6	Tax complexity	3	0.585	0.651	0.808
7	Incentive (positive inducement)	2	0.760	0.698	0.863
8	Tax knowledge	3	0.505	0.523	0.741
9	Public governance quality	4	0.599	0.781	0.856
10	Perceived service orientation	4	0.761	0.895	0.927
11	Perceived corruption	2	0.782	0.778	0.876

As a rule of thumb, the recommended threshold values for composite reliability are .70 and above. As shown in Table 5.16, the calculated values for composite reliability ranged from .741 to .945, which exceeded the recommended level of .70 as set in previous studies (Bagozzi et al., 1991; Gefen, Straub, & Boudreau, 2000), suggesting that the measurement model achieved satisfactory internal consistency reliability. Furthermore, Nunnally (1978) and Hair et al. (2010) documented that a

coefficient greater than .70 was considered to be acceptable. Hence, the adapted instruments were reliable.

In addition to composite reliability, Cronbach‘s alpha was also used to get the inter-item consistency reliability. As a rule of thumb, higher Cronbach‘s coefficient alpha demonstrates higher reliability. In the literature, it has been reported that, a satisfactory level for reliability with a Likert-type scale that is lesser than 10, should have a Cronbach‘s alpha ≥ 0.7, nevertheless a Cronbach‘s alpha values of 0.60 to 0.70 are consider the minimum limit of acceptability (Hair et al., 1998, p. 88). Similarly, Sekaran (2000, p. 312) suggested that a Cronbach‘s alpha of 0.60 is acceptable. Studies suggested that a Cronbach‘s alpha values of 0.60 to 0.70 are considered the minimum limit of acceptability (Hair et al., 1998, p. 88). However, Griffee (2012) recommended an acceptable threshold of 0.5 to be adequate, while 0.7 to be high. As shown in Table 5.16, all the Cronbach‘s alphas of the study constructs were 0.5 to 0.7 which were considered acceptable.

Furthermore, in order to assess the convergent validity of the constructs, the Average Variance Extracted (AVE) should be above .50 (Bagozzi & Yi, 1988; Bagozzi et al., 1991; Chin, 1998; Fornell & Larcker, 1981; Gefen et al., 2000). As shown in Table 5.16, all the values of AVE were greater than the acceptable values of .50 (Bagozzi & Yi, 1988; Bagozzi et al., 1991; Chin, 1998). That means that at least 50% of the measurement variance was captured by the constructs. Factor loadings exceeded the recommended threshold of .70 and above (Hair et al., 2010; Nunnally, 1978) were

included while other items with factor loadings below .70 were deleted consistent with the suggestions Hair et al. (2012) made, as such the convergent validity of the constructs used were confirmed.

5.8 Data Collection Methods and Procedure

In the process of data collection, this study adopted the quantitative technique that has the purpose of providing objective and reliable numerical facts about a particular phenomenon (Fowler, 2013). In the literature, one method identified for data collection when using the quantitative technique is the survey approach through a questionnaire. Several previous researches in the area of tax compliance have used the survey as the method of data collection. These includes Gangl et al. (2013), Jabbar & Manaf (2006), Kasipillai (1997), Mustafa (1997), Saad, 2011, 2012, Song & Yarbrough (1978), and Stefura (2011, 2012).

The current study judiciously adopted the questionnaire method in gathering information from the respondents (SME owners/managers). It further utilized a self-administered procedure called the "drop-off and pick procedure" in administering the questionnaire to the SME owners (Sekaran, Robert, & Brain, 2001). This was necessitated because access to the Internet and other infrastructural facilities such as postal services are very poor and inefficient, and because of this the researcher embarked on self-administration of questionnaire in the form of the drop-off and pick procedure as the only viable option in Nigeria.

Moreover, Ilobube, Ubogu, and Egbezor (2007) noted that poor access to the Internet and other telecommunications, as well as poor postal services, are challenges in Nigeria. Adomi et al. (2007) further showed that about 72% of potential respondents were served with the research instruments through personal contact in Nigeria while about 17% were served through the postal method and 11% through Internet facilities. Thus, the drop off and pick-up method was employed to improve the response rate (Hair et al. 2007). Accordingly, the researcher administered the questionnaire to the respective SMEs businesses located in Kaduna and Kano states, Nigeria.

The data collection was scheduled to last for 4 months during the period from 1 March 2015 to 11 July 2015. The researcher commenced data collection on 9 March 2015. The researcher set one month for the actual distribution of the questionnaires to the respondents, which ended on 11 April 2015. During that time, a total of 450 questionnaires were distributed, and each questionnaire was accompanied by a covering letter.

As of 29 May 2015, a total of 269 questionnaires were retrieved from the respondents, even though the researcher gave additional days to the respondents in order to allow them to celebrate Nigeria's democracy day plus the change of government held on 29 May 2015. During the period from 1 June 2015 to 11 July 2015 an additional 18 questionnaires were collected from the respondents. In sum, a total of 287 questionnaires were retrieved from the respondents.

5.8.1 Survey Questionnaire

Several authors have defined a survey questionnaire. As Sekaran (2003) noted, a research questionnaire can be seen as ~~"a~~ pre-formulated written set of questions to which respondents record their answer, usually within closely defined alternatives" (p. 236). Fowler (2013) also defined a questionnaire as a set of structured questions tailored to collect data required for research, particularly information from the targeted respondents. Therefore, gathering data through questionnaire leads to both cost and time reductions allowing the respondents to complete the instrument at their own convenient time without undue interference from the researcher (Adomi & Nakpodia, 2007). The questionnaire designed for this study examined the determinants of tax compliance behaviour of SMEs in Nigeria, and further examined the perceived service orientation and perceived corruption as the moderating variables/constructs.

Consequently, all the questions were prepared in the English language, as English is the official language of communication in Nigeria, which SME owners/managers can easily understand. The questionnaire was divided into two sections. Section one was further divided into eleven parts.

Section one; Part One examined the tax compliance behaviour (TCB) of the Nigerian SMEs owners/managers. Part Two determined the work family financial commitment (WFFC) faced by SME taxpayers. Part Three investigated the effects of fuel subsidy removal (FSR) as it affects the SMEs owners/managers in the country.

Part Four examined the magnitude of the tax rates. Parts Five, Six, Seven, Eight, and Nine examined the probability of detection, tax complexity, incentives (positive inducement), tax knowledge and the public governance quality (PGQ) of the entire country as they relate to SMEs taxpayers. Parts Ten and Eleven investigated the moderating effect of perceived service orientation and perceived corruption on the relationship between economic factors and psychological factors.

Section Two was only one part: Part Twelve of the study. This was related to the background profile of the respondents. This information included age, gender, years of experience, highest educational qualifications, and the life span of the SME in question (See Appendix F for the sample questionnaire). The structure of the questionnaire is shown in Table 5.17.

Table 5.17
Structure of Questionnaire

Part	Construct	Type of question	Number of items
1	Tax compliance behaviour	Likert scale	15
2	Work - family financial commitment	Likert scale	18
3	Fuel subsidy removal	Likert scale	13
4	Tax rates	Likert scale	6
5	Probability of detection	Likert scale	8
6	Tax complexity	Likert scale	7
7	Incentives (positive inducement)	Likert scale	2

Table 5.17 (continued)

Part	Construct	Type of question	Number of items
8	Tax knowledge	Categorical	6
9	Public governance quality	Likert scale	13
10	Perceived service orientation	Likert scale	5
11	Perceived corruption	Likert scale	4
12	Demographic	Categorical	5

5.8.2 Instrument Validity

The validity of an instrument can be grouped into two main categories, namely, 1) content validity and 2) construct validity. Content validity refers to the suitability of the questions to measure what they are supposed to measure. This can be achieved through adopting or adapting items, which were used in previous research (Boo, Busser, & Baloglu, 2009; Konecnik & Gartner, 2007).

This questionnaire was first checked for content validity by experts to assess whether misunderstandings or ambiguities of expressions existed (Chen & Hu, 2010; Gay, 1987). Experts at the Universiti Utara Malaysia carried out the first content test. The second content validity was carried out by a panel of experts, comprising four professors, three senior lecturers and four tax professionals at Ahmadu Bello University, Nigerian Defence University, and Kaduna State University, all in Nigeria from 28 February 2015 to 1 March 2015.

Generally, they all agreed that most measures were valid except for a few items and that the research instruments were capable of producing valid results that would

benefit the Nigerian economy. Based on their feedback, some modifications were made to the original questionnaire.

They advised that certain items be modified before the actual survey was conducted. They included: 1) "I think the terms used in tax publications (e.g., SBIRS guide books) and in the tax return forms are difficult for an SME owner like me to understand." This was replaced by "I think the terms used in tax publications (e.g., SBIRS guide books) and in tax return forms are difficult" and 2) "Trading or exchanging goods or services from one SME to another without reporting it in a tax return is permissible.” This was replaced by "trading goods or services from one SME to another without reporting it in a tax return is permissible".

The few items used in this research were adopted while others were adapted with few modifications from the literature in which previous research had confirmed their convergent and discriminate validities. Investigating the validity of the instrument is important due to the fact that the items were used in different settings. Hence, checks were carried out during pilot testing of the questionnaire. Lastly, all the 97 items were applied for data collection.

Construct validity is concerned with the theoretical and the hypothetical development of the relationships between the variables (Pallant, 2007). Hair et al (2007) were of the view that construct validity could be verified using two methods. The first method was convergent validity, which investigates whether the construct

of the research relates positively in the evaluation of the construct. The second method was discriminant validity, which investigates whether correlations exist between the research construct and other different constructs.

Before going to the field, on 27 February 2015 a cover letter from the Department of Accounting Kaduna State University, Nigeria was prepared to request the cooperation of the SME owners/managers, which further supported the letter for data collection prepared by OYAGSB, Universiti Utara Malaysia for the researcher (See Appendices A and B).

In addition, the researcher also visited the SMEDAN and the States Board of Internal Revenue Services, in Kaduna and Kano on 1 to 4 March 2015 to seek their support for the cooperation of SMEs. As a result, the data collection letter was stamped by the agencies that had authenticated the survey (See Appendices C, D, and E).

5.9 Control for Measurement Error

Measurement error can be seen as a degree to which the variables the researcher measures do not perfectly describe the variable of interest (Hair et al., 2010). Measurement error may surface from many sources, for instance from data entry to the operationalization and the definition of construct. At times, it might even arise from the responses of the target participants. Illustratively, some participants may respond to some answers in a one way or manner, when the questions are supposed to be interpreted in another way. This type of scenario may result in measurement errors. Furthermore, scaling techniques can also lead to measurement error. Hence,

in this study, the researcher kept measurement errors at a minimum by employing interval scales for the items and conducting several validity and reliability tests for both the pilot test and the main study.

Convergent and discriminant validity were conducted for the main study, which showed that the measures determined for this study were actually capturing the respective constructs. Moreover, employing PLS-SEM also addressed other issues of measurement error in making the estimates of relationships among the various constructs (Hair et al., 2010). This study employed PLS-SEM or variance based SEM using Smart PLS 2.0 M3 software Ringle et al. (2005) developed, which seeks to ensure that measurement errors are properly accounted for, especially from the onset of the measurement model or outer model.

5.10 Method of Data Analysis

This section outlined the proposed method of analysis in evaluating the survey data. In accomplishing the research objectives, the analysis begins with the response rate, followed by the missing data, then the non-response bias test and common method variance test was also discussed. Next was a brief discussion of the descriptive analysis as well as an introduction to structural equation modeling and partial least squares. This was followed by the justification for choosing PLS-SEM and the various models of PLS.

5.10.1 Response Rate

In proving the representativeness of the response rate of the participants, the demographic characteristics of the responses with the entire population are normally compared (McInnis, 2006). In this study, the response rates in both Kaduna and Kano States reflected the representation of the entire population.

5.10.2 Missing Data

Differing opinions exist among experts concerning the best technique for dealing with missing data in research. Missing data do pose a problem for scholars and researchers and affect the results of an empirical study negatively (Cavana et al., 2001). Missing data normally occur when omissions are present in one or more items in a survey. The inability of a researcher to accurately find and treat missing data is capable of creating negative consequences for the outcomes of an empirical inquiry.

Hair et al. (2010) felt that missing data less than 10% of the respondents (cases) might be replaced through any imputation method. Other researchers have suggested that mean substitution is the easiest way of replacing missing values if the total percentage of missing data is 5% or less (Little & Rubin, 1987; Raymond, 1986; Tabachnick & Fidell, 2007), and most scholars have agreed that missing data of 5% or less is non-significant (Kura, Shamsudin & Chauhan, 2013; Tabachnick & Fidell, 2007). In the context of this study, the mean substitution method was used to replace the missing items because the percentage of missing data was below 5%.

5.10.3 Non-Response Bias

To ensure a lack of bias in the responses of the respondents, a non-response bias test was conducted. Tse et al. (1995) said that non-response bias could affect the validity of the survey results. In this regard, Benke and Street (1992) opined that the most widely used approach to prove non-response bias was by comparing early responses to late responses. If no significant differences exist between the two groups of responses, the assumption can be made that no problem of non-response bias exists. In order to account for the possibility of non- response bias, Armstrong and Overton (1977) suggested time-trend extrapolation for estimating non-response bias. This method compares the early and late respondents (i.e., non-respondents). They claimed that late respondents share almost the same features with non-respondents. In the context of this study, the extrapolation method was adopted in order to identify the lack of non-response bias in line with other tax compliance studies of Alabede et al. (2012), Jabbar (2009), and Manaf (2004).

5.10.4 Common Method Variance Test

Common Method Variance (CMV) is seen as the variance that is habitually aligns itself with the measurement procedure rather than with the actual constructs the measures represent. It has been generally agreed that common method variance is a major concern for self-reported survey research (Lindell & Whitney, 2001; Spector, 2006). This issue, therefore, is viewed as a potential threat to behavioural research because it might lead to spurious results in relationship to self-reported measured variables.

In the process of addressing the issue of CMV in this study, the recommendations of Podsakoff, Mackenzie, Lee, and Podsakoff (2003) and Viswanathan and Kayande (2012) were taken into consideration. To minimize the effect of CMV, some procedural and statistical controls that Podsakoff et al. (2003) recommended were employed.

They included: reverse-worded questions, elimination of item ambiguity, allowing the respondents‘ anonymity and Harman‘s single-factor test. In the literature, Harman‘s single-factor test has been identified as one of the most widely used techniques by researchers to address the problem of common method variance and was therefore adopted in this study. In this procedure, Podsakoff and Organ (1986) pointed out that all variables of interest are normally subjected to an exploratory factor analysis. Then the results of the unrotated factor solution are examined to ascertain the number of factors that are necessary to account for the variance in the variables.

5.10.5 Descriptive Analysis

Sekaran and Bougie (2010) posited that descriptive statistics are normally employed to describe a given phenomenon of interest vis-à-vis its interpretation and presentation. In the context of this study, the information was analyzed statistically with regards to how frequently the phenomenon of interest actually occurs, in terms of averages or central tendencies and the magnitude or extent of their variability in terms of standard deviations. Furthermore, descriptive statistics were also used to

check all the variables to ensure that the underlying assumptions of the technique used in the study were not violated (Coakes, 2013; Pallant, 2010).

The descriptive statistics provide a statistical analysis of the profile information of the respondents and the characteristics of the SMEs. The demographic profile was also analysed in terms of their frequency of occurrence and percentages.

Finally, the descriptive statistics of all the variables in the model with respect to minimum and maximum values, fair score, or standard of central tendency (mean) and the scope of variability (standard deviation) were calculated. Thus, this study used descriptive statistics analysis to adequately reveal the characteristics as well as the constituent elements of the study‘s sample. The descriptive statistics of this study are contained in the next chapter.

5.10.6 Introduction to Structural Equation Modeling and Partial Least Squares Methods

a. Structural Equation Modeling (SEM)

In modern-day research, Structural Equation Modeling (SEM) has been widely accepted among researchers as a result of its versatility in performing path modeling with unobserved variables (Chin & Newsted, 1999). Hair, Black, Babin, Anderson, and Tatham (2006) noted that this relatively new statistical tool originated in the first half of the twentieth century but only became widely used in the 1990s. In particular, the use of SEM became more acceptable than other techniques stems from its

flexibility in terms of interaction between theory and data (Chin & Newsted, 2003; 1999). Additionally, the wide acceptability of SEM aligns with four attributes of SEM itself. They are:

1. The ability to represent latent concepts and correct for measurement error in the estimation process;
2. The estimation of multiple and interrelated dependence relationships;
3. Aimed at explaining the covariance among the measured items; and
4. A theory-based approach, where strong theory is needed to specify relationships in the models (i.e., confirmatory analysis) (Hair et al., 2006).

Two components are embedded in SEM. These components are: 1) a measurement model connecting a set of observed indicators or manifest variables to a smaller set of latent or unobserved constructs, and 2) a structural model linking the hypothesized model's latent constructs (Hair et al., 2006). Latent constructs could be seen as unobserved variables that are to be measured indirectly by two or more observed indicators or manifest variables. In a measurement model for instance, the validity and reliability of these observed indicators in measuring the latent constructs are addressed.

Having established the reliability of the measures in the measurement model, the relationship between the latent constructs then can be assessed by path analysis in testing the research hypotheses. Regardless of the positive attributes of SEM, the approach also has several drawbacks, especially with the Covariance-Based SEM

(CB-SEM) demonstrated by software such as LISREL, EQS, AMOS, SEPATH and RAMONA) that demand further attention (Chin, 1998a). The constraints are as follows:

1. It is based on parametric assumptions wherein the observed variables are expected to be distributed normally and observations are independent of one another (Chin & Newsted, 1999).
2. An adequate sample size is needed because an inadequate sample size may lead to spurious results (i.e., poor parameter estimates and model test statistics) (Chou & Bentler, 1995; Hu & Bentler, 1995), and a tendency to over-reject models, especially when the latent variables are dependent (Hu & Bentler, 1995).
3. It is also associated with model complexity because a complex model with a number of indicators approaching 50 or even 100 may likely slow down the software packages (Chin & Newsted, 1999).
4. In the application of CB-SEM, the measured items of a latent variable are expected to all be reflective. An attempt to use formative measures will pose a problem for CB-SEM. If the researcher attempts to include formative measures and treat them as reflective, the results of the estimate will be invalid (Chin, 1998), as a result, may result in a misleading research conclusion (Cohen, Cohen, Tereci, Marchi, & Velez, 1990).

MacCallum and Browne (1993) clearly demonstrate that attempts to explicitly model formative indicators in an SEM analysis can lead to identification problems and

efforts to modify them are generally unrewarding. Another problem with the CB-SEM is factor indeterminacy in which the case values for the latent variables cannot be obtained in the process (Chin & Newsted, 1999). Considering this scenario, the scores for the latent variables cannot be estimated to predict the observed indicators. Thence, CB-SEM may be unsuitable for studies aiming at prediction.

Finally, CB-SEM places an emphasis on a strong theoretical footing. In CB-SEM, the assumption is that the analyses are performed using a strong theory with well-developed measures that have gone through a series of exploratory analyses (Chin & Newsted, 1999). This requirement suggests that it might not be an appropriate technique when the theory is relatively tentative. In this regard, consideration should be more aligned with the data than with the theory.

b. Partial Least Squares Structural Equation Modeling (PLS - SEM)

Bearing in mind some of the drawbacks of CB-SEM, a Component-Based SEM was developed. This approach first came into being in the 1960s and 1970s based on the work of Wold (1975) who proposed a solution to the multicollinearity problem by employing PLS regression (Rouse & Corbitt, 2008). Unlike covariance-based SEM, which emphasises model testing more, the introduction of PLS was aimed at prediction (Chin, 1998b; Chin et al., 2003; Chin & Newsted, 1999).

The PLS algorithm aims at obtaining the best weight estimates for each block of manifest variables in relationship to each latent construct. Therefore, it is associated

with the problem of indeterminacy, and hence is capable of providing an accurate definition of component scores (Chin et al., 2003). The component score generated for each latent construct will then maximise the variance to explain the dependent variables. Also indicators can be in the form of either formative or reflective measures (Chin, 1998b).

Currently, PLS has also been gaining interest and popularity, not only due to its ability to model latent constructs under abnormal or non-normal conditions (Chin et al., 2003), but also because of its limited requirements for measurement scales, wherein it can combine categorical, interval, and ratio level indicators in a single model (Chin & Newsted, 1999). Furthermore, attributes such as sample size do not pose a problem in PLS, because PLS has shown to successfully work with a sample of as little as 30 to a more complex model with 672 indicators, 21 latent variables and 200 cases (Chin et al., 2003).

In a nutshell, Chin and Newsted (1999) summarized the key differences between the CB - SEM and PLS - SEM, as reproduced in Table 5.18.

Table 5.18
Comparison between Covariance-based SEM and PLS Criteria

S / n	Criteria	Co-variance based SEM	PLS-SEM
1	Objective	Parameter oriented	Prediction oriented
2	Approach	Covariance-based	Variance-based

Table 5.18 (continued)

S / n	Criteria	Co-variance based SEM	PLS-SEM
3	Assumption	Typically multivariate normal distribution and independent observations (parametric)	Predictor specification (nonparametric)
4	Parameter estimates	Consistent	Consistent as indicators and sample size increase
5	Latent Variable scores	Indeterminate	Explicitly estimated
6	Epistemic relationship	Typically only with reflective indicators	Can be modelled in either formative or reflective mode
7	Implication	Optimal for parameter accuracy	Optimal for prediction accuracy
8	Model complexity	Small to moderate complexity (e.g., less than 100 indicators)	Large complexity (e.g., 100 constructs and 1,000 indicators)
9	Sample size	Minimal recommendations ranging from 200 to 800	Minimal recommendations ranging from 30 to 100 cases

5.10.7 Justification for using PLS - SEM

The preceding section provided the yardstick for justifying the use of PLS in this study. PLS was considered more appropriate than CB-SEM for several reasons. First, PLS provides better prediction capability, which suits the objective of this study that is to predict the tax compliance behaviour of SME owners/managers. Second, the data distribution in this study fails to follow a multivariate normal distribution, which is a requirement under CB-SEM, but not for component-based SEM or PLS because PLS treats non-normal data relatively well.

Therefore, this method was selected for this study to help counter the normality problem in the course of data analysis for the current study. Third, all the constructs in this study are measured in the reflective mode, which can fit in the PLS model as well as in the CB-SEM. Fourth, the PLS technique was preferred over others for this study because structural equation models have been demonstrated to be superior models that perform estimations better than other forms of regressions (Preacher & Hayes, 2004).

As such, the use of PLS seems more appropriate in this study because it combines both interval and categorical indicators in a single model. Finally, it has been reported that PLS-SEM accounts for measurement errors and can provide more accurate and robust estimates of moderating effects (Chin, 1998a). The PLS software used in this study was SmartPLS Version 2.0 M3 (Ringle et al., 2005). The next section describes model evaluation under PLS-SEM.

5.10.8 PLS Model Evaluation

Because PLS-SEM does not make any distributional assumptions other than predictor specification, traditional-based techniques methods (embedded with parametric assumptions) would not be appropriate for the evaluation of significance. Wold (1980) argues that the PLS approach should apply prediction-oriented measures that are also nonparametric. For that reason, several techniques were implemented to evaluate both the measurement model and the structural model. The measurement model assessment is crucial to establish the validity and reliability of

the model, while the structural model assessment is important for the model‘s predictive capability. The details on the techniques employed are discussed in the following sections.

a. Assessing the Measurement Model

In assessing the measurement model, several statistical measures were adopted in order to ascertain its validity and reliability. For easy assimilation and understanding, the techniques are discussed in the following two subsections.

i. Construct and Item reliability

In ascertaining construct reliability, the reliability of reflective constructs that require high internal consistency among their indicators was adopted. In reflective constructs, the reliability of the measures is normally demonstrated by a high Cronbach‘s alpha or internal consistency scores (Petter, Straub, & Rai, 2007). However, this study adopts internal consistency scores, also known as composite reliability, generated by PLS bootstrapping analysis. Prior studies have suggested the use of ―composite reliability‖ as a replacement for Cronbach's alpha in PLS-SEM analysis (Bagozzi & Yi, 1988; Hair et al., 2012).

Additionally, the composite reliability coefficient provides a much less biased estimate of reliability than Cronbach‘s alpha coefficient because the composite reliability coefficient assumes that all items contribute the same magnitude to its construct without considering the actual contribution of individual loadings (Barclay,

Higgins, & Thompson, 1995; Gotz, Liehr-Gobbers, & Krafft, 2010). Cronbach's alpha may lead to spurious estimates of the scale reliability. Composite reliability takes into account the differences in the loadings, which of course can be interpreted in the same way as Cronbach's alpha.

Similarly, another measure of reliability for reflective constructs is the Average Variance Extracted (AVE) scales. The scales should exceed 0.5 (Fornell & Larcker, 1981) indicating "50% or more variance of the indicators should be accounted for" (Chin, 1998b, p. 321). The interpretation of internal consistency reliability using the composite reliability coefficient should be in accordance with the rule of thumb Bagozzi and Yi (1988) and Hair, Ringle, and Sarstedt (2011), who recommend that the composite reliability coefficient should be at least .70 or more.

Furthermore, item or indicator reliability is critical because higher outer loadings of the manifest variable are perhaps an indication of communality of the indicators, which are always captured by the said construct. According to Creswell (2010) and Hair et al. (2010), item reliability shows the extent of the variability possessed by the item that are explained by the construct, and, at times, is known as the variance extracted from the item. Item reliability, which is the square of the standardized indicators outer loadings, was also adopted in this study.

ii. Construct validity

For reflective constructs to be valid, they are required to meet the convergent and discriminant validity conditions. The AVEs of each construct show the ratio of the sum of its measurement item variance as extracted by the construct relative to the measurement error attributed to its items (Chin, 1998b; Gefen & Straub, 2005). The constructs are said to be converged when the Average Variance Extracted (AVE) is .50 or above as the minimum threshold (Chin, 1998; Bagozzi & Yi, 1988; Fornell & Larcker, 1981), and this criterion was therefore adopted in this study.

Discriminant validity has to do with whether measures that should not be related are actually not related. Duarte and Raposo (2010) see discriminant validity as the extent to which a particular latent variable is different from another. Similarly, discriminant validity occurs when each indicator correlates weakly with all other constructs except its associated construct (Gefen & Straub, 2005). Furthermore, Hair et al. (2010) and Sekaran and Bougie (2010) said that the magnitude to which a construct appears to be naturally distinct from others through empirical standards describes the discriminant validity of that construct.

Primarily, two ways of describing discriminant validity exist in the literature. First is by examining the cross loadings of the manifest variable through ascertaining that the outer loadings on the associated construct are greater than all of its loadings on another construct (Chin, 1998; Hair et al., 2011). If any of the cross loadings exceed the indicators‘ outer loadings, a problem of discriminant validity may be the cause. Second, the discriminant validity of the construct can be ascertained by using the AVE of the construct (Fornell & Larcker, 1981). In order to ascertain this, the

correlation among the latent variables is compared with the square root of the average variance extracted as Fornell and Larcker (1981) suggest.

In this study, discriminant validity was ascertained based on the suggestions of Chin (1998) and Fornell and Larcker (1981) by comparing the indicator loadings with other reflective indicators in the cross loading table, as well as using the square root of the AVE of the construct. As a rule of thumb for ascertaining and evaluating discriminant validity, a score of .50 or more has been suggested for the values of AVE of a construct (Fornell & Larcker, 1981). The second criterion is that the square root of the AVE should be greater than the correlations among the latent construct (Fornell & Larcker, 1981).

b. Assessing the Structural Model

Prediction-oriented indicators, such as the coefficient of determination *R* squared (R^2) value, path coefficients, effect size (f^2), predictive relevance (Q^2), moderating effect test, and strength of the moderating effects techniques, are used in this study to evaluate the structural model. All these tests, which are nonparametric in nature, are used to be consistent with the distribution-free approach of component-based SEM.

i. Coefficient of Determination (R^2) Value

One critical reason for adopting PLS-SEM as a statistical technique lies in its predictive powers. Hair et al. (2011), Hair et al. (2012), and Henseler, Ringle, and Sinkovics (2009) posited the *R - Squared* value (the coefficient of determination) as

an important criterion for assessing the structural model in PLS-SEM. The *R-Squared* value represents the magnitude of explained variance of the endogenous construct that can be explained by one or more predictor variable (Elliott & Woodward, 2007; Hair et al., 2010; Hair et al., 2006). Hair et al. (2010) claimed that an acceptable value of *R - Squared* depended on the context of the research. Falk and Miller (1992) proposed a minimum value of .10 as an acceptable level for research. *R - Squared* values of .25, .50, and .75 in PLS-SEM can be considered as being weak, moderate and substantial respectively Falk and Miller (1992), and this standard was adopted in this study as a basis.

ii. The Path Coefficient

In the structural model, two important issues were considered in this current study in line with Hair, Hult, Ringle, and Sarstedt's (2013) suggestion. The issues are: 1) the significance of the construct relationship; and 2) the relevance of the coefficient in the structural model. With regard to the above considerations, the routine assessment of the *t - values* or bootstrapping confident interval was adopted. Specifically, the *t - values* were used in either supporting or disproving the study's hypotheses.

iii. The Effect Size (f^2)

According to Chin (1998), effect size reveals the actual relative effect of a particular predictive latent construct on criterion latent construct(s) as a result of changes in *R - Squared*. Specifically, the effect size f^2 captures the individual contribution of predictor variables (FSR, incentives (positive inducement), probability of detection,

PGQ, tax complexity, tax knowledge, tax rates, and WFFC) to the *R – squared* value of a given targeted construct of tax compliance behaviour in the structural model.

Effect size can be calculated as the increase in *R – Squared* of the latent construct to which the path is connected relative to the latent construct's proportion of unexplained variance (Chin, 1998). Wilson, Callaghan, Ringle, and Henseler, (2007) outlined the following formulae for the easiest calculation of effect size, which is expressed below:

$$\text{Effect size: } f^2 = \frac{R^2 \text{ Included} - R^2 \text{ Excluded}}{1 - R^2 \text{ Included}} \qquad 5.4$$

Furthermore, Cohen (1988) provided guidelines for assessing the f^2 values, with .02, .15, and .35 respectively representing small, medium, and large effects of the endogenous constructs. This standard was adopted in this study.

iv. The Predictive Relevance (Q^2)

In addition to the assessment of R^2 values as one criterion of predictive relevance. Geisser (1974) and Stone (1974) recommended the use of Stone-Geisser's Q^2 value, which portrays a model‘s predictive importance. This study also applied Stone-Geisser test of predictive relevance of the research model using blindfolding procedures (Geisser, 1974; Stone, 1974). Duarte and Raposo (2010) pointed out that the Stone-Geisser test of predictive relevance is normally employed as a supplementary assessment of goodness-of-fit in PLS-SEM.

In this study, the researcher applied blindfolding in ascertaining the predictive relevance of the research model because the ―blindfolding procedure is only applied to endogenous latent construct that possess a reflective measurement model operationalization" (Sattler, Völckner, Riediger, & Ringle, 2010). McMillan and Conner (2003) were of the view that a reflective measurement model ―specifies that a latent or unobservable concept causes variation in a set of observable indicators" (p. 1). Because the criterion latent variable was reflective in nature, a blindfolding procedure was applied mainly to the criterion latent variable (tax compliance behaviour).

Specifically, a cross-validated redundancy measure (Q^2) was applied in the process of examining the predictive relevance of the research model (Chin, 2010; Geisser, 1974; Hair, Ringle and Sarstedt (2013). Chin (1998) and Hair, Hult, Ringle, and Sarstedt (2014) indicated that Q^2 is a criterion to assess or measure how well a model predicts the data of omitted cases. Thus, following Henseler et al.'s (2009) suggestion, a research model with Q^2 statistic(s) greater than zero was regarded as having predictive importance in this study.

v. Moderating or Indirect Effect Test

In testing the moderating effect of PSO and perceived corruption, this study applied a product indicator approach using PLS-SEM in detecting and estimating the individual strength of the moderating variables on the relationship between

economic factors (tax rates, the probability of detection, tax complexity), psychological factors (incentives (positive inducement), tax knowledge, and public governance quality) and tax compliance behaviour (Henseler & Chin, 2010a; Henseler & Fassott, 2010b). The product term approach is considered to be appropriate because the two moderating variables are continuous in nature (Rigdon, Schumacker, & Wothke, 1998). Henseler and Fassott (2010) recommended the use of the product term approach because its results are usually equal or superior to those of the group comparison approach.

In applying the product indicator approach for testing the individual moderating effects, the product terms between the indicators of the latent exogenous variable and the indicators of the latent moderator variables actually need to be created. These product terms are used as indicators of the interaction term in the structural model (Kenny & Judd, 1984). Additionally, in ascertaining the strength of the moderating effects, Cohen‘s (1988) guidelines for determining the effect size were applied accordingly.

vi. Strength of the Moderating Effects

In order to actually determine the strength of the moderating effects of PSO and perceived corruption on the relationships between economic factors, psychological factors and tax compliance behaviour, Cohen‘s (1988) effect sizes were calculated. Therefore, the strength of the moderating effects was assessed by comparing the *R - Squared* value of the main effect model with the *R - Squared* value of the full model

that incorporates both the independent latent variables and the moderating variable (Henseler & Fassott, 2010; Wilden, Gudergan, Nielsen, & Lings, 2013). Thus, the strength of the moderating effects was expressed using (Cohen, 1988; Henseler & Fassott, 2010b) formula:

$$\text{Effect size } (f^2) = \frac{R^2\text{model with modeartor} - R^2\text{model without moderator}}{1 - R^2 \text{ model with moderator}} \quad (5.5)$$

Moderating effect size (*f2*) values of .02 can be considered as small, effect sizes of .15 as medium while the effect sizes above .35 may be regarded as large (Cohen, 1988; Henseler & Fassott, 2010). Chin et al. (2003) said that a low effect size does not necessarily mean that the underlying moderating effect is insignificant. Even a small interaction effect can be meaningful under extreme moderating conditions, as far as the resulting beta changes are meaningful, "then it is important to take these conditions into account" (Chin et al., 2003, p. 211).

5.11 Summary

This chapter specifically dealt with the approaches and methodology for achieving the desired research objectives. The chapter discussed the research design and the diverse approaches to reach the research aims, including the research paradigm. Furthermore, the population, the sample size, sample size determination, sampling frame, and the sampling technique were discussed. Similarly, the section presented the estimated response rate, and the operational definitions of the constructs. Data collection methods and procedures, the survey questionnaire, and instrument validity were also discussed. Additionally, results of the pilot test as well as the various

methods used for data analysis were also presented. The next chapter covers the research findings.

CHAPTER SIX
RESEARCH FINDINGS

6.1 Introduction

In this current chapter, the empirical results of data analyses were presented using PLS path modeling. The chapter begins with the initial data screening and preliminary analysis, the descriptive statistics for the study constructs as well as the multivariate assumptions of the data was also reported. Next, the chapter justifies why PLS is adopted in this study, as well as the assessment of PLS which is split into two parts in line with the main results of the present study. The first part presents the results of the measurement model comprising four sections, which assessed the individual item reliability, internal consistency reliability, convergent validity and discriminant validity of the constructs. The second part presents the results of the structural model comprising the significance of the path coefficients, level of the R-squared values, effect size, and predictive relevance of the model. The final section reports the PLS-SEM analysis, which examines the moderating effects of PSO and perceived corruption on the relationship between the exogenous latent variables and the endogenous latent construct in the structural model.

6.2 Response Rate

Of the 450 questionnaires that were distributed to the respondents, a total of 287 respondents sourced from SME owners/managers in Kaduna and Kano States, Nigeria filled and subsequently returned the distributed questionnaires. As shown in

Table 6.1, a total of 281 questionnaires were finally retained for analysis. After data collection and the sorting of the returned questionnaires, a total of six responses were excluded from the analysis due to incompleteness.

Table 6.1
Response Rate of the Questionnaire

Response Rate of the Questionnaire	Frequency / Rate
Number of distributed questionnaires	450
Returned questionnaires	287
Returned and usable questionnaires	281
Returned and excluded questionnaires	6
Questionnaires not returned	163
Response rate	64%
Valid response rate	62%

6.3 Data Screening and Preliminary Analysis

Embarking on an initial data screening before applying any appropriate data analysis technique is important. This screening is necessary to avoid any possible violations of key assumptions regarding the application of multivariate techniques of data analysis by the researcher (Hair et al., 2007). This process is aimed at ensuring the chosen sample size has a direct impact on the choice of data analysis techniques and test that are selected (Byrne, 2010).

Therefore, prior to the initial data screening all the returned and usable questionnaires (281) were appropriately coded and entered into the SPSS version 18. Negatively worded items in the questionnaires were reversed accordingly. The negatively worded items that were reverse coded included TCB10, TCB12, TR2, PGQ2, PGQ4, PGQ6, PGQ9, and PGQ12. This study as a matter of fact did not

consider any distributional assumptions as PLS-SEM is regarded as a non-parametric method of statistical analysis technique, therefore both univariate and multivariate outliers as well as the abnormality of the data do not pose problems in PLS-SEM (Hair et al., 2013).

6.3.1 Missing Data

This study had total of 27,257 (i.e., 281 cases multiplied by 97 items) data points, and 69 randomly missed values. Of the missing values, tax compliance behaviour and work family financial commitment had 15 and 19 missing values respectively. Fuel subsidy removal, tax rates, and probability of detection had 6, 7, and 9 missing values each. Tax knowledge had 5 missing values; public governance quality had 8 missing values; and no missing values were found in tax complexity, incentives (positive inducement), perceived service orientation and perceived corruption.

The 69 randomly missed values represented .25% of the total values of the study. Because the percentage of missing items was less than 5%, the mean substitution method was used to replace the missing items as recommended in Little and Rubin (1987), Raymond (1986), and Tabachnick and Fidell (2007). This method was utilized because it was simple to accomplish and time efficient. It is not only the easiest option but it can lower variability with the resultant issue of bias results. Table 6.2 provides details of the missing data.

Table 6.2
Total and Percentage of Missing Values

Latent construct	Number of missing values
Tax compliance behaviour	15
Work family financial commitment	19
Fuel subsidy removal	6
Tax rates	7
Probability of detection	9
Tax complexity	0
Incentives (positive inducement)	0
Tax knowledge	5
Public governance quality	8
Perceived service orientation	0
Perceived corruption	0
Total	69 of 27,257 data points missing
Percentage	0.25%

Note: The percentage of missing values was obtained by dividing the total number of randomly missing values for the entire data set by total number of data points multiplied by 100.

6.3.2 Analysis of Non-Response Bias

In analysing the non-response bias of the respondents, the extrapolation method was adopted in this study in order to identify the presence of non-response bias, a method that was also employed in other similar tax compliance studies (e.g., Alabede et al., 2012; Jabbar, 2009; Manaf, 2004). In applying the extrapolation method, the independent *T* statistic was used in comparing the early respondents and the late respondents as Pallant (2007) suggested. Pallant (2007) asserted that, if the result under Levene's test for equality of variance showed a significant value greater than .01. The data failed to violate the assumption of equal variance. Thus, a non-response bias could be assumed not to exist.

In this study, a period was fixed for the return of the questionnaires by the respondents. The respondents who returned the completed questionnaire after the expiration of the time frame were considered to be late respondents, which is representative of non-respondents (Armstrong & Overton, 1977; Sax, Gimartin, & Bryant, 2003). In the process of data collection, the researcher retrieved the questionnaires, which were numbered and dated sequentially in order to avoid any confusion.

At the end of 29 May 2015, a total of 268 (95%) usable questionnaire forms were retrieved, and, between 1 June 2015 and 30 June 2015, an additional 13 (5%) usable questionnaire forms were also returned. Then, the responses of those who responded to the questionnaires distributed early before 29 May 2015 (before the break of the swearing in of the new government) and those who responded to the questionnaires distributed after May 2015 (after the break) were compared. Those who responded to questionnaires after May 2015 were, in effect, regarded as non-respondents relative to the first collected questionnaires and were hence assumed to be the representative of the non-respondents group. Therefore, the first group represented the early respondents while the second group was referred to as the late respondents. The two groups were compared using the independent *T* statistic and the results are shown in Table 6.3.

Table 6.3
Results of Independent-Samples T-test for Non-Response Bias

Variable	Group	N	Mean	SD	Levene's test for equality of variance	
					F	Sig.
Tax compliance behaviour	Early response	268	2.47	.55	.20	.65
	Late response	13	2.63	.55		
Work family financial commitment	Early response	268	2.72	.42	3.77	.05
	Late response	13	2.62	.27		
Fuel subsidy removal	Early response	268	2.87	.53	.21	.65
	Late response	13	2.76	.61		
Tax rates	Early response	268	2.52	.57	1.68	.20
	Late response	13	2.44	.43		
Probability of detection	Early response	268	2.37	.28	.03	.87
	Late response	13	2.31	.29		
Tax complexity	Early response	268	2.79	.37	.17	.68
	Late response	13	2.67	.39		
Incentives (positive inducement)	Early response	268	2.55	.54	.06	.80
	Late response	13	2.69	.48		
Tax knowledge	Early response	268	1.83	.50	2.38	.12
	Late response	13	1.86	.40		
Public governance quality	Early response	268	3.78	.47	2.84	.09
	Late response	13	3.89	.27		

Table 6.3 (continued)

Variable	Group	N	Mean	SD	Levene's test for equality of variance	
					F	Sig.
Perceived service orientation	Early response	268	3.28	.78	5.68	.02
	Late response	13	3.32	.51		
Perceived corruption	Early response	268	2.94	.68	.40	.53
	Late response	13	3.17	.55		

Table 6.3 shows that the differences between the mean score and standard deviation of early responses and late responses were almost the same. For instance, the mean score for tax compliance for early responses was 2.47 while that of late responses was 2.63 indicating a variation of .16 between the two groups. This implies that the differences between the two were marginal and negligible. The result of the independent-samples *t*-tests as shown in Table 6.3 also revealed that the equal variance significance values for each of the eleven constructs were greater than the .01 significance level of Levene's test for equality of variances as Field (2009) and Pallant (2010) suggested.

Probability of detection had the greatest significant value of .87 while perceived service orientation had the lowest significant value of .02. Because significant values of all the constructs were larger than *.01 (p > .01),* this result suggests that the differences between early responses and late responses were insignificant. Using Lindner and Wingenbach‘s (2002) recommendation and because this study achieved

a reasonable level of 64% response rate, it can be deduced that the issue of non-response bias does not appear to be an issue of concern. Therefore, the assumption of equal variance between the two groups was not violated; hence, it can be fairly assumed that non-response bias did not exist in the data for the study.

6.3.3 Common Method Variance Test

Following the recommendation of Podsakoff and Organ (1986) for the common method variance, all items in this study were subjected to a principal components factor analysis as shown in Appendix G. The results of the analysis explained a cumulative of 78.4% of the variance, with the first (largest) factor explaining 11.7% of the total variance, which was less than 50% (Kumar, 2012). Furthermore, the results also showed that no single factor accounted for the majority of covariance in the predictor and criterion variables (Podsakoff, MacKenzie, & Podsakoff, 2012). Thus, common method bias was not an issue of concern in the data of the present study.

6.4 Demographic Characteristics of the Respondents

This section is concerned with the description of the sample of the present study. Therefore, the data reflected all the 281 SME owners/managers who participated in the survey. Table 6.4 presents the background information of the respondents who participated in the current survey. The respondents comprised SMEs operators in Kaduna and Kano States, Nigeria. The demographic characteristics examined in this study include gender, age group, educational qualification, years of experience and the existence or lifespan of the SME (See Table 6.4).

Table 6.4
Demographic Information of the Respondents

Category	Frequency (N = 281)	Percentage (Total = 100)
Gender		
Male	154	54.8
Female	127	45.2
Age group		
Less than 30 years	58	20.6
31 - 40 years	125	44.5
41 - 50 years	79	28.1
Above 50 years	19	6.8
Qualification		
Doctoral degree	7	2.5
Master degree	84	30.0
Bachelor degree or equivalent	106	37.7
Diploma or A - level or equivalent	51	18.1
GCE or O - level or equivalent	33	11.7
Experience		
1 - 5 years	87	31.0
6 - 10 years	141	50.1
Above 10 years	53	18.9
Existence of SMEs		
1 - 5 years	11	3.9
6 - 10 years	27	9.6
11 - 15 years	80	28.5
16 - 20 years	113	40.2
Above 20 years	50	17.8

Table 6.4 shows that, about 55% of the respondents were male leaving 45% as female. This is actually a fair representation of both genders taking into account that at least 60% and 40% of the population of the two states covered in the study were

male and female respectively, with a substantial number of males in employment and business (National Population Commission, 2006).

In terms of age grouping, about 20.6% of the respondents were less than 30 years of age and 44.5% were between 31 to 40 years of age. Those respondents who were between 41 to 50 years of age represented 28.1% of the total respondents while the remaining 6.8% of the respondents were more than 50 years of age. The age distribution of the respondents fairly reflected the age distribution of the studied areas, as more people in the population are between 31 and 40 years of age are actively involved in economic activities (National Population Commission, 2006). This shows that the sample of this study largely comprised the young men and women of the total workforce.

Regarding to the educational qualification of the participants, the vast majority of the respondents 88.3% had a higher educational qualification including doctorate degree 2.5%, master‘s degree 30%, bachelor‘s degree or its equivalent 37.7%, and diploma or the A level equivalent 18.1%. This was also followed by 11.7% of the respondents who had GCE or an O level equivalent. The low proportion of doctorate degree holders in the sample reflects the assertion made by the Nigerian President that 60% of the Nigerian population do not have a doctorate degree (Odiegwu, 2012).

Additionally, in terms of experience, Table 6.4 also shows that a high proportion of the respondents had between 6 - 10 years‘ work experience, which accounted for

50.1% or 141 participants. This is followed by 31% of the participants who had 1 - 5 years of work experience, while the remaining 53 respondents, representing 18.9% had more than 10 years of work experience. This reveals that a substantial sample of the population have had quite long working experiences.

Finally, the descriptive statistics show that 40.2% of SMEs have been in existence for 16 - 20 years, followed by 11 - 15 years at 28.5%, 17.8% of the businesses have been in existence for more than 20 years, while 3.9% of the SMEs have been in existence for less than 5 years.

6.5 Descriptive Statistics

This section specifically dealt with the descriptive statistics for the latent constructs used in this study. In respect of the descriptive statistics, the mean and standard deviation for the latent constructs were explored and computed accordingly. The results are presented in Table 6.5.

Table 6.5
Descriptive Statistics for Latent Variables

Latent variable	Number of Items	Mean (M)	Standard Deviation (STD)
Tax compliance behaviour	15	2.475	.547
Work family financial commitment	18	2.717	.411
Fuel subsidy removal	13	2.861	.537
Tax rates	6	2.517	.565
Probability of detection	8	2.367	.279
Tax complexity	7	2.786	.368
Incentives (positive inducement)	2	2.553	.540
Tax knowledge	6	1.827	.496
Public governance quality	13	3.784	.462
Perceived service orientation	5	3.281	.768
Perceived corruption	4	2.951	.671

Table 6.5 shows that the overall mean for the latent constructs ranged between 1.827 and 3.784. Specifically, the mean score of tax compliance behaviour tended to have a low score (M = 2.475; STD = .547). Perhaps this is not surprising, because the descriptive statistics suggest that compliance among the individual taxpayers in Nigeria is low.

The opinions of the respondents concerning work family financial commitment were expressed with 18 items (M = 2.717, STD = .411) as documented in Table 6.5. The descriptive analysis of this construct also indicates a moderate perception on the part of the respondents on how they viewed conflict in relationship to home and business environment.

The mean and standard deviation for fuel subsidy removal were 2.861 and .537 respectively. This is an indication that the perception of the participants in relationship to fuel subsidy removal was moderate.

Opinions about the tax rates as shown in Table 6.5 also indicate moderate scores in terms of mean and standard deviation at 2.517 and .565 respectively. This variable has been seen to be significantly active right from the Allingham and Sandmo model (1972), and as such made a significant contribution to the variation in the endogenous variable in this current study.

Probability of detection is another exogenous variable with a very low mean score of 2.367 and the standard deviation of .278. This indicates that the respondents tended to possess low levels of perception in relationship to the likelihood being detected for any act by the relevant tax authorities.

In addition, Table 6.5 also shows the mean and standard deviation of tax complexity. The descriptive analysis of this construct shows a mean score of 2.786 and a standard deviation of .368. This is an indication that the respondents considered the tax system to be moderately complex. Similarly, the results show a moderate score for incentives (positive inducement) (M = 2.553; STD = .540).

Moreover, Table 6.5 revealed that tax knowledge had the lowest scores (M = 1.827; STD = .496); all the items concerning tax knowledge indicated that the respondents

had very weak knowledge of tax rules concerning taxable income and expenses deductible for tax purposes. Additionally, public governance quality was one of the constructs that showed a high mean among other constructs (M = 3.784; STD = .462). This could be as a result of the values attached to infrastructural facilities by the taxpayers, even though the level of infrastructural facilities is inadequate.

Furthermore, the descriptive statistics also reveal a moderate score in terms of mean and standards deviation for perceived service orientation (M = 3.281; STD = .768). Finally, the descriptive statistics in relationship to perceived corruption also revealed a moderate perception (M = 2.951; STD = .671). This was possibly due to the desire of the newly elected government to combat corruption in the country.

6.6 Multivariate Assumption Tests

To attain the fundamental assumptions of multiple regression, the constructs were checked for outliers, normality, linearity and multicollinearity following Hair et al. (2010).

6.6.1 Treatment of Outliers

According to Barnett and Lewis (1994), outliers are observations or subsets of observations that are not in agreement with the main data. Cases that have significantly dissimilar values than the rest of the cases are considered outliers (Hair, Anderson, Tatham & Black, 1995). In a regression base analysis, outliers are exceedingly sensitive whether low or high score (Pallant, 2007). Since the extreme

value in the cases affects the statistics, these cases may have greater effect on the regression coefficient (Tabachnick & Fidell, 2007) than any other cases.

Furthermore, there are different ways of detecting outlier some are graphical such as normal probability plot, univariate which is based on the items and multivariate which is based on the variables (Aggarwal & Yu, 2001). Thus, to identify if there are presence of outliers, firstly, the data of this study were examined for univariate outliers using standardized values with a cut-off of ±3.29 ($p < .001$) as suggested by Tabachnick and Fidell (2007). Following Tabachnick and Fidell (2007), standard for identifying univariate outliers, all the cases were below ±3.29 threshold as such, the data are free from univariate outliers. Apart from checking the univariate outliers, multivariate outliers were also detected through the use of Mahalanobis distance (D2) (Pallant, 2007). According to Tabachnick and Fidell (2007), Mahalanobis distance (D2) is ~~–~~the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the mean of the entire variable" (p. 74). Based on 97 observed cases in this study, the suggested threshold of chi-square is 145.789 ($p = 0.001$). Following this criterion, no multivariate outliers were detected, because their values were below 145.789.

6.6.2 Test of Normality

Previous research (e.g., Cassel, Hackl, & Westlund, 1999; Reinartz, Haenlein, & Henseler, 2009; Wetzels, Odekerken-Schroder, & Van Oppen, 2009) has traditionally assumed that PLS-SEM provides accurate model estimations in

situations with extremely non-normal data. However, normality test help to check if the data score is normally distributed. Normality test forms part of the data screening before the actual analyses (Pallant, 2007). Normality can be identified either with a graphical method and/or numerical method (Razali & Wah, 2011). In view of the above, this study uses both the two methods in testing the normality of the data sets in order to know the actual level the data deviate from normal distribution (Hair et al., 1992). The methods used are reported below.

6.6.3 Graphical Methods

One of the methods to evaluate the normality is through histogram residual plots. It refers to the shape of data distribution for each constructs and its connection to normal distribution. To achieve this, the distribution of the plot is required to be normally distributed. According to Field (2009), in a large sample of 200 and above, it is important to examine the shape of the distribution graphically than looking at the value of the skewness and kurtosis statistics. Following this, this study uses a graphical technique to check for the normality of the data collected (Tabachnick & Fidell, 2007). Figure 6.1 is one of the examples of the normal histogram pictorially showing that the normality was not attained because all the bars on the histogram were not closed to a normal curve. Thus, the data distribution for all the constructs is considered to be slightly abnormal.

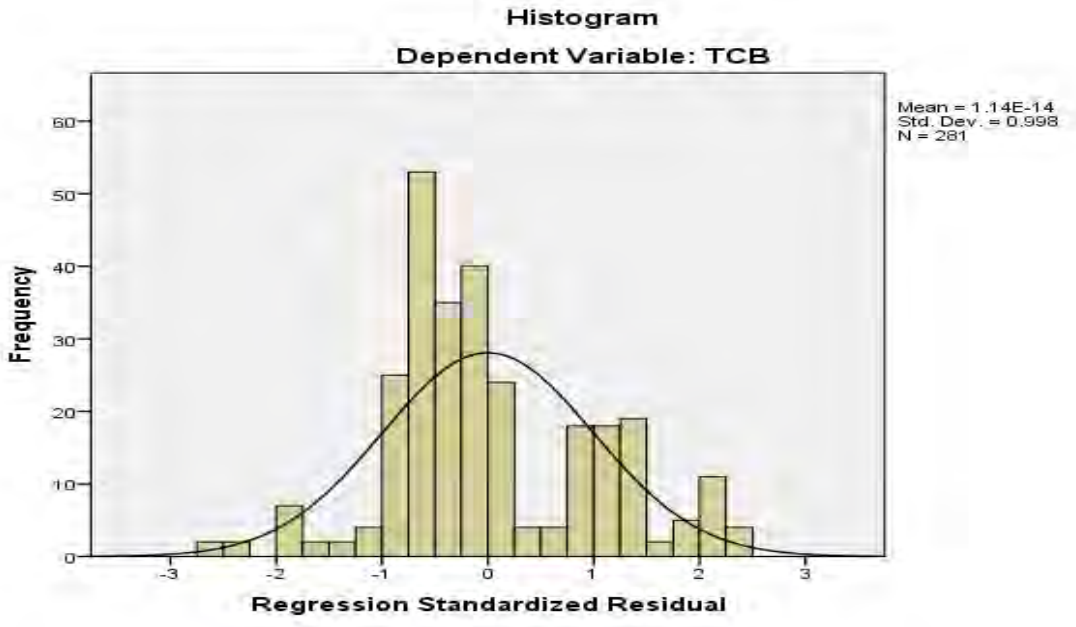


Figure 6. Histogram and Normal Probability Plots for WFFC.

6.6.4 Numerical Method: Skewness and Kurtosis Test

In order to further check the normality of the data set, this study also conducted another set of normality test using statistical method called skewness and kurtosis test. Skewness and Kurtosis tests are regarded as descriptive statistics (Razali & Wah, 2011). Skewness is a measure of the asymmetry of the probability distribution of a real-valued random variable about its mean. Kurtosis is any measure of the "peakedness in which both are compared to normal distribution (Hair et al., 1995). The skewness and kurtosis value can be positive or negative, or even undefined (Tabachnick & Fidell, 2007). Positive skewness is whereby the right tail is excessively longer with numerous cases piling up to the left. Negative skewness is contrary to positive skewness (Tabachnick & Fidell, 2007). According to Pallant (2007), kurtosis can be regarded as positive if the data distribution is peaked, while

negative Kurtosis is when the data distribution is flat. Regardless, data distribution is completely normal if the values of skewness and kurtosis is zero (Razali & Wah, 2011). As a simple rule of thumb if the statistics score is divided by its standard error and the result is greater than ±1.96, it suggests that the data are not normal with respect to that statistic (Rose, 2015). Applying the rule of thumb of dividing each value by its standard error (Std. Error) as shown in Table 6.6, most of the statistical values in respect to skewness and kurtosis were well above ±1.96 limits, suggesting that the departure from normality is too extreme. This was confirmed by visual inspection of the histogram of the same data in Figure 6.1.

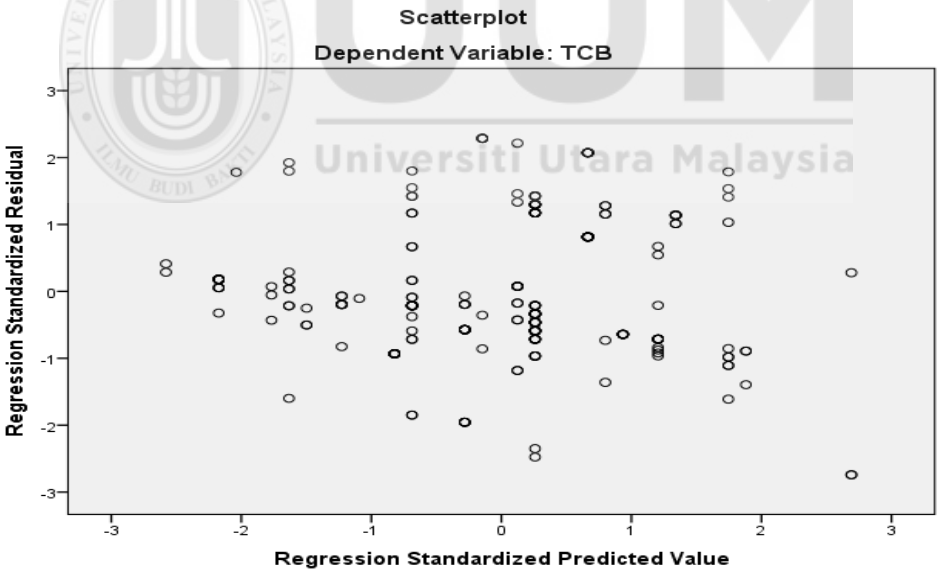
Table 6.6
Numerical Method: Skewness and Kurtosis Tests

Constructs	Statistic	Std. Error	Statistic	Std. Error	Skewness	Kurtosis
TCB	-.54	.14	-.21	.29	3.75	-.73
WFFC	-.32	.14	.22	.29	2.21	.755
FSR	-.58	.14	.84	.29	-4.02	2.88
TR	.28	.14	-.07	.29	1.95	-.23
PD	.10	.14	.06	.29	.69	.23
TC	-.11	.14	.145	.29	-.77	.50
IPI	-.06	.14	-.09	.29	-.41	-.32
TK	.32	.14	-.57	.29	2.23	-1.99
PGQ	-.36	.14	.64	.29	-2.46	2.20
PSO	-.47	.14	-.58	.29	-3.26	-1.98
PC	.88	.14	.69	.29	6.10	2.38

Descriptively, the skewness and kurtosis of the variables were mix, some negative while some positive and some were above the ±1.96, as recommended by Tabachnick and Fidell (2010). In other word, the variables do not have a flat data distribution as such the data distribution of all the variables had been proved to be relatively abnormal.

6.6.5 Testing of Linearity

Linearity assumption examines the link between the residuals and the predicted values (Pallant, 2007). According to Pallant (2007), when there is no clear relationship between the residuals and the predicted values, linearity assumption has been met. The residual scatter plot was used in checking for the normality of this study. The assumption is that majority of the scores should be in the centre at zero point (Flury & Riedwyl, 1998). The scatter plot in Figure 6.2 confirmed that the residual scores are not within the centre along the zero point, indicating that the linearity assumption was not met. Besides, the residual should have a straight line connection with the predicted dependent constructs scores in which Figure 6.2 does not vividly showed.



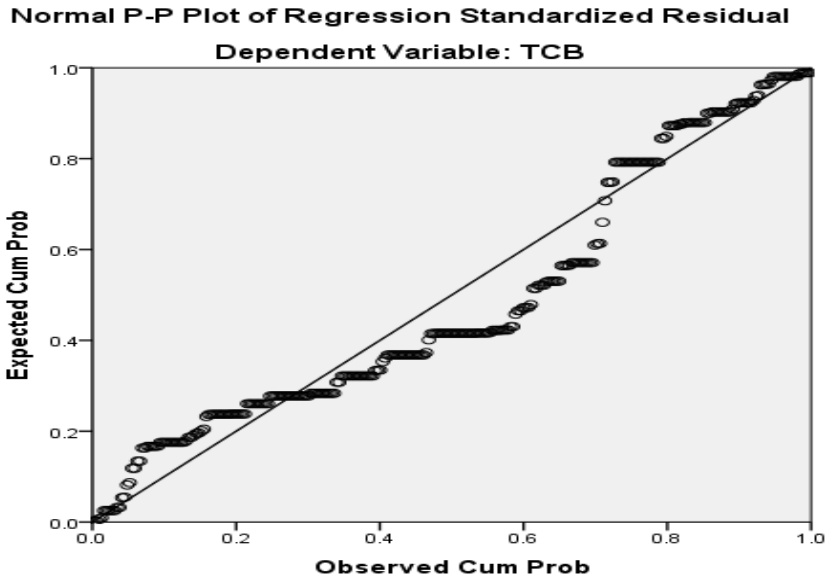


Figure 6.2. Residual Plots between Independent Factors and Dependent Variable (TCB)

6.6.6 Multicollinearity Test

Multicollinearity is another data checking process needed before further analysis can be conducted. Multicollinearity is a situation whereby more exogenous latent constructs turn out to be highly correlated. This relationship causes great harm by making the coefficients statistically non-significant (Tabachnick & Fidell, 2007). It increases the variance of regression coefficients in addition, put the validity of regression equation under threat.

To detect multicollinearity, two methods were used in this study (Chatterjee & Yilmaz, 1992; Peng & Lai, 2012). First, variance inflation factor (VIF) was examined to detect if there is any multicollinearity problem in the data set. According to Lahore and Kedia (2009), variance inflationary factor (VIF) is use to check multicollinearity cases in a study. However, there is no prescribed VIF value

for determining the presence of multicollinearity. According to Lahiri and Kedia (2009), if the values of VIF exceed 10 it indicates there is multicollinearity. Similarly, Hair et al., (2011) suggested that there is multicollinearity if the value of VIF is greater than 5 and the tolerance value is less than 0.20. As indicated in Table 6.7, the VIF between the independent variables were below the suggested threshold values of five (5) and ten (10) (Hair et al. 2011; Lahiri & Kedia, 2009) and the tolerance values are higher than 0.20 (Hair et al., 2011). Hence the data sets are free from multicollinearity as shown in Table 6.7.

Table 6.7
Tolerance and Variance Inflation Factors (VIF)

Construct	Tolerance	VIF
WFFC	0.953	1.049
FSR	0.956	1.047
TR	0.971	1.030
PD	0.933	1.072
TC	0.984	1.016
IPI	0.932	1.073
TK	0.776	1.289
PGQ	0.957	1.045
PSO	0.777	1.287
PC	0.983	1.017

Furthermore, bivariate correlation of all the exogenous latent constructs is another approach employed to confirm multicollinearity problem in this research. The value of Pearson‘s correlation shows the relationships between the exogenous variables used for identifying multicollinearity (Allison, 1999; Meyer et al., 2006). According to Cooper and Schindler (2003), no precise standard for the level of correlation that make up a serious multicollinearity problem but, a correlation of 0.8 above is problematic. The general rule of thumb is that it should not exceed .75. As a result, this study also checks the multicollinearity between the exogenous variables using

Pearson's correlation (see Table 6.8). The results in the correlation table show that no multicollinearity exists between the exogenous variables because the Pearson's correlation indicators for all the exogenous constructs are less than 0.7. It indicates that the exogenous latent constructs are independent. Therefore, multicollinearity is not a threat to this study as showed in Table 6.7 and 6.8.

Table 6.8
Correlation Matrix of the Exogenous Latent Constructs

Construct	1	2	3	4	5	6	7	8	9	10
1.WFFC	1									
2. FSR	.005	1								
3. TR	.039	.089	1							
4. PD	.041	.142*	.120*	1						
5. TC	-.114	.030	.002	-.007	1					
6. IPI	-.136*	-.088	.015	.116	-.009	1				
7. TK	.013	.045	.006	-.066	.017	-.089	1			
8. PGQ	-.030	-.029	.063	-.010	-.029	.015	.107	1		
9. PSO	-.089	-.051	-.021	.035	-.002	.009	-.454**	-.067	1	
10 PC	.025	-.053	.040	.000	.010	-.040	-.025	-.027	.092	1

6.7 Further Justification for Using Partial Least Square (PLS) Approach

Application of structural equation modeling (SEM) in this study has been explained previously in sections 5.10.7 and 5.10.8. Because some of the assumptions of normality have not been met in the data sets, Rose (2015) recommended that subsequent significance testing should be done using methods that do not require normality (e.g. nonparametric tests) such as PLS SEM. Therefore, this study resorted to using SEM for testing hypothesis which evolved from the proposed theoretical framework. The two mostly used approaches to SEM have been: covariance based (AMOS, LISREL) and variance based (Partial Least Squares), wherein one approach is not actually perceived superior to another by the researchers. Instead, depending

upon the study objectives and nature of data, they offer a researcher alternative and relevant options to choose from. However, the prime difference between the two is that CBSEM has been mainly considered as confirmatory (towards testing a strong theory) in nature whereas PLS- VBSEM has been considered as prediction oriented (facilitating theory development) which this study was aimed at.

Though CBSEM has been a traditionally popular approach, nowadays researchers tend to appreciate and give emphasis on VBSEM (PLS) because of its advantages pertaining to absence of factor indeterminacy or convergence issues (Henseler, 2010); comparatively simpler distributional assumptions (Reinartz, Haenlein, & Henseler, 2009); when the focus is on theory development or prediction; ability to estimate models which have got more variables than the observations (Dijkstra & Henseler, 2012); and ability to run both interval and categorical constructs simultaneously (Haenlein & Kaplan, 2004). There have been several studies describing the development and importance of PLS-VBSEM‘s methodological aspects, for example: Chin (1998), Ringle, Sarstedt, and Straub (2012), Tenenhaus, Vinzi, Chatelin, and Lauro (2005), and Wold (1982).

As this study contained of a complex model consisting of several independent, moderating and dependent constructs as such resorted to using Smart PLS 2.0 (Beta) software developed by Ringle et al. (2005) for the SEM to statistically explain the relationships among these constructs. Highly complex models with several latent and manifest variables can be estimated by PLS which is also said to be capable of easily

estimating hierarchical models, or moderating effects (Chin, Marcolin, & Newsted, 2003). The complexity inside a model can be calculated after considering a causality relationship among the model‘s latent concepts, termed as latent variables, each estimated by the means of various observed indicators which are called manifest variables (Vinzi, Trinchera, & Amato, 2010). As Wold (1985) pointed out PLS is quite useful among larger models amidst abnormal data wherein the prominence shifts from individual variables and parameters to sets of variables and aggregate parameters.

Moreover, the focus of this study was on making prediction which also gave rise to the need of using PLS. Also, PLS is said to be free of any assumption in terms of sample size, normality, multicollinearity and linearity issues, etc. Alternatively speaking, as a major advantage, PLS relies on making minimal distributional assumptions, and as such, tests for normality, for instance skewness, kurtosis, Kolmogorov-Smirnov test, etc. are not needed to be done while using Smart PLS (Hossain, 2013). Furthermore, Hair et al. (2013) and Iglewicz and Hoaglin (1993) also recommended that outliers and other normality issues do not have the tendency of distorting the statistical results of analysis in PLS, because PLS has the ability to produce good results amidst the presence of abnormal data.

And in line with it, one of the reasons to select PLS SEM was to estimate the model of this study without letting it imposed by any kind of limiting constraints which might be a case in covariance based structural equation modeling. As such, data

analysis in this study was done using Smart PLS software meant to perform PLS path modeling. It is also in line with Ringle et al. (2012) who pointed out that PLS-SEM can facilitate in enhancing the already existing good reporting practices in the area of social sciences. Moreover, SEM is said to be a unification of two dominant approaches— factor analysis and path analysis, which seeks to enable the researchers in examining concurrently the two important facets of a model which are: 1) measurement model (conventionally estimated through factor analysis), and 2) structural model (conventionally estimated through path analysis) (Lee, Peter, Fayard, & Robinson, 2011).

In this study, the data analysis was carried out through PLS path modeling performed for the two parts: firstly, for the measurement model which is called outer model in PLS; and secondly for the structural model which is termed as inner model in PLS. The relationship between latent or unobserved variables was explained in the inner model, whereas the link between a latent variable and its manifest variables was described in the outer model. Furthermore, the PLS algorithm sought to produce loadings between the reflective constructs and their respective indicators as this study consisted of all reflective constructs only. In overall terms, similar to regression, PLS always attempted to stress on maximizing the variance of the dependent variables of the study explained through the independent variables (Chin, 1998). For a detailed explanation, the results of the PLS modeling are explained in subsequent sections.

6.8 Assessing the PLS-SEM Results

Partial least square structural equation modeling (PLS-SEM) was employed for the purpose of estimating the model of the current study. To achieve the targeted result, the SmartPLS 2.0 3M - next generation path modeling software application that Ringle et al. (2005) developed was employed. Therefore, this study adopted a two-step process in evaluating the report of the PLS-SEM path results as Henseler et al. (2009) suggested. PLS models do not follow any distributional normality assumptions of the observations in their procedures for estimating parameters, therefore the traditional parametric-based techniques for significance testing are not appropriate in PLS (Chin, 2010). Thus, the two-step process employed in this study included: 1) the assessment of a measurement model, and 2) the assessment of a structural model as represented in Figure 6.4 (Hair et al., 2014; Hair et al., 2012; Henseler et al., 2009).

Assessment of model	**Function**
Measurement model	• Examining individual item reliability • Ascertaining internal consistency reliability • Ascertaining convergent validity • Ascertaining discriminant validity
Structural model	• Assessing the significance of path coefficients • Evaluating the level of *R*-squared values • Determining the effect size • Ascertaining the predictive relevance • Examining the moderating effect

Source: Henseler et al. (2009).

Figure 6.3. A Two-Step Process of PLS Path Model Assessment.

The two-stage modeling approach is also consistent with the recommendation of Anderson and Gerbing (1988). The reason behind the adoption of the two-stage approach in this study was due to its popularity and acceptability by researchers in the field of social sciences (Hair et al., 2006). Additionally, the method has been employed in similar areas of taxation studies in developed and developing countries (Saad, 2011). The process of PLS-SEM algorithm has been used to carry out all the analysis in relationship to the evaluation of both the measurement and structural models. In lieu of this, all the measurements of the constructs in this study were adapted from previous studies; hence, exploratory data analysis is not needed (Hair et al., 2010).

6.8.1 Assessment of PLS SEM Measurement Model (Path Model Analysis)

In assessing the measurement model, this study judiciously follows the suggestions of Hair et al. (2014), Hair et al. (2011) and Henseler et al. (2009), which involves determining individual item reliability, internal consistency reliability, content validity, convergent validity and discriminant validity. The measurement model is shown in Figure 6.4 below.

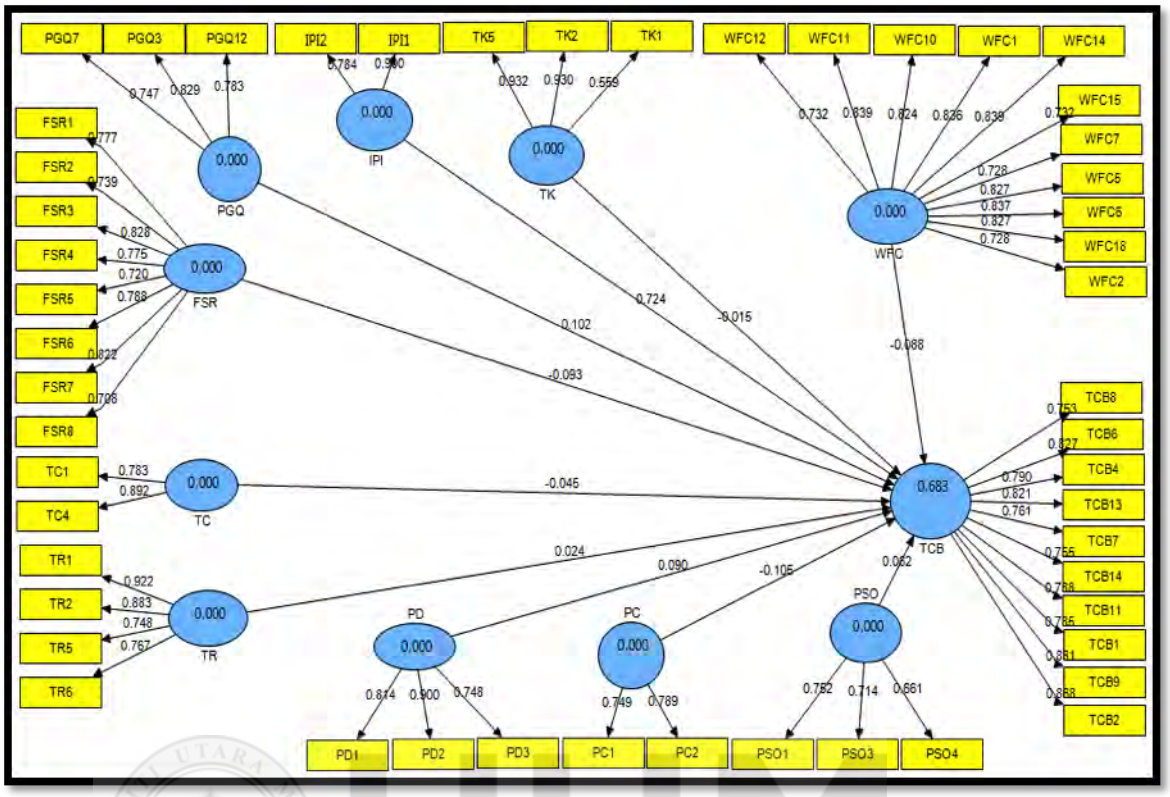


Figure 6.4. Measurement Model (Outer Model).

After conducting the PLS-SEM algorithm, of the 97 manifest variables from the 11 constructs, only 51 items were finally retained for further analysis as shown in Table 6.9.

Table 6.9
Items Retained after PLS Algorithm

Construct	Indicator
Tax Compliance Behaviour	TCB01
	TCB02
	TCB04
	TCB06
	TCB07
	TCB08
	TCB09
	TCB11
	TCB13
	TCB14
Work family financial commitment	WFFC01
	WFFC02
	WFFC05
	WFFC06
	WFFC07
	WFFC10
	WFFC11
	WFFC12
	WFFC14
	WFFC15
	WFFC18
Fuel subsidy removal	FSR01
	FSR02
	FSR03
	FSR04
	FSR05
	FSR06
	FSR07
	FSR08

Tax rates	TR01
	TR02
	TR05
	TR06
Probability of Detection	PD01
	PD02
	PD03
Tax Complexity	TC01
	TC04
Incentives (positive inducement)	IPI01
	IPI02
Tax knowledge	TK01
	TK02
	TK05
Perceived Governance Quality	PGQ03
	PGQ07
	PGQ12
Perceived service orientation	PSO01
	PSO02
	PSO03
Perceived corruption	PC01
	PC02

6.8.1.1 Individual Item Reliability

Assessing item or indicator reliability is critical because the outer loadings of the manifest variables are perhaps an indication of communality of the indicators, which are always captured by the said construct and higher loadings are better. Item reliability is computed as the square of the standardised indicators outer loadings.

In Table 6.10 below, all the items, except TK1 with an item reliability of .312, ranged from .437 to .868 and were above the recommended threshold of .40 (Hair et al., 2014). This is an indication that the significance of the PLS-SEM path model was adequately preserved by these manifest variables because almost all of the indicators were above .40 (Coakes, 2013; Hair et al., 2010; Hair et al., 2011; Pallant, 2010).

In this study, individual item reliability was also assessed by examining the outer loadings of each construct‘s measure (Duarte & Raposo, 2010; Hair et al., 2014; Hair et al., 2012; Hulland, 1999). Hair et al. (2014) suggested a rule of thumb for retaining items with loadings between .40 and .70, and this rule was applied in this study. In the process of deleting items that did not meet these values, 46 of the 97 items terms were deleted due to factor loadings below .40. Deleting items with low loadings increased the average variance explained of the construct (Bambale, 2013). Hence, in the whole model, only 51 items were retained as their loadings were above .40. The retained manifest variables had factor loadings ranging from .559 to .932 as presented in Table 6.10.

6.8.1.2 Internal Consistency Reliability

In terms of internal consistency reliability, the values for composite reliability for all the study constructs ranged from .743 to .950 as shown in Table 6.10, These actually exceeded the recommended level of .70 as shown in past studies (Bagozzi et al.,

1991; Gefen et al., 2000); hence, the assumption was that a satisfactory internal reliability of the measurement model was achieved.

Table 6.10
Loadings, Composite Reliability and Average Variance Extracted

Latent construct	Indicator	Loading	Indicator reliability	Composite reliability	AVE
Fuel subsidy removal (FSR)	FSR1	.777	.604	.921	.594
	FSR2	.739	.546		
	FSR3	.828	.685		
	FSR4	.775	.601		
	FSR5	.720	.518		
	FSR6	.788	.622		
	FSR7	.822	.676		
	FSR8	.708	.501		
Incentives (positive inducement) (IPI)	IPI1	.900	.810	.832	.713
	IPI2	.784	.615		
Perceived corruption (PC)	PC1	.749	.561	.743	.592
	PC2	.789	.623		
Probability of detection (PD)	PD1	.814	.663	.862	.677
	PD2	.900	.809		
	PD3	.748	.559		
Public governance quality (PGQ)	PGQ12	.783	.614	.830	.619
	PGQ3	.829	.687		
	PGQ7	.747	.557		
Perceived service orientation (PSO)	PSO1	.752	.565	.753	.504
	PSO3	.714	.510		
	PSO4	.661	.437		
Tax complexity (TC)	TC1	.783	.614	.826	.705
	TC4	.892	.796		

Table 6.10 (continued)

Latent construct	Indicator	Loading	Indicator Reliability	Composite Reliability	AVE
Tax compliance behaviour (TCB)	TCB1	.785	.617	.948	.646
	TCB11	.788	.621		
	TCB13	.821	.674		
	TCB14	.755	.570		
	TCB2	.868	.754		
	TCB4	.790	.623		
	TCB6	.827	.684		
	TCB7	.761	.579		
	TCB8	.753	.567		
	TCB9	.881	.776		
Tax knowledge (TK)	TK1	.559	.312	.860	.682
	TK2	.930	.864		
	TK5	.932	.868		
Tax rates (TR)	TR1	.922	.849	.900	.694
	TR2	.883	.780		
	TR5	.748	.559		
	TR6	.767	.588		
Work - family financial commitment (WFFC)	WFFC01	.836	.699	.950	.635
	WFFC10	.824	.678		
	WFFC11	.839	.704		
	WFFC12	.732	.536		
	WFFC14	.839	.704		
	WFFC15	.732	.536		
	WFFC18	.827	.684		
	WFFC02	.728	.529		
	WFFC05	.827	.684		
	WFFC06	.837	.700		
	WFFC07	.728	.530		

6.8.1.3 Convergent Validity

In assessing the convergent validity in this study, the recommendation of Fornell and Larcker (1981) was followed. The convergent validity was assessed by examining the Average Variance Extracted (AVE) of each latent variable. To achieve the above

course of action (i.e., adequate convergent validity), Chin (1998) was of the view that the AVE of each latent construct should be .50 or above as a minimum threshold. As shown in Table 6.10, the AVE values had loadings greater than the minimum threshold of .50 in relationship to all the constructs; hence, an adequate convergent validity was arrived at.

6.8.1.4 Discriminant Validity

In this study, discriminant validity was ascertained based on the suggestions of Chin (1998) and Fornell and Larcker (1981) by comparing the indicator loadings with other reflective indicators in the cross loading table, as well as using the square root of the AVE of the construct. As a rule of thumb for ascertaining and evaluating discriminant validity, a score of .50 or more has been suggested as the threshold for the values of AVE of a construct (Fornell & Larcker, 1981). The second criterion is that the square root of the AVE should be greater than the correlations among the latent construct (Fornell & Larcker, 1981).

As shown in Table 6.11 below, the values of the average variances extracted ranged from .504 to .713, suggesting acceptable values. Additionally, Table 6.11 also shows the correlations among the latent constructs, which were compared with the square root of the average variances extracted shown in boldfaced type. Table 6.11 further revealed that the square root of the average variances extracted were all greater than the correlations among the latent variables, and hence suggested adequate discriminant validity (Fornell & Larcker, 1981).

Table 6.11
Latent Variable Correlations and Square Roots of Average Variance Extracted

Latent variable	1	2	3	4	5	6	7	8	9	10	11
1 Fuel subsidy removal	**.77**										
2 Incentives (positive inducement)	-.12	**.84**									
3 Perceived corruption	.01	-.05	**.77**								
4 Probability of detection	.01	.11	-.01	**.82**							
5 Public governance quality	.00	.12	-.01	.16	**.79**						
6 Perceived service orientation	-.04	.04	.09	.12	.03	**.71**					
7 Tax complexity	.07	-.13	-.05	-.02	-.04	-.01	**.84**				
8 Tax compliance behaviour	-.20	.79	-.13	.20	.21	.11	-.15	**.80**			
9 Tax knowledge	.04	-.11	-.07	-.01	.05	-.31	.00	-.10	**.83**		
10 Tax rates	.07	.00	.02	.08	.03	-.05	-.03	.02	.01	**.83**	
11 Work - family financial commitment	.11	-.21	.01	-.02	.00	-.07	.00	-.26	-.02	.02	**.80**

Note: Entries shown in bold represent the square root of the average variance extracted.

Additionally, as Chin (1998) and Hair et al., (2011) has pointed out, discriminant validity can be ascertained by comparing the indicator outer loadings with cross-loadings. To achieve this objective, Table 6.12 was used to compare the manifest variable loadings (shown in bold face) with other reflective indicators. It shows that all indicators loadings were found to be greater than the cross loadings, and as such suggested an adequate discriminant validity to warrant further analysis.

Table 6.12
Cross Loadings

	FSR	IPI	PC	PD	PGQ	PSO	TC	TCB	TK	TR	WFC
FSR1	**.777**	-.009	-.034	-.017	-.101	-.059	.090	-.088	-.034	.074	.052
FSR2	**.739**	-.144	.026	.044	-.118	.032	.020	-.154	-.008	.017	.116
FSR3	**.828**	-.131	-.023	-.013	.076	-.072	.070	-.200	.100	.074	.074
FSR4	**.775**	-.021	-.030	.002	-.113	-.001	.126	-.080	-.012	.085	.042
FSR5	**.720**	-.103	.051	-.002	-.105	-.028	.012	-.119	-.005	.020	.104
FSR6	**.788**	-.111	-.016	.015	.105	-.037	.057	-.210	.021	.047	.080
FSR7	**.822**	-.083	.058	-.027	.043	-.047	.023	-.148	.095	.064	.083
FSR8	**.708**	-.015	.044	.084	.033	.041	.049	-.045	.039	.066	.174
IPI1	-.084	**.900**	-.040	.134	.039	.057	-.121	.769	-.093	-.034	-.150
IPI2	-.133	**.784**	-.045	.034	.191	.008	-.087	.540	-.087	.048	-.228
PC1	.002	-.045	**.749**	-.002	.011	.085	-.024	-.100	-.026	-.045	-.005
PC2	.012	-.032	**.789**	-.017	-.021	.052	-.046	-.107	-.080	.066	.018
PD1	-.011	.132	-.033	**.814**	.121	.087	-.088	.192	-.009	.054	.015
PD2	.003	.077	.024	**.900**	.135	.112	.056	.175	-.023	.093	-.016
PD3	.051	.028	-.029	**.748**	.162	.094	.002	.083	.004	.020	-.074
PGQ12	-.049	.130	.019	.110	**.783**	-.031	-.039	.154	-.025	.044	-.016
PGQ3	.006	.084	-.028	.184	**.829**	.059	-.082	.194	.041	-.013	.017
PGQ7	.035	.068	-.001	.063	**.747**	.029	.038	.132	.106	.052	-.006
PSO1	-.084	.046	.071	.084	.009	**.752**	.043	.087	-.169	-.100	-.127
PSO3	-.021	.049	.070	.032	.000	**.714**	-.052	.081	-.283	-.026	-.045
PSO4	.039	-.009	.044	.144	.056	**.661**	-.026	.068	-.215	.041	.040
TC1	.054	-.132	-.015	-.008	-.006	.009	**.783**	-.101	.043	.022	.010
TC4	.058	-.088	-.057	-.021	-.061	-.026	**.892**	-.139	-.038	-.058	-.012
TCB1	-.180	.448	-.133	.174	.272	.133	-.122	**.785**	-.088	.040	-.307
TCB11	-.106	.843	-.067	.136	.026	.062	-.110	**.788**	-.069	-.011	-.166
TCB13	-.061	.654	-.158	.103	.143	.063	-.079	**.821**	-.074	.049	-.316
TCB14	-.284	.505	-.065	.225	.202	.078	-.093	**.755**	-.039	-.001	-.078
TCB2	-.232	.565	-.131	.203	.262	.138	-.158	**.868**	-.118	.069	-.187
TCB4	-.096	.860	-.065	.128	.023	.063	-.120	**.790**	-.078	-.018	-.173
TCB6	-.053	.681	-.156	.094	.138	.060	-.094	**.827**	-.085	.037	-.327
TCB7	-.275	.529	-.064	.216	.197	.076	-.106	**.761**	-.049	-.010	-.089
TCB8	-.155	.473	-.131	.165	.270	.113	-.110	**.753**	-.090	-.037	-.237
TCB9	-.216	.606	-.128	.192	.254	.139	-.175	**.881**	-.133	.057	-.201
TK1	.014	-.072	-.134	-.057	-.035	-.326	-.101	-.075	**.559**	-.021	-.015
TK2	.034	-.102	-.032	.012	.088	-.227	.034	-.090	**.930**	.029	-.010
TK5	.054	-.085	-.018	.002	.052	-.221	.041	-.087	**.932**	.019	-.017
TR1	.044	-.007	-.004	.071	.048	-.036	-.019	.025	.036	**.922**	-.023
TR2	.059	.016	.032	.027	.062	-.079	.031	.011	.043	**.883**	.016

Table 6.12 (continued)

	FSR	IPI	PC	PD	PGQ	PSO	TC	TCB	TK	TR	WFFC
TR5	.072	-.004	.005	.085	-.002	-.015	-.079	.017	-.050	**.748**	.059
TR6	.069	.007	.068	.047	-.052	-.058	.001	.007	.012	**.767**	.093
WFFC01	.051	-.134	.030	-.020	-.094	-.044	-.018	-.199	-.018	.032	**.836**
WFFC10	.193	-.137	.000	.004	-.005	-.124	.024	-.257	-.015	-.011	**.824**
WFFC11	.050	-.130	.025	-.018	-.094	-.050	-.019	-.198	-.018	.025	**.839**
WFFC12	.007	-.263	-.012	-.026	.125	.011	-.014	-.158	-.006	.044	**.732**
WFFC14	.050	-.130	.025	-.018	-.094	-.050	-.019	-.198	-.018	.025	**.839**
WFFC15	.007	-.263	-.012	-.026	.125	.011	-.014	-.158	-.006	.044	**.732**
WFFC18	.194	-.143	.006	.002	-.005	-.118	.025	-.260	-.016	-.002	**.827**
WFFC02	.008	-.268	-.004	-.028	.125	.018	-.013	-.158	-.007	.054	**.728**
WFFC05	.194	-.143	.006	.002	-.005	-.118	.025	-.260	-.016	-.002	**.827**
WFFC06	.049	-.125	.019	-.016	-.095	-.055	-.020	-.197	-.017	.017	**.837**
WFFC07	.006	-.255	-.019	-.023	.124	.004	-.015	-.155	-.006	.034	**.728**

6.8.1.5 Summary of Result of the Measurement Model

Considering the importance of the measurement model in PLS-SEM analysis. Table 6.10 and Figure 6.5 give a snapshot of the reflective measurement model assessment as recommended by Hair et al. (2014), Hair et al. (2012) and Henseler et al. (2009). Furthermore, the outline of the results as presented in Table 6.10, Table 6.11, and Table 6.12 all shows that the criteria concerning the model have been properly met, and provided all the needed support for demonstrating the reliability and validity of the study‘s measures and constructs.

6.8.2 Assessment of Significance of the Structural Model (Direct Effect)

The results of the measurement model in the previous section indicated that the measures for all the constructs were reliable and valid. In this section, the purpose of running the model with all the study variables was to ascertain the results of the direct

relationships (exogenous and endogenous relationship) arising from the research objectives of this study. The path coefficients in the structural model, which are shown in Figure 6.6, were the result of a bootstrapping with 5,000 bootstrap samples which was larger than the actual sample size of this study, and, as such, met the condition Hair et al. (2013) suggested. The results of the structural model of the direct effect are presented in this section, and the structural model of the direct effect is depicted in Figure 6.5.

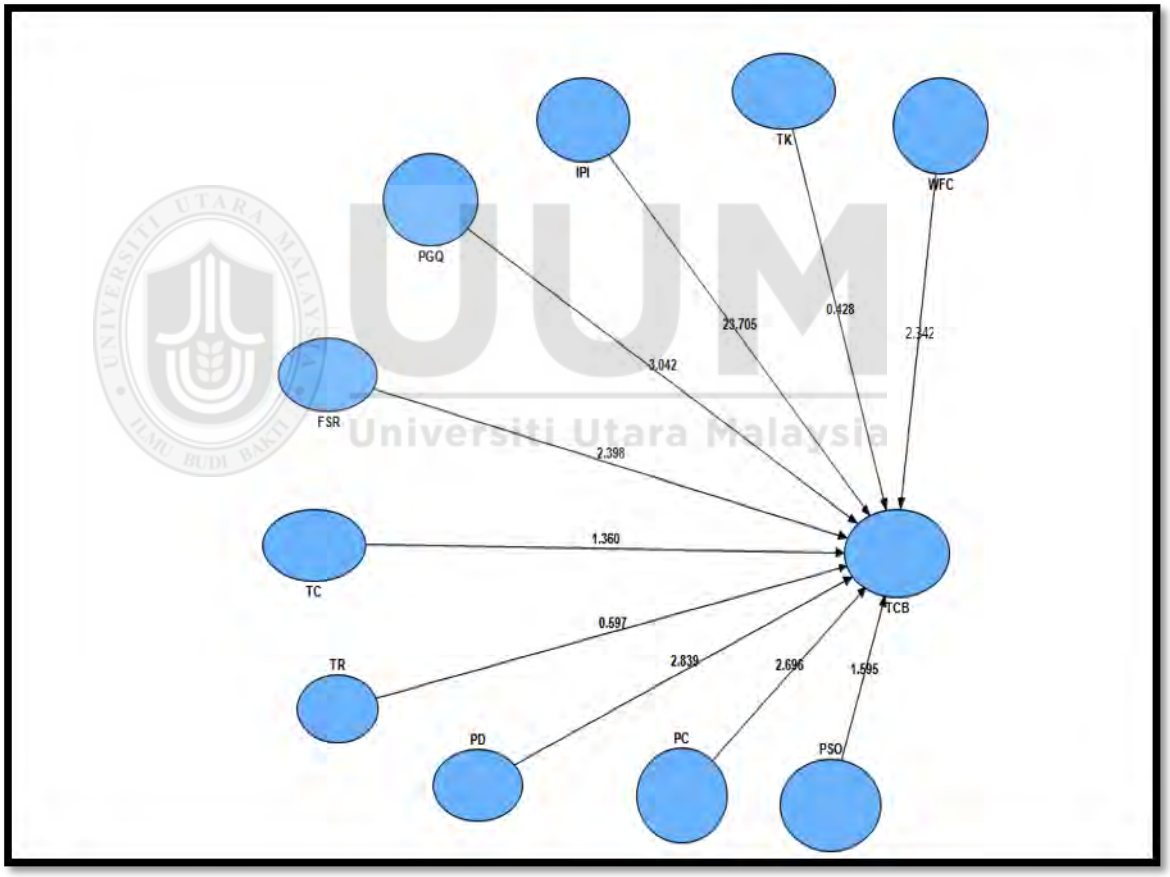


Figure 6.5. Structural Model or Inner Model (Direct effect).

6.8.2.1 Assessment of Path Coefficient in the Structural Model (Direct Effects)

In assessing the structural model, the significance of the construct as well as the relevance of the coefficient were taken into consideration. The t-values were used in either supporting or disproving the earlier hypotheses in Chapter Four. In this study, the path coefficients were estimated using t-statistics and the probability values. Therefore, the significance level of the t-value was assessed by a one-tailed distribution (Chin et al., 1996; Churchill, 1979; Sharma, 2000). In accordance with Churchill (1979) and Sharma (2000), in a situation in which a two-tailed statistical test is carried out, the significance level of a t-value of 1% is greater than or equal to 2.326, at 5% is greater or equal to 1.645 and at 10% is greater or equal to 1.282. Any t-value lesser than the stated values is said to be insignificant.

To buttress further, no consensus exists among researchers on the issue of what defines a reasonable level of significant in research (Verma, 1995). Even though Dallal (1998) was of the view that a probability value of 0.90 requires a very large sample size, which is consistent with the nature of this study. Furthermore, it has been documented that a probability value of less than 10% is reasonable and accepted in social and behavioral sciences (Cohen, 1977, 1988; Hinlde & Oliver, 1983; Kirk, 1982).

Hypothesis (H1) predicted a significant relationship between work family financial commitment and tax compliance behaviour. The results (Table 6.13, Figure 6.5)

revealed a significant negative relationship between work - family financial commitment (WFFC) and tax compliance behaviour (TCB), (β = -.08, t = 2.34, p = .01), supporting hypothesis (H1).

Hypothesis (H2) posited a significant relationship between fuel subsidy removal (FSR) and tax compliance behaviour (TCB). The results (Table 6.13, Figure 6.5) show that fuel subsidy removal had a significant negative relationship with tax compliance behaviour (β = -.09, t = 2.39, p < .01), supporting hypothesis (H2).

Table 6.13
Structural Model Results (Direct Effect)

Hypotheses	Relation	Beta values	Std errors	T - statistics	P - values	Decision
H1	WFFC -> TCB	-0.08	0.03	2.34***	0.01	Supported
H2	FSR -> TCB	-0.09	0.03	2.39***	0.00	Supported
H3	TR -> TCB	0.02	0.04	0.59	0.27	Not supported
H4	PD -> TCB	0.09	0.03	2.83***	0.00	Supported
H5	TC -> TCB	-0.04	0.03	1.36*	0.08	Supported
H6	IPI -> TCB	0.72	0.03	23.70***	0.00	Supported
H7	TK -> TCB	-0.01	0.03	0.42	0.33	Not supported
H8	PGQ -> TCB	0.10	0.03	3.04***	0.00	Supported

Note: ***Significant at 0.01 (1-tailed), and *significant at 0.1 (1-tailed); WFFC = work - family financial commitment; FSR = fuel subsidy removal; TR = tax rates; PD = probability of detection; TC = tax complexity; IPI = incentives (positive inducement); TK = tax knowledge; PGQ = public governance quality; TCB = tax compliance behaviour.

With respect to the influence of tax rates, hypotheses (H3) predicted a significant relationship between tax rates and tax compliance behaviour. The results (Table 6.13, Figure 6.5) showed no significant relationship between tax rates and tax

compliance behaviour (β = .02, t = .59, p > .10). Thus, this hypothesis was not supported.

The results for hypothesis (H4), which predicted a significant relationship between the probability of detection and tax compliance behaviour, indicated that probability of detection had a significant positive relationship with tax compliance behaviour *(β* = .09, t = 2.83, p < .01*),* indicating full support for hypothesis (H4).

In relationship to the influence of tax complexity, hypothesis (H5) hypothesised a significant relationship between tax complexity and tax compliance behaviour. This hypothesis was also supported because the estimates as shown (Table 6.13; Figure 6.5) were significant (β = -.04, t = 1.36, p < .10) i.e., significant at 10% which is accepted in social and behavioral sciences as reported by Cohen (1977, 1988); Hinlde and Oliver (1983) and Kirk (1982).

Regarding the influence of incentives (positive inducement) on tax compliance behaviour, the results (Table 6.13, Figure 6.5) indicated that incentives (positive inducement) had a significant positive relationship with tax compliance behaviour (β = .72, t = 23.70, p < .01). Therefore, hypothesis (H6) was fully supported.

However, the results for hypothesis (H7), concerning the influence of tax knowledge on tax compliance behaviour (Table 6.13, Figure 6.5) showed no significant relationship between tax knowledge and tax compliance behaviour (β = -.01, t = .42,

p > .10). Thus, hypothesis (H7) was not supported. As shown in Table 6.13, a significant positive relationship between public governance quality and tax compliance behaviour (β = .10, t = 3.04, p < .01) was found, indicating full support for hypothesis (H8).

6.8.2.2 Evaluation of the Coefficient of Determination (R2 Value) in the Structural Model

Albers (2010) and Chin (2010) suggested values of .25, .50, and .75 in PLS- SEM for categorizing findings as weak, moderate and substantial respectively using *R* squared values. Table 6.14 and Table 6.15 present the R-squared values of the endogenous latent construct before and after the interacting effects of the moderators.

Table 6.14
Variance Explained in the Endogenous Latent Variable before the Interacting Effect of PSO & Perceived Corruption

Latent variable	Variance explained (R^2)
Tax compliance behaviour	68%

Table 6.15
Variance Explained in the Endogenous Latent Variable in Relation to Full Model

Latent variable	Variance explained (R^2)
Tax compliance behaviour	71%

As shown in Table 6.14, the research model explains 68% of the total variance in tax compliance behaviour. This value means that the exogenous latent variables (i.e., work - family financial commitment, fuel subsidy removal, tax rates, the probability of detection, tax complexity, incentives (positive inducement), tax knowledge, public governance quality, perceived service orientation, and perceived corruption)

collectively explained 68% of the variance in endogenous construct (tax compliance behaviour). When the interacting effect of PSO and perceived corruption were applied in the full model as shown in Table 6.15, the model explains 71% of the variance in tax compliance behaviour. This means that, the exogenous latent constructs plus the moderating effect of PSO and perceived corruption collectively explained 71% of the variance in the endogenous latent construct (TCB). Consistent with the criteria of Albers (2010) and Chin (2010), the endogenous latent variable showed acceptable levels of R-squared value, which were considered to be moderate.

6.8.2.3 Evaluation of the Effect Size (f2)

In evaluating the effect size (f^2) of the endogenous latent construct, Cohen's (1988) guidelines were adopted for assessing f^2 values, with .02, .15, and .35 representing small, medium, and large effects of the endogenous construct respectively. Therefore, Table 6.16 represents the respective effects sizes f^2 of the latent construct on the structural model of the present study.

Table 6.16
Effect Sizes of the Latent Constructs on Cohen's (1988) Recommendation

Latent construct	R^2 Included	R^2 Excluded	f - squared	Effect size
Fuel subsidy removal	0.68	0.68	0.02	Small
Incentives (positive inducement)	0.68	0.24	1.39	Large
Probability of detection	0.68	0.68	0.02	Small
Public governance quality	0.68	0.68	0.02	Small
Tax complexity	0.68	0.68	0.01	None
Tax knowledge	0.68	0.68	0.00	None
Tax rates	0.68	0.68	0.00	None
Work - family financial commitment	0.68	0.68	0.02	Small

As shown in Table 6.16, the effect sizes for the latent construct (fuel subsidy removal, incentives (positive inducement), probability of detection, public governance quality, tax complexity, tax knowledge, tax rates, and work - family financial commitment) on tax compliance behaviour were .02, 1.39, .02, .02, .01, .00,.00, and .02 respectively. Therefore, considering the guidelines of Cohen (1988), the effect sizes of the eight predictor latent constructs on tax compliance behaviour can be considered to be small, large, small, small, none, none, none, and small respectively. However, those constructs categorized as having either none or small effect sizes were statistically important with respect to medium or large effect sizes. Chin et al. (2003) claimed that irrespective of the value of the effect sizes, they all possess their own peculiarity in predicting or influencing the endogenous variable, and hence should all be considered relevant.

6.8.2.4 Evaluation of the Predictive Relevance (Q2)

Following Henseler et al. (2009) suggestion, the results of the cross-validated redundancy Q^2 test of the current study is presented in Table 6.17.

Table 6.17
Construct Cross-Validated Redundancy

Total	SSO	SSE	1-SSE/SSO
Tax compliance behaviour	2810	1624.092004	0.422031

As presented in Table 6.17, the cross-validated redundancy measure Q^2 for the criterion latent construct was above zero, hence suggesting a predictive relevance of the model (Chin, 1998; Henseler et al., 2009).

6.8.3 Testing the Moderating Effect

It has been reported that, when the impending influence of a predictor variable on a criterion variable is contingent upon the values of another variable, a moderating effect is said to exist, especially when the variable in question moderates the existing relationship between the predictor variable and the criterion variable (Hair et al., 2013). As shown in Figure 6.6, the structural path of the interacting effect of perceived service orientation and perceived corruption is depicted.

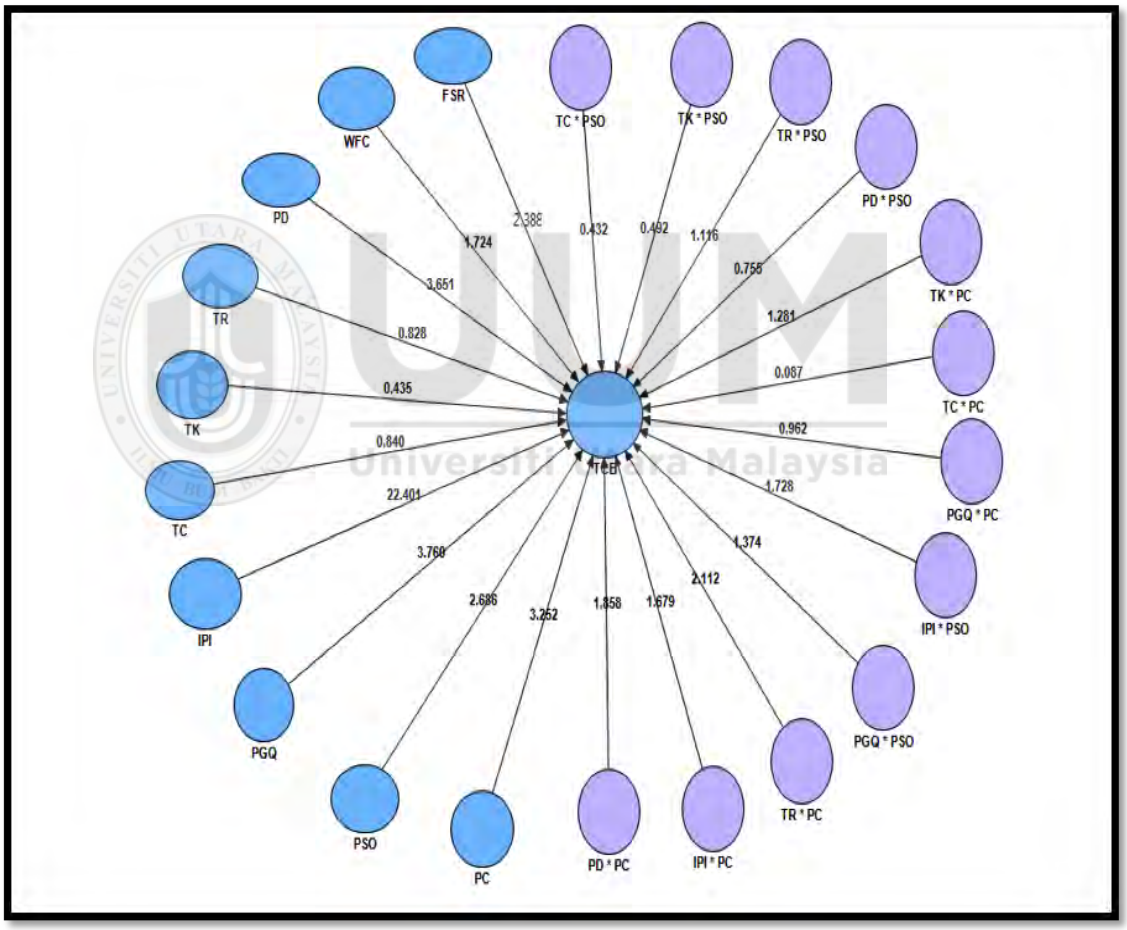


Figure 6.6. Path Model Results: Interaction of Perceived Service Orientation and Perceived Corruption.

The moderating effect of perceived service orientation and perceived corruption were tested. The estimates were shown in Table 6.18 and Figure 6.6 after the application of the product indicator approach to examine the moderating effects of perceived service orientation, perceived corruption on the relationship between economic factors, psychological factors and tax compliance behaviour.

As stated in Chapter Four, hypothesis (H3a) posited that perceived service orientation would moderate the relationship between tax rates and tax compliance behaviour. The results (Table 6.18, Figure 6.6) show that the interaction terms representing tax rates x perceived service orientation were not statistically significant ($\beta = .04$, $t = 1.12$, $p > .10$).

Table 6.18
Results of Moderating Effects

Hypothesis	Relationship	Beta – values	Std – error	T – values	P - values	Decision
H3a	TR * PSO -> TCB	0.04	0.03	1.12	0.13	Not supported
H3b	TR * PC-> TCB	0.06	0.03	2.11**	0.02	Supported
H4a	PD* PSO -> TCB	-0.04	0.05	0.75	0.23	Not supported
H4b	PD * PC -> TCB	-0.09	0.05	1.86**	0.03	Supported
H5a	TC * PSO -> TCB	-0.02	0.05	0.43	0.33	Not supported
H5b	TC * PC -> TCB	0.00	0.03	0.09	0.47	Not supported

Table 6.18 (continued)

Hypothesis	Relationship	Beta – values	Std – error	T – values	P - values	Decision
H6a	IPI * PSO -> TCB	0.08	0.05	1.73**	0.04	Supported
H6b	IPI* PC -> TCB	-0.08	0.05	1.68**	0.05	Supported
H7a	TK * PSO -> TCB	-0.03	0.05	0.49	0.31	Not supported
H7b	TK * PC -> TCB	-0.08	0.06	1.28*	0.10	Supported
H8a	PGQ* PSO -> TCB	0.08	0.05	1.37*	0.09	Supported
H8b	PGQ * PC-> TCB	0.03	0.04	0.96	0.17	Not supported

Note: **significant at 0.05 (1-tailed), and *significant at 0.1 (1-tailed). TR = tax rates; PD = probability of detection; TC = tax complexity; IPI = incentives (positive inducement); TK = tax knowledge; PGQ = public governance quality; PSO = perceived service orientation; PC = perceived corruption; TCB = tax compliance behaviour.

However, hypothesis (H3b) predicted that perceived corruption would moderate the relationship between tax rates and tax compliance behaviour. As expected, the results shown in Table 6.18, Figure 6.6 indicated that the interaction terms representing tax rates x perceived corruption ($\beta = .06$, $t = 2.11$, $p < .05$) was statistically significant; thus hypothesis (H3b) was fully supported.

Additionally, information from the path coefficients was also used to plot the moderating effect of perceived corruption on the relationship between tax rates and tax compliance behaviour as Aiken and West (1991) and Dawson (2013) recommended as depicted in Figure 6.7.

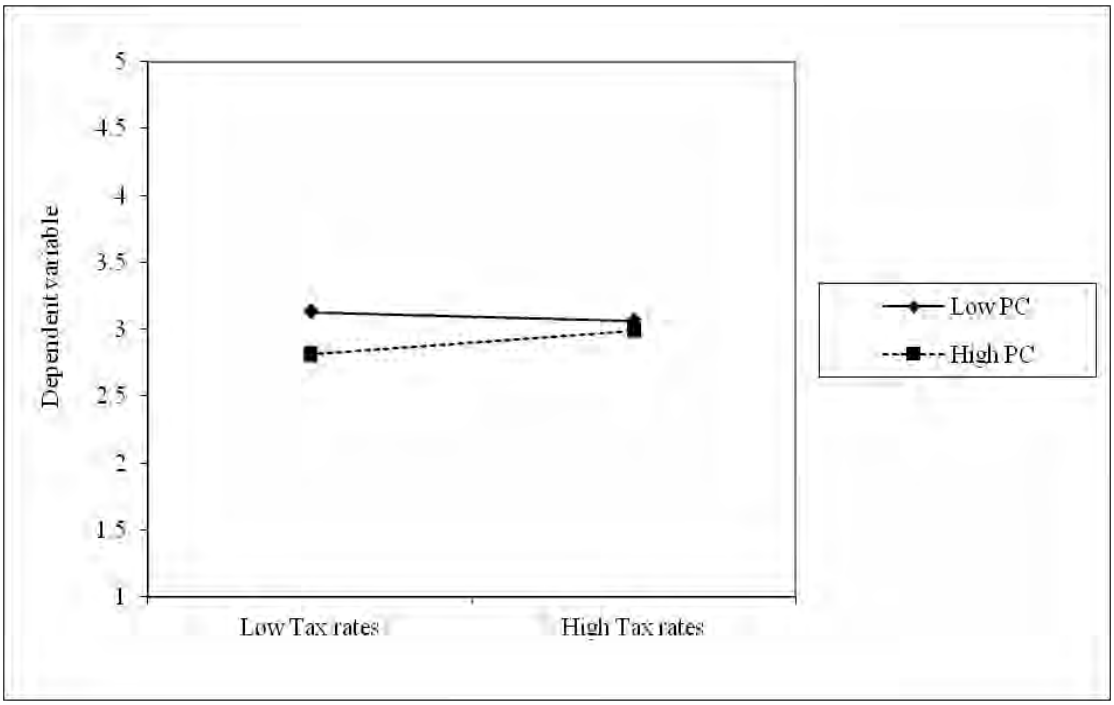


Figure 6.7. Interaction Effect of Tax Rates and Perceived Corruption on Tax Compliance Behaviour.

Additionally, hypothesis (H4a) stated that perceived service orientation would moderate the relationship between the probability of detection and tax compliance behaviour. The results (Table 6.18, Figure 6.6) show that the interaction terms representing probability of detection rates x perceived service orientation was not statistically significant (β = - .04, t = .75, p > .10).

Hypothesis (H4b) predicted that perceived corruption would moderate the relationship between probability of detection and tax compliance behaviour. This hypothesis was supported because the interaction between probability of detection and perceived corruption in predicting tax compliance behaviour was found be significant (β = - .09, t = 1.86, p < .05). Graphically, this result is illustrated in

Figure 6.8. Hence, perceived corruption moderates the relationship between probability of detection and tax compliance behaviour as depicted in Figure 6.9.

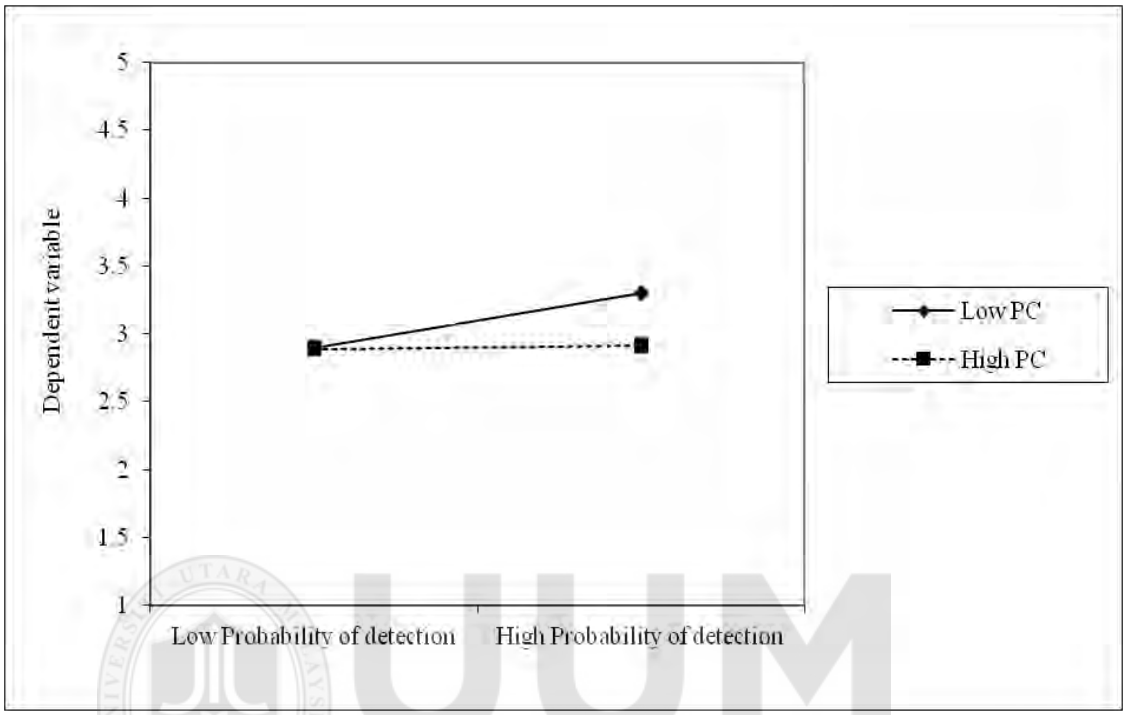


Figure 6.8. Interaction Effect of Probability of Detection and Perceived Corruption on Tax Compliance Behaviour.

Similarly, hypothesis (H5a) also predicted that perceived service orientation would moderate the relationship between tax complexity and tax compliance behaviour, as shown in Table 6.18, Figure 6.6, the hypothesis was not supported because the interaction between tax complexity and perceived service orientation in predicting tax compliance behaviour was insignificant (β = - .02, t = .43, p > .10).

Hypothesis (H5b) posited that perceived corruption would moderate the relationship between the probability of detection and tax compliance behaviour. The results in

Table 6.18; Figure 6.6 (β = .00, t = .09, p >.10) do not support hypothesis (H4b); thus, the hypothesis was rejected.

Moreover, hypothesis (H6a) predicted that perceived service orientation would moderate the relationship between incentives (positive inducement) and tax compliance behaviour. Table 6.18 shows support for hypothesis (H6a) (β = .08, t = 1.73, p < .05). The graphical representation of the moderating effect of perceived service orientation on the relationship between incentives (positive inducement) and tax compliance is also depicted in Figure 6.9.

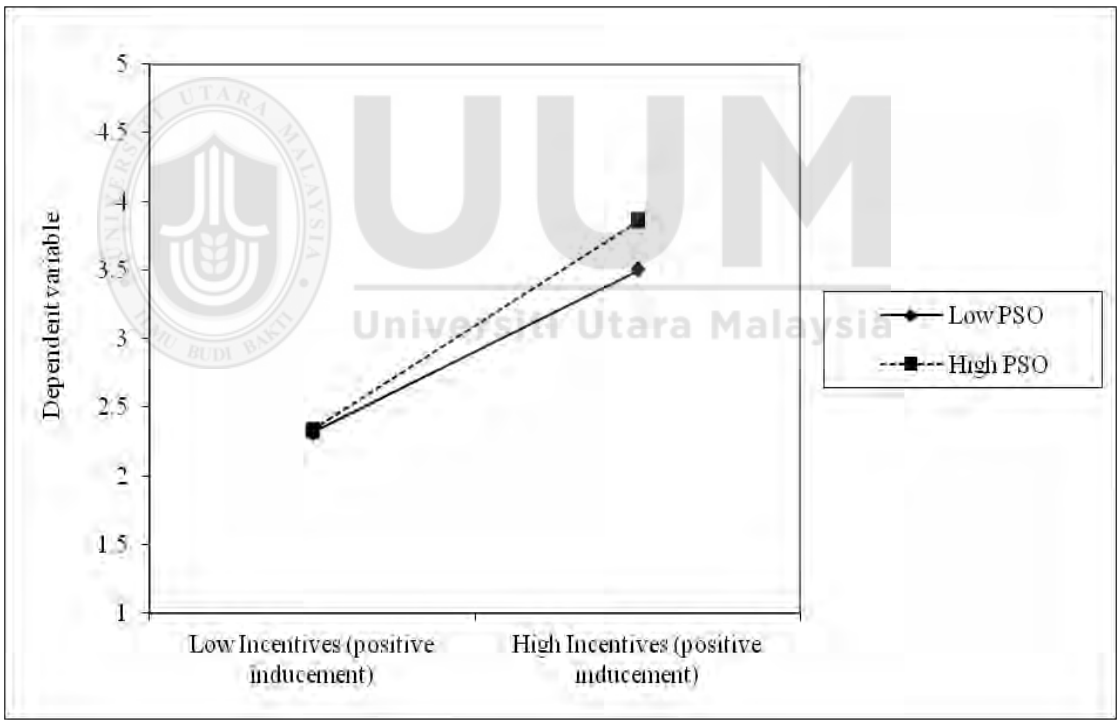


Figure 6.9. Interaction Effect of Incentives (positive inducement) and Perceived Service Orientation on Tax Compliance Behaviour.

Hypothesis (H6b) predicted that perceived corruption would moderate the relationship between incentives (positive inducement) and tax compliance behaviour.

The results shown in Table 6.18, Figure 6.6 demonstrated a significant interaction between incentives (positive inducement) and perceived corruption in relationship to their compounding effects on tax compliance behaviour (β = - .08, t = 1.68, p = .05). The graphical illustration of this result is shown in Figure 6.10 for the moderating effect of perceived corruption on the relationship between incentives (positive inducement) and tax compliance behaviour.

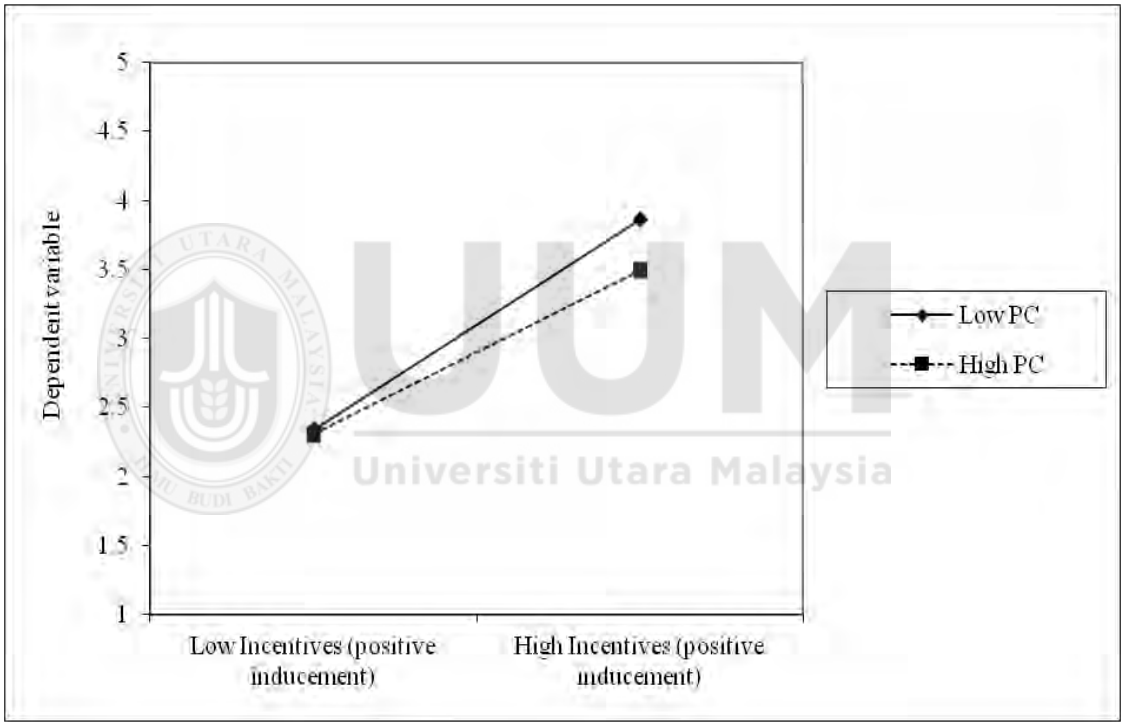


Figure 6.10. Interaction Effect of Incentives (positive inducement) and Perceived Corruption on Tax Compliance Behaviour.

Hypothesis (H7a) posited that perceived service orientation would moderate the relationship between tax knowledge and tax compliance behaviour. The results shown in Table 6.18, Figure 6.6 indicated that perceived corruption failed to moderate the relationship between tax knowledge and tax compliance behaviour

because their coefficient was insignificant (β = - .03, t = .49, p > .10), and, as such, this hypothesis was not supported.

Moreover, hypothesis (H7b) predicted that perceived corruption would moderate the relationship between tax knowledge and tax compliance behaviour. Table 6.18, Figure 6.6 indicated a significant interaction between tax knowledge and perceived corruption in predicting tax compliance behaviour perceived (β = - .08, t = 1.28, p = .10), hence granting strong support for hypothesis (H7b). Furthermore, it has been documented that a probability value of 10% is reasonable and accepted in social and behavioral sciences (Cohen, 1977, 1988; Hinlde and Oliver, 1983; Kirk, 1982) hence supported. Graphically, Figure 6.11 shows the interacting effects of perceived corruption on the relationship between tax knowledge and tax compliance behaviour.

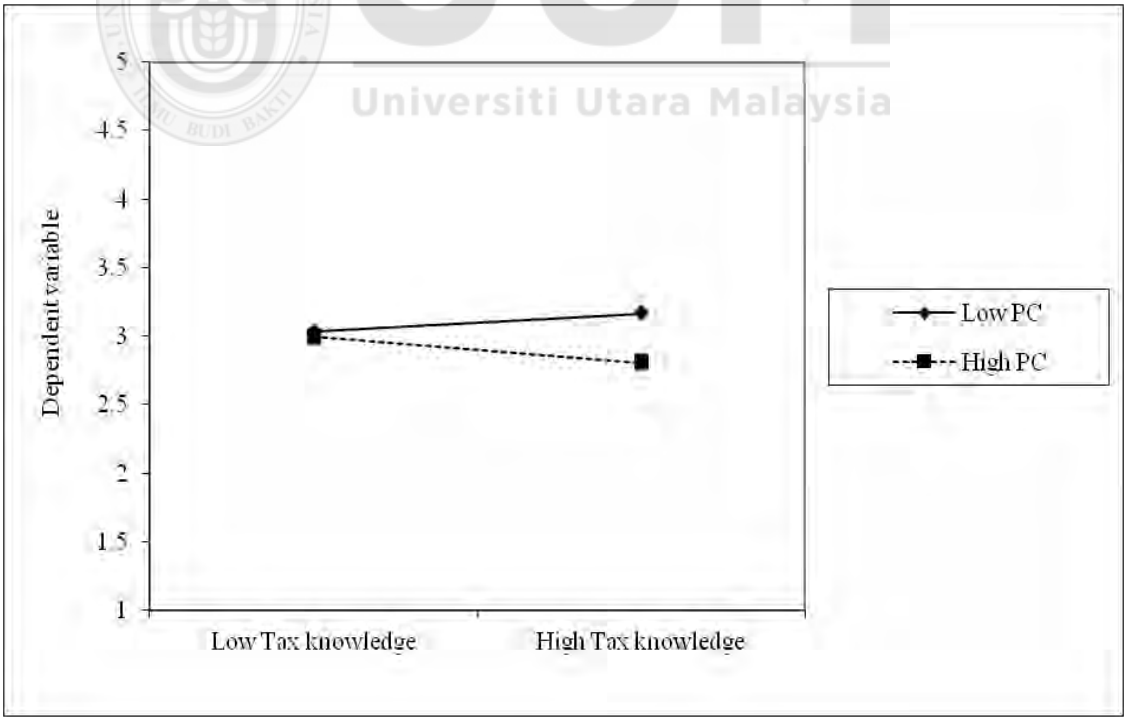


Figure 6.11. Interaction Effect of Tax Knowledge and Perceived Corruption on Tax Compliance Behaviour.

Specifically, hypothesis (H8a) posited that perceived service orientation would moderate the relationship between public governance quality and tax compliance behaviour. The findings in Table 6.18, Figure 6.6 demonstrated a significant interaction between public governance quality and perceived service orientation in predicting tax compliance behaviour ($\beta = .08$, $t = 1.37$, $p < .10$). The interacting term is significant at 10% and therefore accepted because a probability value of 10% is reasonable and accepted in social and behavioral sciences (Cohen, 1977, 1988; Hinlde and Oliver, 1983; Kirk, 1982). The graphical representation of the interacting effect is shown in Figure 6.12.

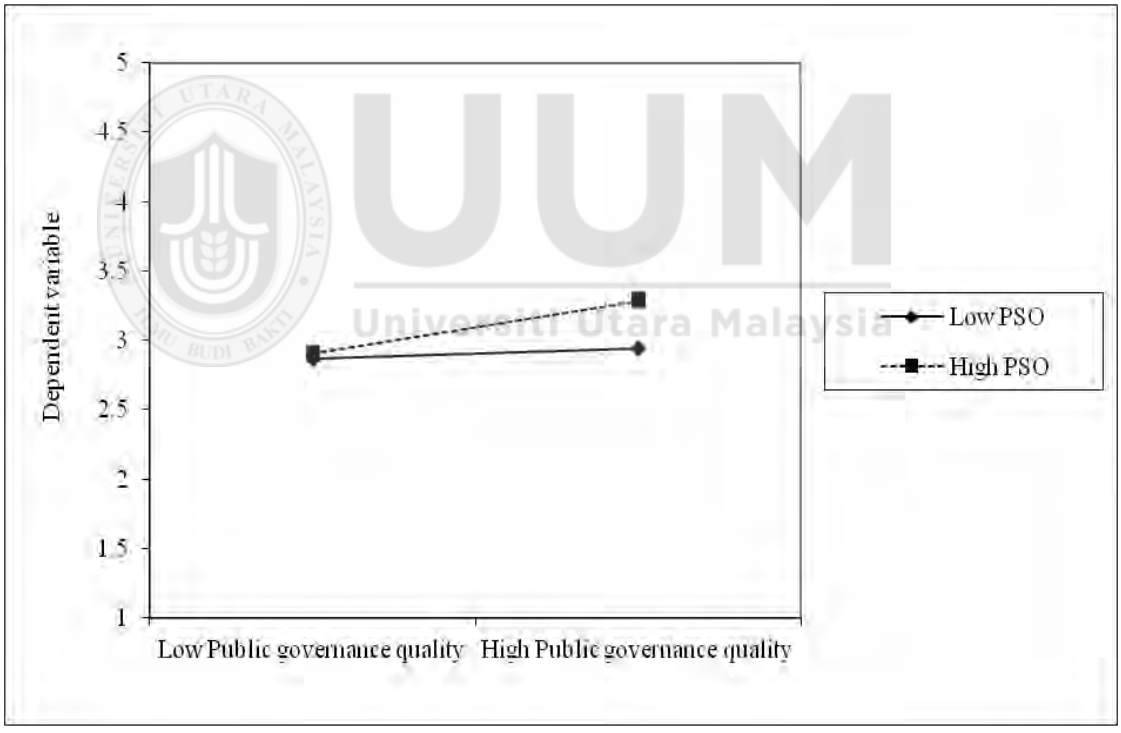


Figure 6.12. Interaction Effect of Public Governance Quality and Perceived Service Orientation on Tax Compliance Behaviour.

Finally, hypothesis (H8b) predicted that perceived corruption would moderate the relationship between public governance quality and tax compliance behaviour. This

hypothesis was not supported because the interaction between public governance quality and perceived corruption in predicting tax compliance behaviour was not significant (β = .03, t = .96, p > .10). Thus, the hypothesis was rejected.

As presented above, the moderation results demonstrate that six of the hypotheses) (H3b, H4b, H6a, H6b, H7b, and H8a were supported, while the remaining six hypotheses (H3a, H4a, H5a, H5b, H7a, and H8b) were not supported, and thus were rejected.

6.8.3.1 Determining the Strength of the Moderating Effects

In determining the strength of the moderating effects of perceived service orientation and perceived corruption on the relationships between economic factors, psychological factors and tax compliance behaviour, Cohen's (1988) effect sizes were calculated. Hence, Table 6.19 presents the results of the strength of the moderating effects of perceived service orientation and perceived corruption.

Table 6.19
Strength of the Moderating Effect Based on Cohen's (1988) Recommendation

R - squared	Included	Excluded	f - squared	Effect size
TC * PC -> TCB	.710	.710	.000	None
TC * PSO -> TCB	.710	.710	.000	None
TK * PC -> TCB	.710	.704	.021	Small
TK * PSO -> TCB	.710	.709	.003	None
PD * PC -> TCB	.710	.704	.021	Small
PD * PSO -> TCB	.710	.709	.003	None
TR * PC -> TCB	.710	.707	.010	None
TR * PSO -> TCB	.710	.709	.003	None
IPI * PC -> TCB	.710	.704	.021	Small
IPI * PSO -> TCB	.710	.704	.021	Small
PGQ * PC -> TCB	.710	.709	.003	None
PGQ * PSO -> TCB	.710	.706	.014	None

In line with Henseler and Fassott's (2010) and Cohen's (1988) rules of thumb for ascertaining the strength of the moderating effects, the effect sizes for tax knowledge and perceived corruption, probability of detection and perceived corruption, incentives (positive inducement) and perceived corruption, incentives (positive inducement) and perceived service orientation, were .021, .021, .021, and .021 respectively. These results suggested that the moderating effect was small respectively, while tax complexity and perceived corruption, tax complexity and perceived service orientation, tax knowledge and perceived service orientation, probability of detection and perceived service orientation, tax rates and perceived corruption, tax rates and perceived service orientation, public governance quality and perceived corruption, and public governance quality and perceived service orientation had no effects as shown in Table 6.19 (Henseler, Wilson, Götz, & Hautvast, 2007; Wilden et al., 2013). This shows that, the effect of the variables revealed the important of each construct in the model as pointed by Cohen (1998). This can either increase or reduce the predictive relevance of the study model.

6.9 Summary of Findings

This section presents a comprehensive summary of the results in relation with the tested hypotheses and also in accordance with the research questions in Chapter One. A total of twenty hypothesised relationships were tested in this study. Of the twenty hypotheses, twelve were empirically supported, while eight were not supported. Table 6.20 summarizes the results of all the hypotheses that were tested, and the implications of these results are discussed further in the next chapter.

Table 6.20
Summary of Hypotheses Testing

Hypothesis	Statement	Finding
H1	There is a significant relationship between work - family financial commitment and tax compliance behaviour.	Supported
H2	There is a significant relationship between fuel subsidy removal and tax compliance behaviour.	Supported
H3	There is a significant relationship between tax rates and tax compliance behaviour.	Not supported
H3a	Perceived service orientation will moderate the relationship between tax rates and tax compliance behaviour.	Not supported
H3b	Perceived corruption will moderate the relationship between tax rates and tax compliance behaviour.	Supported
H4	There is a significant relationship between probability of detection and tax compliance behaviour.	Supported
H4a	Perceived service orientation will moderate the relationship between probability of detection and tax compliance behaviour.	Not supported
H4b	Perceived corruption will moderate the relationship between probability of detection and tax compliance behaviour.	Supported
H5	There is a significant relationship between tax complexity and tax compliance behaviour.	Supported
H5a	Perceived service orientation will moderate the relationship between tax complexity and tax compliance behaviour.	Not supported
H5b	Perceived corruption will moderate the relationship between tax complexity and tax compliance behaviour.	Not supported

Table 6.20 (continued)

Hypothesis	Statement	Finding
H6	There is a significant relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H6a	Perceived service orientation will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H6b	Perceived corruption will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H7	There is a significant relationship between tax knowledge and tax compliance behaviour.	Not supported
H7a	Perceived service orientation will moderate the relationship between tax knowledge and tax compliance behaviour.	Not supported
H7b	Perceived corruption will moderate the relationship between tax knowledge and tax compliance behaviour.	Supported
H8	There is a significant relationship between public governance quality and tax compliance behaviour.	Supported
H8a	Perceived service orientation will moderate the relationship between public governance quality and tax compliance behaviour.	Supported
H8b	Perceived corruption will moderate the relationship between public governance quality and tax compliance behaviour.	Not supported

6.10 Summary

Specifically, this study carries out data analysis in two rigorous processes. First, this involved the preliminary analysis of the data. This process is very important to the data analysis in order to ensure that the data met the basic requirements for PLS-SEM analysis. Second, the two stages of PLS-SEM evaluation criteria, which included the measurement and structural models, were employed accordingly.

Furthermore, using the PLS-SEM technique, the multivariate analysis statistically provided evidence of the predictive relevance of both the economic and psychological factors as good mechanisms for influencing the behaviours of the taxpayers.

Following the assessment of significance of the path coefficients, the key findings of the study were presented. Primarily, these findings revealed six main significant effects affecting the relationship between: 1) work - family financial commitment (WFFC) and tax compliance behaviour (TCB), 2) fuel subsidy removal (FSR) and tax compliance behaviour (TCB), 3) the probability of detection (PD) and tax compliance behaviour (TCB), 4) tax complexity (TC) and tax compliance behaviour (TCB), 5) incentives (positive inducement) and tax compliance behaviour (TCB), and 6) public governance quality (PGQ) and tax compliance behaviour (TCB).

However, two of the direct effect relationships: 1) tax rates (TR) and tax compliance behaviour (TCB), and 2) tax knowledge (TK) and tax compliance behaviour (TCB), were not supported and, therefore, rejected because of their insignificant path coefficients that did not tally with their formulated hypotheses.

Importantly, with respect to the moderating effects of perceived service orientation, perceived corruption on the relationship between economic factors, psychological factors and tax compliance behaviour, the PLS path coefficients revealed that of twelve formulated hypotheses, six were significant, whereas six were not significant.

In particular, perceived service orientation was found to moderate the relationship between: 1) incentives (positive inducement) and TCB, 2) public governance quality and TCB, while perceived corruption was found to moderate the relationship between: 1) tax rates and TCB, 2) probability of detection and TCB, 3) incentives (positive inducement) and TCB, and 4) tax knowledge and TCB.

The next chapter focuses on the results in detail for the purpose of achieving the objectives of this study and discusses the findings further, followed by implications (theoretical, methodological and practical), limitations, suggestions for future research directions and the conclusion.

CHAPTER SEVEN
DISCUSSION

7.1 Introduction

The previous chapter highlighted the findings and the results of the PLS-SEM. This chapter presents a discussion of the concluding part of this research. The chapter is divided into six sections. Section 7.1 provided the introduction while Section 7.2 summarized the major findings of the study. The discussion of the findings was captured in Section 7.3, while the practical, theoretical and methodological implications of the study were discussed in Section 7.4. Section 7.5 explicitly highlighted the limitations and future research directions. Finally, Section 7.6 drew the conclusions for the entire thesis.

7.2 Recapitulation of the Study Findings

This study examined the influence of WFFC, FSR and tax compliance behaviour of Nigerian SMEs owners/managers. The study further explored the moderating role of perceived service orientation, and perceived corruption on the relationship between economic factors (tax rate, the probability of detection, and tax complexity), psychological factors (incentives such as positive inducement, tax knowledge, and PGQ) and tax compliance behaviour. In totality, this study has succeeded in advancing the current frontier of knowledge of other determinants of tax compliance behaviour that were not captured in Fischer's model; hence, the study is capable of providing answers to the following research questions:

1. Are WFFC, FSR, economic factors (tax rates, probability of detection and tax complexity), and psychological factors (incentives i.e., positive inducement, tax knowledge and public governance quality) related to tax compliance behaviour?
2. Do PSO and perceived corruption moderate the relationship between economic factors (tax rates, probability of detection and tax complexity), psychological factors (incentives i.e., positive inducement, tax knowledge and public governance quality) and tax compliance behaviour?

Towards this end, twenty hypotheses representing the relationships of the constructs were devised. The results provided empirical support for twelve hypotheses including the main and moderating effects.

Regarding the direct relationship between the exogenous latent construct and endogenous latent construct, the findings revealed that six hypotheses of the eight were supported and two were not. The PLS path model showed that work - family financial commitment was significantly and negatively related to tax compliance behaviour. Similarly, fuel subsidy removal was also significantly and negatively related to tax compliance behaviour. The results further revealed that the probability of detection, tax complexity, incentives (positive inducement), and public governance quality were also significantly related to tax compliance behaviour. However, tax rates and tax knowledge were not found to be significantly related to tax compliance behaviour.

With respect to perceived service orientation and perceived corruption as potential moderators on the relationship between economic factors (tax rates, probability of detection, and tax complexity), psychological factors (incentives via positive inducement, tax knowledge, and public governance quality) and tax compliance behaviour, the findings provided empirical evidence and support for six of the twelve hypotheses.

In particular, perceived service orientation was found to moderate the relationship between incentives (positive inducement), public governance quality and tax compliance behaviour. In addition, perceived corruption was discovered to moderate the relationship between tax rates, probability of detection, incentives (positive inducement), and tax knowledge and tax compliance behaviour.

In contrast, perceived service orientation did not moderate the relationship between: 1) tax rates and tax compliance behaviour, 2) probability of detection and tax compliance behaviour, 3) tax complexity and tax compliance behaviour, 4) tax knowledge and tax compliance behaviour. Perceived corruption did not moderate the relationship between 1) tax complexity and tax compliance behaviour, and 2) public governance quality and tax compliance behaviour. The next section offers discussion of the results.

7.3 Discussion of Results

This section discusses the results of the study's finding in relationship to both direct and indirect relationships between the exogenous, moderating and endogenous variables.

There were twenty hypotheses testing the direct and indirect relationships. These hypotheses and summary of the results are represented in Table 7.1.

Table 7.1
Hypotheses and Summary of Results for Direct and Moderating Relationships

No	Hypothesis	Result
H1	There is a significant relationship between work - family financial commitment and tax compliance behaviour.	Supported
H2	There is a significant relationship between fuel subsidy removal and tax compliance behaviour.	Supported
H3	There is a significant relationship between tax rates and tax compliance behaviour.	Not supported
H3a	Perceived service orientation will moderate the relationship between tax rates and tax compliance behaviour.	Not supported
H3b	Perceived corruption will moderate the relationship between tax rates and tax compliance behaviour.	Supported
H4	There is a significant relationship between probability of detection and tax compliance behaviour.	Supported
H4a	Perceived service orientation will moderate the relationship between probability of detection and tax compliance behaviour.	Not supported
H4b	Perceived corruption will moderate the relationship between probability of detection and tax compliance behaviour.	Supported
H5	There is a significant relationship between tax complexity and tax compliance behaviour.	Supported
H5a	Perceived service orientation will moderate the relationship between tax complexity and tax compliance behaviour.	Not supported
H5b	Perceived corruption will moderate the relationship between tax complexity and tax compliance behaviour.	Not supported
H6	There is a significant relationship between incentives (positive inducement) and tax compliance behaviour.	Supported

Table 7.1 (continued)

No	Hypothesis	Result
H6a	Perceived service orientation will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H6b	Perceived corruption will moderate the relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H7	There is a significant relationship between tax knowledge and tax compliance behaviour.	Not supported
H7a	Perceived service orientation will moderate the relationship between tax knowledge and tax compliance behaviour.	Not supported
H7b	Perceived corruption will moderate the relationship between tax knowledge and tax compliance behaviour.	Supported
H8	There is a significant relationship between public governance quality and tax compliance behaviour.	Supported
H8a	Perceived service orientation will moderate the relationship between public governance quality and tax compliance behaviour.	Supported
H8b	Perceived corruption will moderate the relationship between public governance quality and tax compliance behaviour.	Not supported

Table 7.2 presents the results of hypothesis testing for direct relationships.

Table 7.2
Summary of Results for Direct Relationships

No	Hypothesis	Results
H1	There is a significant relationship between work - family financial commitment and tax compliance behaviour.	Supported
H2	There is a significant relationship between fuel subsidy removal and tax compliance behaviour.	Supported
H3	There is a significant relationship between tax rates and tax compliance behaviour.	Not supported
H4	There is a significant relationship between probability of detection and tax compliance behaviour.	Supported
H5	There is a significant relationship between tax complexity and tax compliance behaviour.	Supported
H6	There is a significant relationship between incentives (positive inducement) and tax compliance behaviour.	Supported
H7	There is a significant relationship between tax knowledge and tax compliance behaviour.	Not supported
H8	There is a significant relationship between public governance quality and tax compliance behaviour.	Supported

7.3.1 Direct Effects of WFFC, FSR, Economic Factors, and Psychological Factors on Tax Compliance Behaviour

The first research question was whether WFFC, FSR, economic factors and psychological factors actually explain tax compliance behaviour. In line with this research question, the first objective of this study was to examine the relationships among WFFC, FSR, economic factors (tax rates, probability of detection, tax complexity), psychological factors (incentives, tax knowledge and public governance quality) and tax compliance behaviour. To answer the first research question, eight research hypotheses were formulated and tested using PLS-SEM. In relationship to the direct effects of these constructs, this study found that WFFC, FSR, probability of detection, tax complexity,

incentives (positive inducement), and public governance quality had significant relationships with tax compliance behaviour. Tax rates and tax knowledge were not significantly related to the compliance behaviour of SMEs taxpayers.

Specifically, work - family financial commitment has been defined as a form of inter-role obligation in which one‘s role make it difficult to have valuable time with the family, or when commitment in the family makes it difficult to be fully engaged at work or to meet individual or organisational responsibilities and obligations (Greenhaus & Beutel, 1985). Individuals who are able to manage this conflict have less pressure emanating either from the family (family obligations, such as extended family burdens) or from the work domain (less cost of business operations, wages, and business commitments such as tax payments). The first hypothesis (H1) of this study states that work - family financial commitment would be significantly related to tax compliance behaviour. As expected, the findings provided support for the hypothesis.

The findings regarding this construct represent one main contribution of this research, and possible explanations for its direct effect could be explained from theoretical perspectives rather than relying on prior empirical studies. Hence, work family spillover theory (Staines, 1980) serves as the basis for the possible justifications of the new findings.

Intrinsically, as work - family financial commitment become tense, individual taxpayers such as SMEs owners/managers may be faced with so many family obligations that

attention to either business obligations or family may be affected. Therefore, the reciprocal of this conflict is consistent with work family spillover theory (Staines, 1980).

Work family spillover theory emphasizes that either the family or work system may have a spillover effect or influence on the other system (Staines, 1980). Similarly, the theory further highlights that either satisfaction or dissatisfaction in one area of life may extend to other domains. That is obligation in the family may affect individual business obligations in individual business obligations may affect the family (George & Brief, 1990). This implies that, as the work - family financial commitment become severe, the financial position of the taxpayer is possibly affected. Because he/she could try by all means to meet those needs, the spillover effect may shift to his/her business environment, as a result may make him/her unable them to fulfil business obligations such as tax payments, salaries and wages, and other administrative costs.

The finding of this current study also corroborates the results of Kossek and Ozeki (1998) who found that the presence of a high work - family financial commitment might create additional demands such as financial obligations to meet family pressure, which in turn will negatively affect tax payments and compliance behaviours of the taxpayers. The findings also align with those of Kalliath and Kalliath (2013) and Shaffer and Joplin (2001) who said that family interference with work demands was negatively associated with job performance, which could include the ability of the business to adhere to tax obligations and payments.

Such seems the case in Nigeria, especially in the northern region of the country in which the literacy level is very low compared to other regions (World Bank, 2011). Additionally, the northern region, where this study was conducted, is characterized by extreme poverty, which gives rise to burdens related to extended family. Therefore, in the process of meeting the needs of an extended family, spillover effects may, in turn, affect the meeting of business obligations.

The present study predicted that fuel subsidy removal would be significantly related to tax compliance behaviour (H2). The results provided empirical to support this hypothesis. The finding regarding this construct represents another contribution of this research. Similar to the work family financial commitment, possible explanations of the direct effect of fuel subsidy removal could be explained from theoretical perspectives as of social exchange theory (Blau, 1964). Thus, in aligning this finding with the tenets of social exchange theory, individuals are psychologically indebted and thus compelled to return benefits that they receive in material or non-material forms to the person that benefited them (Blau, 1964). The negative relationship between fuel subsidy removal and tax compliance behaviour is not surprising and aligns with (Taiwo, 2013) who found that fuel subsidy removal would compound pressures on disposable income as well as intensify loss of tax revenues and create higher costs for enforcing compliance.

This implies that SMEs taxpayers who experience more hardships in trying to run their respective businesses may perceive that the government is responsible for causing the misery. As a consequence, their compliance behaviour may be affected negatively.

Common knowledge is that the revenue derived from the subsidy removal was supposed to have been used to finance the infrastructural facilities. In doing so, government may encourage taxpayers to reciprocate by paying their taxes. However, in a situation in which such a contract is void because impartments were not made, taxpayers might not engage in compliance behaviour.

Tax rate is defined as the perceived fairness in the tax rate structure and burden distribution (Gilligan & Richardson, 2005). It is operationalized in the context of this study as a percentage of taxes to be paid to the relevant tax authorities. Hypothesis (H3) states that tax rates would be significantly related to tax compliance behaviour. Contrary to expectations, an insignificant relationship was found. Thus, hypothesis (H3) was not supported.

This finding could be aligned with economic deterrence theory, which posits that factors such as the tax rate in ascertaining the rewards of evasion or noncompliance, the probability of detection and penalties for the crime or fraud which help in determining the costs influence the behaviour of taxpayers (Allingham & Sandmo 1972; Becker, 1968). This actually means that, if the probabilities of detection are not likely or certain and penalties attached to are also not severe, neither higher nor lower tax rates might significantly influence on the compliance behaviour of taxpayers.

The results of the present study significantly differ from the previous studies (Clotfelter, 1983; Mas'ud et al., 2014; Palil et al., 2013) that found that a negative relationship existed

between tax rates and tax compliance because the findings of the current study demonstrated that tax rates had no effect on tax compliance behaviour. One plausible explanation for the present findings may be related to economic, cultural, demographic, and business orientations of the respondents who belong to a highly under-developed economy. No doubt tax laws, service orientation, as well as the overall economic viability of SMEs found in Malaysia, Europe or the United States, in which most previous studies were conducted are far better than those in the underdeveloped countries like Nigeria.

Against that background, a good rationale for the non-significant effect of tax rates on tax compliance behaviour could be aligned to the operations of SMEs in Nigeria, which according to Micah, Ebere, and Umobong (2012) are at a rudimentary stage without appropriate recordkeeping statistics that made assessments difficult for tax authorities. Moreover, this scenario results in tax administration estimates that are prone to a wide margin of error. Because this situation is prevalent in the country, most taxpayers, but especially SME owners, might not notice or feel the impact of the prevailing tax rates due to the fact that the tax administration has so many inconsistent estimates by the tax assessors.

Supporting the above argument, Ariyo (1997) reported that, while the percentage of the self- employed to total working population is large in Nigeria, tax revenue from the self-employed sector is grossly untapped. That is to say, tax authorities have not outlined an appropriate mechanism for collecting tax from this group of taxpayers. Because of this, the tax rates may not have a reasonable correlation with the compliance level because the

sector has been reported to be grossly untapped whether the tax rates are high, moderate or low. This finding is also consistent with that of Modugu et al. (2012) who failed to discover either a positive or a negative relationship between tax rates and tax compliance in Nigeria. In their study, they did not explain why no significant relationship existed between the two constructs.

The probability of detection is the likelihood that the relevant tax authorities will uncover an individual‘s noncompliance and seeks to remedy the evasion (Chau & Leung, 2009). Hypothesis 4 of this study states that probability of detection would be related to tax compliance behaviour. As expected, the findings offered support for the hypothesis. Most importantly and in the context of this current study, the current findings significantly agree with several previous studies (Alm, 1991; Carnes & Englebrecht, 1995; Eisenhauer, 2008; Lewis et al., 2009) that found the probability of detection to be significantly and positively related to tax compliance. This implies that as the probability of detection becomes high, tax compliance may also become high.

This finding, like the previous positive findings discussed in this section, is consistent with the tenets of economic deterrence theory as Allingham and Sandmo (1972) posited. The findings were positive because the taxpayers who participated in the survey were aware of the possible mechanisms put in place by the relevant tax authorities both at the state and the federal levels towards increasing the level of compliance in the country and the penalties attached to it that are severe, which, in turn, will lead to high level of tax compliance. Therefore, the positive relationship between the probability of detection and

tax compliance behaviour might be as a result of proper equipment or methods of the Internal Revenue Service's offices in the states. They also could be as a result of tax tribunal offices spread among the six geopolitical zones of the country for the purpose of curbing the high number of cases of low levels of tax compliance. This is especially true in the northern region of the country.

Tax complexity arises from the process of improving the equity of the tax system while simultaneously reducing ambiguity (McKercher et al., 2005). Hypothesis (H5), which asserted a significant relationship between tax complexity and tax compliance behaviour, was accepted using PLS output with a significant relationship found between these two variables. These findings align with (Cox & Eger, 2006) who found that tax complexity contributed to an increase in tax non-compliance.

The findings demonstrate that tax complexity has a completely negative effect on tax compliance behaviour. Seemingly, the more complex a tax system is, the more taxpayers perceive the whole system to be inequitable. Therefore, whether taxpayers have the requisite tax knowledge or not, as far as the system is too complex, taxpayers may resort to low compliance. Another explanation for the significant effect of tax complexity on tax compliance behaviour stems from the fact that, lack of simplicity in tax returns, feelings of uncertainty may accompany the perceived peculiarities of tax complexities encountered by so many taxpayers, and, as a result, these taxpayers are subsequently deterred from compliance (Vogel, 1974). This situation seems applicable to the case of Nigeria. Put differently, the significant negative effect of tax complexity on tax

compliance behavior could stem from the fact that frequent changes and amendments to the Personal Income Tax Act (PITA) 1993 as amended in 2004, and 2011, which altered and deleted some sections in the Act, have made the tax system more cumbersome to the Nigerian taxpayers (Angahar & Alfred, 2012).

Another possible explanation for the nature of these findings could be aligned with the cultural and demographic background of the respondents. That is because the level of literacy level in the northern part of the country is very low falling below minimum standards (World Bank, 2011). As a result, this situation could further affect taxpayers in assessing and understanding the tax system, which of course may affect them negatively. In support of the above argument, McKerchar (2003) noted, that the most common problem faced by taxpayers in Australia was understanding the instructions in the Taxpack, which was followed by problems in understanding the rules, the tax return forms and other relevant written information provided by the tax authority. Therefore, shortfall in terms of literacy level will further compound the issue of tax complexity and reduce compliance behaviour of SME taxpayers all other things being equal.

The negativity of the association of complexity could be aligned to the tenets of equity theory (Adams, 1965). Drawing from equity theory, Adams (1965) and Fjeldstad et al. (2012) stated that, when the tax system is perceived to be complex, taxpayers might question its inherent fairness. Thus, the more complex a tax system is, the more taxpayers might perceive the whole system to be inequitable. Hence, this logic supported the current findings.

Incentives according to Slemrod (1992) and Smith (1992) are a form of positive inducement that encourages taxpayers to comply with the relevant tax laws and regulations or negative inducements such as penalties or sanctions where a likelihood of noncompliant exists. Consistent with hypothesis 6, a significant relationship between incentives (positive inducement) and tax compliance behaviour was found. This finding also supports the social exchange theory (Blau, 1964). This result suggests that individuals are psychologically indebted and thus forced to pay back the benefits they received in material or non-material form to the person that have provided benefits to them.

The positive relationship between incentive (positive inducement) is in line with previous studies indicating that perception of taxpayers in relationship to incentives may be one of the important factors in motivating them to comply to tax payment (Richardson & Sawyer, 2001). The result of this current study also agrees with Alm et al. (1992a), Manaf (2004), and Trivedi et al. (2004) who found a significant positive relationship between positive incentives and tax compliance behaviour. Additionally, this finding suggests that incentives (positive inducements) have a significant positive effect on the behaviour of Nigerian SMEs owners/managers. The importance of this finding is not over reaching because the provision of adequate and better tax incentives will help in boosting the economic activities of entrepreneurs.

Tax knowledge encompasses general knowledge, technical knowledge and legal knowledge in relationship to taxation. In the course of this study, participants were asked

about their general knowledge of the income tax system without making reference to a specific type of knowledge as consistent with Saad (2011). Prior literature has investigated tax knowledge of the taxpayers in relation to their compliance behaviour.

Hypothesis 7 of this study states that tax knowledge would be significantly related to tax compliance behaviour. Unexpectedly, the result failed to support the proposed hypothesis; the results demonstrated that taxpayers‘ knowledge did not affect their compliance behaviour in relationship to tax payment. Specifically, the present finding matched that of Harris (1989), who found no significant direct relationship between tax knowledge and taxpayers‘ compliance behavior. This is consistent with the findings of McKerchar (1995) who suggested that small business taxpayers are unaware of their tax knowledge shortfall, which may invariably lead to unintentional non-compliance behaviour.

However, the finding in this current study is contrary to other previous studies in Malaysia, Australia, and New Zealand that found a significant relationship between tax knowledge and tax compliance behaviour (e.g., Kasipillai & Jabbar, 2003; Kirchler et al., 2006; Loo et al., 2009; Saad, 2014). Additionally, the result is also contrary to the expectations as suggested by social learning theory (Bandura, 1977), which was premised on the influence of environment. The theory posits that behavior is one of the most important ingredients that has been identified to be either intentionally or unintentionally influenced by others in the environment. One plausible reason for such inconsistent

results is that these inconsistencies may arise from the jurisdictional tax differences or from cultural differences.

Another important reason may be because of the result of the level of educational and literacy levels of the northern part of Nigeria, which fall below the acceptable standards compared to other countries in which previous findings found significant results. Finally, different authors used different metrics for measurement, which may serve as another potential reason for the differences in findings. For example, studies that found significant relationship were conducted in Malaysia, Australia or New Zealand, while this study was conducted in Nigeria.

Consistent with hypothesis (H8), a significant relationship between public governance quality and tax compliance behaviour was found. This finding was consistent with Blau's social exchange theory (1964) because the results suggest the role of reciprocity in enforcement of compliance in social relationship. This finding also aligns with Torgler (2003, 2007) who found that positive behaviour by government was reciprocated by the taxpayers through enhanced compliance behaviour. Furthermore, this result is also in accord with Alabede et al. (2011) who found a positive significant relationship between public governance quality and tax compliance behaviour of salaried taxpayers in the Federal Capital Territory. The current findings also align with other past studies that indicated that taxpayers seem to be more willing to comply with tax rules and regulations including paying their taxes in situations in which they can observe a direct relationship

between their contributions and the quality of public service (governance) provided by the government (Alm et al. 1992; Alm & Gomez, 2008; Fjeldstad & Semboja, 2001).

The positive association between public governance quality and tax compliance behaviour as reflected in the findings generally portrays the concept of reciprocity, which suggests that both government and taxpayers are in a contract for an exchange of value. That is, taxpayers pay taxes in exchange for political goods, which in sum, are represented by public governance quality. The continuity of this relationship, particularly on the part of taxpayers, depends upon, among other things, the ability of the government to maintain or improve the quality of public governance.

The work of Levi (1988) and Lassen (2003) supports this line of argument. They pointed that, when taxpayers perceived the rate of transformation from their tax payment to political goods, as captured by public governance quality was low, they may feel that government is not actually adhering to its obligations of the contract of reciprocity. As a result, they will be disenchanted, causing voluntary tax compliance to decline.

In line with the findings of this current study, government ineffectiveness in the provision of public infrastructure, such as education, electricity, and healthcare and unfair administration of the rule of law, contributed significantly to the shrinking level of tax compliance among individual taxpayers in Nigeria. Therefore, as part of the answer to the first research question, the findings of this study provide proof that public governance quality is a significant determinant of tax compliance behaviour.

7.3.2 Moderating Effects of Perceived Service Orientation and Perceived Corruption

In this section, twelve hypotheses were presented to test whether perceived service orientation and perceived corruption separately moderate the relationship among economic factors, psychological factors and tax compliance behaviours. As shown in Table 7.3, six hypotheses were found to be significantly moderated, while the remaining six hypotheses were not significantly moderated.

Table 7.3
Hypotheses and Summary of Results for Moderating or Indirect Relationships

No	Hypothesis	Result
H3a	Perceived service orientation will moderate the relationship between tax rates and tax compliance behaviour.	Not supported
H3b	Perceived corruption will moderate the relationship between tax rates and tax compliance behaviour.	Supported
H4a	Perceived service orientation will moderate the relationship between probability of detection and tax compliance behaviour.	Not supported
H4b	Perceived corruption will moderate the relationship between probability of detection and tax compliance behaviour.	Supported

Table 7.3 (continued)

No	Hypothesis	Result
H5a	Perceived service orientation will moderate the relationship between tax complexity and tax compliance behaviour	Not supported
H5b	Perceived corruption will moderate the relationship between tax complexity and tax compliance behaviour	Not supported
H6a	Perceived service orientation will moderate the relationship between incentives (positive inducement) and tax compliance behaviour	Supported
H6b	Perceived corruption will moderate the relationship between incentives (positive inducement) and tax compliance behaviour	Supported
H7a	Perceived service orientation will moderate relationship between tax knowledge and tax compliance behaviour	Not supported
H7b	Perceived corruption will moderate the relationship between tax knowledge and tax compliance behaviour	Supported
H8a	Perceived service orientation will moderate the relationship between public governance quality and tax compliance behaviour	Supported
H8b	Perceived corruption will moderate the relationship between public governance quality and tax compliance behaviour	Not supported

The following subsections discuss the findings in detail.

7.3.2.1 Moderating Effects of Perceived Service Orientation on the Relationship between Economic Factors, Psychological Factors and Tax Compliance Behaviour

Perceived service orientation can be seen as the attitudes of being helpful, thoughtful, considerate and cooperative (Hogan et al., 1984). In this study, perceived service orientation was proposed as a moderator on the relationship between economic factors, psychological factors and tax compliance behaviour. In Chapter One, part of the second research question was to examine the moderating role of perceived service orientation on the relationship between economic factors, psychological factors and tax compliance behaviour.

Therefore, taking this research question as a basis, part of the second objective of this study was to assess whether perceived service orientation would moderate the relationship among economic factors, psychological factors and tax compliance behaviour of SME owners/managers. To answer this research question, six research hypotheses (H3a, H4a, H5a, H6a, H7a, and H8a) were formulated and tested using PLS-SEM. The results revealed that two hypotheses (H6a and H8a) were found to be moderated, while the remaining four hypotheses (H3a, H4a, H5a, and H7a) were not moderated.

Hypothesis (H3a) stated that perceived service orientation would moderate the relationship between tax rates and tax compliance behaviour, while hypothesis (H4a) posited that perceived service orientation could moderate the relationship between probability of detection and tax compliance behaviour. However, the present study did not find support for these two hypotheses (H3a and H4a). The results demonstrated that service awareness did not serve as an avenue in enlightening taxpayers towards increasing their compliance level, and, as such, service orientation did not stimulate the taxpayers.

The lack of moderating effect of perceived service orientation on the relationship between tax rates, probability of detection and tax compliance behaviour might be as a result of participants of this study not being actually motivated by the activities of the relevant tax authorities targeting at benefiting SMEs owners/managers. Even though,

Locke (1968) reported that, if people are to be motivated to behave in a rational way, such people need to see a good reason to act in the desired direction.

This reason could be that a need exists to provide services in the form of tax education, calls and other services, which, in return, will induce taxpayers to behave in the desired direction towards tax payment. Another possible explanation for the lack of support for these hypothesized relationships pertains to the notion of perceived maltreatment of taxpayers by service providers in Nigeria. According to Feld et al. (2006) and Wallschutzky (1984), improper treatment of taxpayers in the course of providing service in tax offices may go a long way in influencing future compliance behaviour.

Hypothesis (H5a) indicated that perceived service orientation would moderate the relationship between tax complexity and tax compliance behaviour, while hypothesis (H7a) posited that perceived service orientation would moderate the relationship between tax knowledge and tax compliance behaviour. Unfortunately, the results did not support the two hypotheses. One plausible reason for the lack of a significant moderating effect on the relationship between tax complexity and tax compliance behaviour might possibly be due to a significant direct relationship between tax complexity and tax compliance behaviour. From the findings, the deduction can be made that taxpayers‘ concern for perceived service orientation did not supersede their perceptions of the complexity of the tax system in the country.

Another reason for this fascinating result is the frequent changes in the Nigerian tax laws because the PITA amendment that took effect in 2011. This amendment deleted about 36 sections of the PITAM, Cap P8, and tax authorities perhaps did not properly orient the stakeholders about these alterations. Hence, the complex nature of the tax system may be a more important factor in determining the compliance behaviour of taxpayers than service orientations. Thus, as tax regulations and other provisions become more complex over time, complexity may become a significant factor in lowering the level of tax compliance (Jackson & Milliron, 1986; Richardson & Sawyer, 2001).

Additionally, Micah et al. (2012) pointed out that one manifestation of the poor tax education and weak fulfilment by tax authorities of their responsibilities might be a promising factor for understanding the lack of a moderating effect of perceived service orientation on the relationship between tax complexity and tax compliance behaviour.

On the other hand, one important reason for the lack of significant moderating effect of perceived service orientation on the relationship between tax knowledge and tax compliance behaviour may have to do with the use of tax consultants, as the knowledge of the taxpayers may not matter enough because they can hire the services of other tax professionals.

The finding of this current study supported hypotheses (H6a) and (H8a). These results supported the view that perceived service orientation moderates the relationship between incentives (positive inducement) and tax compliance behaviour. Likewise, the results

provide support for the view that perceived service orientation moderates the relationship between public governance quality and tax compliance behaviour. The PLS path results provides evidence in support of hypothesis (H6a), indicating that SMEs taxpayers' service orientation significantly moderated the influence of incentives on tax compliance behaviour. One interesting aspect of this finding was that the presence of service orientation on the relationship between incentives and compliance behaviour made the relationship to more positive.

This is an indication that the effects of perceived service orientation further strengthened the influence of incentives on taxpayers' compliance behaviour. Thus, one recommendation is that, along with a better service orientation, an increase in incentives would lead SME owners/managers to be more compliant. Thus, the results indicate that a remarkable number of SME owners believe that incentives combined with a better service orientation would further increase the level of compliance. This finding is not surprising for a country like Nigeria. In 2004, the Nigeria Government established the Service Compact Office (SERVCOM) to monitor the quality of public service provided by Nigerian public organizations. The results of the office might be one possible reason that the confidence of the taxpayers in terms of service provision and orientations was boosted.

This finding is also consistent with Odusola (2006) and Odinkonigbo (2009) who reported that revenue authorities in Nigeria were equipped with customer care units to ensure that taxpayers get prompt action inform of service delivery. The positive effects of

perceived service orientation in this current study could also lend support to the conclusions of Gangl et al. (2013) who found that taxpayers who perceived a greater service orientation would be more willing to pay their taxes. Kirchler (2007), OECD (2007), and Torgler (2007) also discovered that an improvement in the quality of tax service provided by the revenue authorities would enhance taxpayer‘s compliance behaviour. The findings of the current study are in line with other researches in the area of marketing, which has established a linkage between the quality of service and behavioural intentions of individuals (Sivadas & Baker, 2000; Wong & Sohal, 2003).

Social influence theory might help explain this result. Social influence theory has a lineage derived from Bandura's social learning theory (1977), which was premised on the influence of environment. The theory states that behavior is one of the most important ingredients in behaviour and that an individual was influenced either intentionally or unintentionally by others in the environment. Therefore, individuals learn from each other through observation and imitation, as well as through orientation, which explains human behavior in relationship to continuous exchange interactions between cognitive and behavioral environmental influences.

Hence, Bandura (1977) documented that people not only learn the behavior of others through observing their attitudes, but are influenced by the outcomes of their behaviors. In this context, social influence theory identifies the opinions of peers and the extent of social influence that an individual encounters in socialization (for instance, service

orientation) as one of the most important variables in determining compliance (Sutinen & Kuperan, 1999).

Additionally, Crisp and Turner (2007) conceived that social influence is concerned with ―how our thoughts, feelings and behaviour change in the midst of others". Hogg and Vaughan (2005) reiterated that social influence could be aligned to conformity, compliance and obedience. The authors further said that compliance might be influenced by the manner in which individuals employed persuasive ways in seeking consent as well as in the power that individuals perceived to have at their disposal. Power in the context of this study is regarded as the ability of an individual or institution to exert influence through service orientation.

French and Raven (1959) outlined five bases of social power, which Raven (1965 & 1993) later expanded to six. The six bases of social power are: 1) reward power, 2) coercive power, 3) informative power (for instance service orientation), 4) expert power (for instance ability to influence), 5) legitimate power, and 6) referent power. Reward power, according to the literature, has to do with the provision of incentives for compliance. For instance, Manaf (2004) found that incentives (positive inducements) had a significant impact on compliance attitudes of land taxpayers in Malaysia.

In the context of this study, service orientation directed towards taxpayers may go a long way in encouraging the taxpayers to comply with the tax obligation. Expert power is the fourth base. This has to do with the absolute ability or capacity of experts (through the

provision of tax education, calls and other ancillary services to the taxpayers) together with their knowledge to motivate compliance. In fact, these arguments suggest that service orientation is an important mechanism for strengthening the compliance behaviour of taxpayers. But, in practical terms, social influence in taxation might not be easily achieved due to different needs or requirements of individual taxpayers. For instance, an influential SME owner/manager will probably receive more attention from the relevant tax authorities compared to less influential a SME owner/manager despite their contributions.

Finally, the results of the present study supported the prediction that perceived service orientation moderates the relationship between public governance quality and tax compliance behaviour. The PLS path results provide evidence in support of hypothesis (H8a), which revealed that SMEs taxpayers‘ service orientation significantly moderated the influence of public governance quality on tax compliance behaviour and also are in line with social influence theory (Bandura, 1977). This finding revealed that service orientation served as a stimulant between public governance quality and tax compliance behaviour, such that it further strengthened the positivity of the governance quality. In other words, this finding suggested that SMEs owners who are always oriented in terms of their tax-related matters and what their contributions in the form of tax payments will be used for are likely to be obedient compliant.

One interesting aspect of this finding is that the presence of service orientation with respect to the relationship between public governance quality and tax compliance

behaviour made the relationship more positive. This is an indication that the effects of perceived service orientation had further strengthened the influence of incentives on taxpayers‘ compliance behaviour. Because of this, the presence of service orientation, with an increase in the provision of infrastructural facilities taxpayers, would make taxpayers likely to be more compliant. More importantly, this result showed that taxpayers with motivational postures such as the provision of public goods and services might warrant more commitment and capitulation towards having positive attitude to tax payment (Braithwaite, 2003a, 2009; Braithwaite, Reinhart, & Smart, 2007).

Along the same line of argument, the education of taxpayers, assistance in the form of phone call advice or a website, the simplification of the tax law and procedures, and the development of a more service-oriented approach might go a long way to reducing the administrative burden for taxpayers as well as their costs of compliance (Alm & Torgler, 2011; Eichfelder & Kegels, 2010). Provision of information on tax-related issues to taxpayers constitutes one aspect of perceived service orientation, which, in turn, will increase tax compliance (Alm et al., 2010). Thus, the advocates of the slippery slope framework posit that service orientation is one promising strategy for tax authorities to increase tax compliance (Kirchler et al., 2008).

7.3.2.2 Moderating Effects of Perceived Corruption on the Relationship between Economic Factors, Psychological Factors and Tax Compliance Behaviour

Perceived corruption is defined as an abuse of public power for private benefit (Habib & Zurawicki, 2002). In this study, perceived corruption was proposed as a moderator on the

relationship between economic factors, psychological factors and tax compliance behaviour.

Social exchange theory emphasizes that individuals are psychologically obliged and thus forced to return the benefits that they have received either in material or non-material form to the person who provided them (Blau, 1964). Therefore, the main focus of social exchange theory is that relationships providing more benefits than costs always yield enduring mutual trust and attraction (Blau, 1964). These social transactions could be in the form of material benefits (i.e., incentives, bonuses, and other infrastructural facilities) and psychological rewards (i.e., trust, transparency, loyalty and truthfulness) (Yukl, 1994). Therefore, in a setting in which people observe that others behave in an abnormal way, without elements of trust (i.e., perceived to be engulf by corruption), without any proper measures taken to address the menace, or without being punished for such acts, such people may likely to be encouraged to imitate bad behaviours.

From social exchange viewpoint, the expectation is that a high level of corruption could negatively energize taxpayers to reduce their level of compliance in relationship to tax payment provided a lack of trust exists between the parties.

Based on the foregoing line of discussion, the last research question addressed whether perceived corruption would moderate the relationship between economic factors, psychological factors and tax compliance behaviour. In line with this research question, part of the second objective of this study was to assess the moderating effects of

perceived corruption on the relationship among economic factors, psychological factors and tax compliance behaviour. Therefore, to fully achieve the second objective of this study, six hypotheses (H3b, H4b, H5b, H6b, H7b and H8b) were formulated.

The results supported the view that perceived corruption significantly moderates the relationship between: 1) tax rates; 2) probability of detection; 3) incentives (positive inducement); and 4) tax knowledge while tax complexity and public governance quality were not moderated by perceived corruption. That is, hypotheses (H3b, H4b, H6b, and H7b) were supported, while hypotheses (H5b) and H8b) were not supported.

Firstly, the results provide support for hypothesis (H3b) indicating that perceived corruption moderates the relationship between tax rates and tax compliance behaviour. One surprising thing about this finding is that perceived corruption actually strengthened the positive relationship between tax rates and tax compliance, thereby making it stronger. This finding aligned with the tenets of social exchange theory (Blau, 1964), which states that a relationship is absolutely built on the basis of costs and benefit, and for the relationship to continue or survive, that relationship must be beneficial to all parties. This finding is also in accord with an earlier argument in the literature that positive behaviour by government may be reciprocated by the taxpayers through enhanced compliance behaviour (Torgler, 2003 & 2007).

Taxpayers always assess the benefits of their commitment, in that the amount they pay as tax is seen as being put into worthwhile ventures by the government in terms of service

provision, good roads, adequate portable clean water, constant electricity supply and a conducive atmosphere in which businesses can thrive. By extension, these perceived benefits might encourage taxpayers to keep the covenant of reciprocity. Conversely, in a situation in which such contract is void, the compliance behaviour of a taxpayer might be negatively impacted.

Taxpayers were not actually deterred or affected by the magnitude of tax rates whether they were high or low because they perceived corruption to actually strengthen the positivity of the tax rates in relationship to their compliance behaviour. With the provision of infrastructural facilities, even though the tax rates and corruption are high, the level of taxpayer compliance will not diminish.

The significant effect of perceived corruption in this current study also aligns with other early findings in Nigeria, in which the majority of the populace were not satisfied with the performance of the government, particularly in the areas of corruption control, provision of infrastructure, accountability and provision of security (Lewis, 2006; Lewis & Alemika 2005; Madueke, 2008). The findings also agree with the opinions of some Nigerians that the quality of public governance is unsatisfactory in Nigeria (Natufe, 2006; Oluba, 2008).

Second, hypothesis (H4b) of this study states that perceived corruption would moderate the relationship between the probability of detection and tax compliance behaviour. As expected, the finding offered support for the hypothesis. Importantly, and, in the context

of this study, the present findings suggest that perceived corruption dampens the positive relationship between the probability of detection and tax compliance behaviour, thereby making the relationship weaker. The findings further suggest that, even when taxpayers perceived corruption to be high and the probability of detection to be low, such perceptions might not affect their compliance behaviour negatively compared to the way in which they perceived corruption. That is because the probability of detection has been found to possess a negative relationship with tax compliance behaviour (Slemrod et al., 2001; Young, 1994).

Furthermore, drawing upon Blau's social exchange theory (Blau, 1964), the results suggest that perceived corruption is more responsible for driving taxpayers‘ behaviour than is the probability of being detected for any illegal misdeed. This further suggests that tax compliance behaviour is not merely explained by taxpayers‘ perceptions in relationship to the probability of being detected, but also by the level of corruption that an individual perceives in the country.

Third, contrary to expectations, hypothesis (H5b) was not supported because perceived corruption did not moderate the relationship between tax complexity and tax compliance behaviour. One plausible explanation could be due to a significant direct relationship between tax complexity and tax compliance behaviour. Another possible reason could be that this behaviour is a result of the frequent changes in the Nigerian tax laws. The PITA amendment that took effect in 2011 deleted about 36 sections of the PITAM, Cap P8, which might have resulted in many varied interpretations by taxpayers. Complexity

negatively affected most taxpayers in the country, and they took advantage of this complexity as an opportunity to indulge in many illegal acts.

Therefore, the SMEs taxpayers may not have perceived that corruption possessed any significant effects on their compliance level because they are also part and parcel of the issue. Furthermore, other reasons for the lack of moderating effect of perceived corruption might be due to the fact that Nigerian SMEs are relatively less exposed in the media. In short, they are less closely monitored and supervised by the stakeholders and thereby have less direct reputational risks at stake, and these factors might facilitate the perception that bribery is less risky. Such an environment can nurture a culture and tolerance for corruption as a natural way of doing business. As such, corruption might not have a direct bearing on their compliance behaviour because of their involvement in the act.

Fourth, hypothesis (H6b) indicated that perceived corruption would moderate the relationship between incentives (positive inducement) and tax compliance behaviour. As expected, the finding provided support for the hypothesis. This is an indication that perceived corruption dampens the positive relationship between incentives (positive inducements) and tax compliance behaviour. As taxpayers perceive the system to be more corrupt and the amount they pay as taxes was not adequately used in providing services and other infrastructural facilities, these factors might, in turn, affect or influence their compliance behaviour negatively. The reciprocal behaviour of the taxpayers is synonymous with the social exchange theory (Blau, 1964). The theory emphasizes that

people are always psychologically driven, and, as such, are forced to return benefits they have received in either material or non-material forms to the donor (Blau, 1964).

However, the negative moderating effect of perceived corruption also corresponded with the earlier reports by Lewis (2006), Lewis and Alemika (2005), and Madueke, (2008) who said that Nigerians are broadly not satisfied with the performance of their government, particularly in the areas of corruption and accountability. This is because corruption in Nigeria has been significant for many years, and government has failed to provide basic infrastructure like good road networks, misuse of natural resources, inadequate power and water supplies, mediocrity in professional and leadership positions, defective leadership outputs, fuel scarcity in an oil producing nation, falling standards of education and work output, high unemployment rates, the ever-widening gap between the rich and poor to mention to name just a few. Therefore, with these widening effects of corruption, may overwhelm the provision of possible incentives to taxpayer‘s vis-á-vis SME owners/managers.

Fifth, hypothesis (H7b) indicated that perceived corruption would moderate the relationship between tax knowledge and tax compliance behaviour. The findings also align with Blau's social exchange theory (1964), which states that a relationship is built on an atmosphere of trust. For a relationship to thrive, it must be capable of benefiting all the parties. In relationship to the moderating effect of perceived corruption on the relationship between tax knowledge and tax compliance behaviour, the presence of perceived corruption further strengthened the negative relationship between the two

constructs. This is because, with a fair knowledge of tax as well as the prevailing corruption in the country, corruption will further reduce the level of tax compliance in the country.

Furthermore, receiving contributions for social exchange generates a positive effect and a kind of moral duty to support the donor, which is socially and psychologically sanctioned by the norms of reciprocity (Gouldner, 1960). Eventually, however, the form and timing of reciprocation lies at the discretion of the receiver and cannot be enforced. As the deliberate acceptance of vulnerability associated with making contributions, the other party is only morally bound to reciprocate, and trust is vital to social exchange (Haas & Deseran, 1981).

Sixth, hypothesis (H8b) states that perceived corruption would moderate the relationship between public governance quality and tax compliance behaviour. The results of this current study did not support the hypothesised moderating relationship. The results demonstrate that taxpayers concern for perceived corruption did not overwhelm their perceptions of the nature of public governance quality in the country. This finding could be aligned to social exchange theory (1964) as discussed earlier. Taxpayers are always concerned about the quality of public goods being supplied by the government in relationship to the amount of taxes paid by them. Exchanges can go a long way in motivating the taxpayers. This finding of the current study aligns with Alm et al. (1992) and Alm and Gomez (2008) who found that taxpayers generally seem to be more willing to comply with tax rules and regulations including paying their taxes when they can

observe a direct relationship between their contributions and the quality of public service (governance) provided by the government.

Additionally, the positive association between public governance quality and tax compliance behaviour generally reflects the norm of reciprocity, which suggests that both government and taxpayers are in a contract for exchange of value. That is, the taxpayers pay taxes in exchange for political goods, which in sum, represent public governance quality. By implication, as far as the public goods are being provided to the taxpayers, the effects of corruption might be perceived to be insignificant by SME owners/managers. Elaborating further, the results demonstrated that sampled respondents were indifferent to the role of corruption as a catalyst for influencing the relationship between public governance quality and tax compliance behaviour, which may be due to other plausible reasons as to why this finding occurred.

This finding is not really surprising because an individual behaves in a positive way if and only if the person perceives a positive connection with their efforts (Vroom, 1964). Hence, in the context of this study, as already revealed by the findings, SME owners/managers do not really hold the prevalence of corruption in high esteem compared to the provision of public goods, in determining their compliance level.

7.4 Implications of the Study

This study has offered a new frontier of knowledge and understanding of other determinants of tax compliance behaviour in relationship to SMEs. The findings of the

present study have significant theoretical, practical and methodological implications in the area of tax compliance as discussed below.

7.4.1 Theoretical Implications

Researchers have devoted much effort towards identifying other determinants of tax compliance capable of influencing the decisions of SME taxpayers. At the onset, most research traditionally viewed problems of tax compliance from the theoretical perspective of economic deterrence models (Allingham & Sandmo, 1972; Dubin & Wilde, 1988; Riahi-Belkaoui, 2004). However, the suggestion has been made that economic variables alone do not provide a complete explanation or understanding of the puzzle of tax compliance behaviour (Alm, 1999; Riahi-Belkaoui, 2004). Hence, researchers began to pay attention to the influences of sociological and psychological factors affecting tax compliance behaviour (Alabede et al., 2012; Mason & Calvin, 1984; Recker et al., 1994).

Drawing from past and recent literature, much theoretical development for a tax compliance model has been developed (Alabede et al., 2012; Chau & Leung, 2009; Manaf, 2004; Mustafa, 1997). This study, unlike others, further expanded Fischer's model to include work family financial commitment, fuel subsidy removal as well as the moderating effects of perceived service orientation and perceived corruption as a single model. In light of the above, the findings of this study contain some fascinating theoretical implications.

The present findings have contributed to literature and theory development in the following ways: 1) establishing the effects of work - family financial commitment and fuel subsidy removal on tax compliance behaviour; 2) establishing the moderating effect of perceived service orientation on the relationship between incentives (positive inducement), public governance quality and tax compliance behaviour; 3) establishing the moderating effects of perceived corruption on the relationship between tax rates, probability of detection, incentives (positive inducement), tax knowledge and tax compliance behaviour; 4) extending the tax compliance model with two exogenous constructs and two moderating constructs; 5) integrating the work family spillover theory into the area of tax compliance; and 6) extending the theories of social exchange (Blau, 1964) and social learning (Bandura, 1977).

The literature in the area of behavioural sciences has indicated significant direct effects between work - family financial commitment and other factors such as job performance, organisational commitment, and psychological strain (Ahmad, 2008; Akintayo, 2010; Kalliath et al., 2012). However, not much has been documented on the direct effect of work - family financial commitment on tax compliance behaviour. The strong evidence of negative influence of work - family financial commitment on tax compliance behaviour in this current study has provided new theoretical knowledge about its effects by revealing that work - family financial commitments have negative significant effects on tax compliance behaviour. This indicates that work - family financial commitment exerts considerable influence on tax compliance behaviour.

Another contribution to the literature of this current study was the findings on the relationship between fuel subsidy removal and tax compliance behaviour. The study established that the perceptions of taxpayers in relationship to fuel subsidy removal had a strong negative impact on tax compliance behaviour.

Third, the study further reaffirmed the finding of the previous studies concerning the impact of public governance quality on compliance behaviour; however, in this study governance quality was related to the SME sector.

Other key contributions of the study concerned the presence of moderators in the relationship between economic factors, psychological factors and tax compliance behaviour. The findings in this direction were in accordance with the earlier suggestions of Alabede et al. (2011) and Kirchler et al. (2007) that the relationship between tax compliance behaviour and its determinants may be moderated by certain variables. Hence, evidence from the findings revealed that perceived service orientation, as well as perceived corruption possessed moderating impacts on tax compliance behaviour and some of its factors. In particular, the findings revealed that only perceived service orientation in the tax compliance model significantly moderated the influence of incentives (positive inducement) (5% significance level) and public governance quality (10% significance level) on tax compliance behaviour.

In addition, the study also revealed that, when perceived corruption was added to the model, perceived corruption exerted a strong moderating effect on the influence of tax

rates (5% significance level), probability of detection (5% significance level), incentives (positive inducements) (5% significance level), and tax knowledge (10% significance level) on tax compliance behaviour. One unique finding of the moderating effect of perceived corruption was its ability to alter the direction of the relationship between tax rates, probability of detection, incentives and tax knowledge from a positive to a negative relationship.

The findings further indicated that perceived service orientation and perceived corruption in the model accounted for (71% R^2) as moderators and further strengthened the ability of the model to predict SMEs owners/manager‘s compliance behaviour. When the interacting effect of PSO and perceived corruption was not applied, the model accounted for (68% R^2). Thus, this study suggests that the inclusion of perceived service orientation and perceived corruption specifically to Fischer's model further strengthen the predictive relevance of the tax compliance model from 68% to 71%, showing an increment of 3%. The effect of the moderating variables was regarded as being strong bearing the recommendation of .02, .15 and .35 as having weak, moderate and strong effects respectively (Chin, 1998). In a nutshell, these variables further enhanced the predictive relevance of the tax compliance model.

Fundamentally, this study has further enriched the tax compliance literature, especially in relationship to factors influencing the tax compliance behaviour of SME owners/managers in developing countries. In doing so, the study helped reduce the

research gap to developing countries as recommended in Chau and Leung (2009), Stefura (2011, 2012), and Torgler (2003, 2007).

This research has expanded the frontier of knowledge by providing empirical evidence about the influence of work family financial commitment on tax compliance behaviour. Therefore, in this study, more than an ordinary validation of the relationship was done, and this is the first of its kind in the literature. The study follows the suggestion of Stefura (2011, 2012) for empirical studies that will incorporate more psychological and other noneconomic variables capable of explaining tax compliance behaviour in a more elaborate manner.

7.4.2 Practical / Policy Implications

The present study contributed several practical implications in terms of the factors that influence taxpayers' compliance behaviour in the context of Nigerian SMEs. The results suggest that work family financial commitment and fuel subsidy removal are important factors influencing tax compliance among the Nigerian SME owners/managers. In particular, the study is crucial to the States Board of Internal Revenues Services on the probable factors that could be managed better to mitigate the extremely high number of cases related to tax compliance issues in the country.

Second, the findings also suggest that work family financial commitment and fuel subsidy removal were related to tax compliance behaviour of the SME owners/managers. Specifically, work - family financial commitment was found to be related negatively to

tax compliance behaviour in the study. Hence, States as well as the Federal government could minimise the likelihood of this type of financial commitment through poverty reduction and mitigation, because work - family financial commitment is highly connected to extended family burdens, financial obligations, and poverty. These problems could be properly addressed through adequate counselling units in the States tax offices that have been established purposely for tackling those related cases. Placing priority in such implications, there is likelihood of increasing tax compliance from these sets of taxpayers.

Furthermore, fuel subsidy removal was also found to be related negatively to tax compliance. Thus, the Federal government should reconsider its earlier decisions with regards to fuel subsidy removal in the country because the resources or funds derived from the exercises should be ploughed back into developing the country‘s infrastructural deficits. By doing so, the government would go a long way to motivating taxpayers to abide by the reciprocity principles, which, in turn, would motivate the taxpayers positively towards tax payment. Other incentives should also be provided to the taxpayers by the government in order to cushion the effects of the fuel subsidy removal in the country. Similarly, the timing of the fuel subsidy removal in the country should also be looked at because the country and its populace are just recovering from the global financial crisis.

Finally, as stated at the beginning of this research, a blend of both the economic and psychological factors might be important in explaining the puzzle of tax compliance

(Stefura, 2011, 2012). Consequently, the findings suggest that, beside other economic factors and psychological factors that were adequately explored in the literature, other psychological factors (work family financial condition, fuel subsidy removal) should be accorded serious consideration as factors likely to affect SME taxpayers in Nigeria. As such policy makers should look at the possibility of integrating these motivational intrinsic factors in their frameworks so as to improve the level of compliance vis a vis revenue generation in their respective states. In particular, the moderating role of perceived service orientation suggests that effective service provision in the form of tax services and assistance could minimise the tendency of taxpayers to engage in a low level of tax payments.

To do so, the relevant tax authorities could consider the integration of service-oriented units in the States Internal Revenue Services, the Federal Inland Revenue Services, as well as sponsoring public service announcements on radio stations and television stations in order to orient the taxpayers on the importance of tax payment. In addition, the moderating role of perceived corruption also suggests that, corruption constitutes one of the factors causing the low level of tax compliance in the country. The results revealed that, aside other determinants, corruption are one of the most important factors affecting the social contract of taxpayers with the government. With a new government in place, for which fighting corruption is among its policy thrusts, this finding will assist the government in a campaign against such cankerworms.

7.4.3 Methodological Implications

The present study has several methodological implications. This study tried in testing the measures of Carlson et al.'s (2000) work family financial commitment measures and Abdelrahim's (2014) fuel subsidy removal measures for the first time into the area of taxation in order to capture the extent to which financial commitment and fuel subsidy removal affect the taxpayers in the context of a developing economy. By doing that, this study clarified and tested the measures of both work family financial commitment and fuel subsidy removal in relationship to tax compliance in Nigeria, different from the settings in which the measures were formally developed. Therefore, the integration of work family financial condition and fuel subsidy removal scales into the area of tax compliance is another methodological contribution. Similarly, the validation of Alabede et al.'s (2011) public governance quality measurement scale adopted in this study provided another methodological contribution.

Another methodological contribution of this study is related to the application of smart PLS path modeling in assessing the properties of the latent constructs in the study. Past studies on tax compliance behaviour have employed analytical tool such as SPSS to produce results (Alabede et al., 2011; Manaf, 2004; Tayib, 1998; Palil & Mustapha, 2011). In the context of Nigeria same SPSS software were employed in tax compliance studies by several authors (Atawodi & Ojeka, 2012; Aronmwan, Imobhio & Izedonmi, 2015; Modugu & Anyaduba, 2014; Oladipupo & Obazee, 2016). Even though Chan et al. (2000) employed SEM in estimating the parameters of their constructs, but their model was not as complicated as the current model of this study that incorporates eleven

exogenous as well as two moderating constructs as a combined model which is one of the advantages of using PLS SEM. Therefore, this relatively new tool of analysis (i.e., PLS-SEM) explained the structural relationship between the study's constructs. PLS-SEM is seen as a general model that comprises multivariate analysis of variance among other analyses. Thus, employing this tool of analysis has significant methodological connotations.

In particular, this study succeeded in assessing the properties of each latent variable in terms of their convergent validity, as well as their discriminant validity. These properties included individual items reliability, average variance extracted (AVE), and composite reliability of each construct. Therefore, the present study has used one of the more robust methods (PLS-SEM) in assessing the psychometric features of each construct as shown in the study's research framework.

7.5 Limitations and Future Research Directions

This study has provided empirical support for some of the hypothesized relationships between the exogenous latent variables and endogenous latent constructs; hence, these findings have to be interpreted with caution.

First, this study adopted a cross-sectional research design in which causal inferences pertaining the study's population may not be made with certainty. Hence, a longitudinal or panel data research design should be considered in the future so as to have a more

accurate estimate and measurement of the study's constructs at different time intervals in order to further confirm or validate this study.

Second, all the study constructs were assessed using self-reported measures like other compliance research. Dodaj (2012) and Podsakoff et al. (2003) revealed that the use of self-reported measures is normally accompanied with common method variance as well as social desirability bias. Self-reported measures might not actually portray the real behaviours of SME taxpayers (Hessing, Elffers, & Weigel, 1988; van Djike & Verboon, 2010).

Notwithstanding its limitations, this study tried to reduce these issues through improving the scales as well as ensuring anonymity of the participants (Podsakoff et al., 2003; Podsakoff et al., 2012). It is of interest to note that the respondents might have under-reported their survey responses in the questionnaires. Therefore, researchers might wish to employ other strategies to assess tax compliance behaviour of SME owners/managers in the future.

Third, it is also important to note that the present study offers limited generalizability because it focused mainly on SMEs owners/managers in two states located in the North Western part of Nigeria. Additionally, the accuracy and the authenticity of the list of SMEs was not certain, even though that list was derived from SMEDAN. Further research is also required so as to include other geopolitical zones and other types of

taxpayers in order to generalize the results. Therefore, SME taxpayers should be studied in comparison with other taxpayers.

Fourth, this study research model was able to explain 71% of the total variance in tax compliance behaviour, which means that other latent variables could explain the variance in tax compliance. Because compliance behaviour could be explained by other factors that accounted for 29% of the variance, future study is needed to consider other possible factors that could affect the behaviours of the SME taxpayers.

Finally, perceived service orientation was not found to moderate the relationship between: 1) tax rates; 2) probability of detection; 3) tax complexity, and 4) tax knowledge and tax compliance behaviour. This could possibly be the result of other mediating effects or other moderating variables. In particular, the relationship between these factors could be mediated by the influence of perceived service orientation. Similarly, perceived corruption was not found to moderate the relationship between: 1) tax complexity and 2) public governance quality, and tax compliance behaviour. Therefore, their relationship may also be mediated by perceived corruption. Thus, considering either perceived service orientation or perceived corruption as a mediator could be another good avenue for future studies. Furthermore, the relationship between tax rates and tax compliance behaviour, tax complexity and tax compliance behaviour, and tax knowledge and tax compliance behaviour was found to be insignificant; hence, it is necessary in the future to verify whether the presence of other moderating variables might strengthen this relationship.

7.6 Conclusion

The present study has provided additional evidence to the growing body of knowledge about tax compliance. Theoretically, important gaps exist in the literature concerning the puzzle of tax compliance. Past research in this area (Alabede et al., 2011; Stefura, 2011, 2012) have not addressed the following: 1) the influence of work - family financial commitment and tax compliance behaviour; 2) the influence of fuel subsidy removal and tax compliance behaviour; and 3) the moderating role of perceived service orientation and perceived corruption on the relationship between economic factors, psychological factors and tax compliance behaviour.

The present study has contributed to the body of knowledge by providing empirical evidence about the effects of work family financial commitment, fuel subsidy removal and tax compliance behaviour. This study also lends theoretical and empirical support to the significant moderating effects of perceived service orientation, perceived corruption on the relationship between some of the economic factors, psychological factors and tax compliance behaviour.

Aside from the study's major contributions, this research has also contributed to the body of literature by further validating past findings (Alabede et al., 2011, Manaf, 2004; Stefura, 2011, 2012) in relationship to incentives, public governance quality, and tax compliance behaviour.

Essentially, and bearing the new context of Nigeria, as well as the setting (SMEs) of this study, this research has shown that work family financial commitment and fuel subsidy removal negatively affects taxpayers‘ behaviour, which, in turn, affects their tax compliance behaviour negatively. Even though, Organ, Podsakoff, and Mackenzie (2006) argued that leaders who provide personal support (incentives, infrastructural facilities) to followers (taxpayers) and show absolute interest in them will motivated them to reciprocate the same gesture by means such as tax payments.

Basically, the findings of this study have indicated a great association or linkage between work family financial commitment, fuel subsidy removal and tax compliance behaviour and the significant moderating effects of perceived service orientation, perceived corruption on the relationship between economic and psychological factors and tax compliance behaviour. Hence, the study will be relevant to the States Internal Revenue Services, Federal Inland Revenue Services, SMEDAN, as well as to SME owners in the country. The findings indicate that considering these newly introduced determinants will give the government new avenues for tackling the extremely high number of cases of a low level of tax compliance in the country.

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Appendix A: Written Permission for Data Collection from UUM

OTHMAN YEOP ABDULLAH
GRADUATE SCHOOL OF BUSINESS
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA

Universiti Utara Malaysia

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KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

UUM/OYAGSB/K-14
18 February 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER FOR DATA COLLECTION AND RESEARCH WORK

This is to certify that **Ayuba Augustine (Matric No: 95509)** is a bonafied student of Doctor of Philosophy (PhD), Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia. He is conducting a research entitled ***"Determinants of Tax Compliance Behaviour Among the Small and Medium Enterprises in Nigeria : The Moderating Role of Perceived Service Orientation and Perceived Corruption."*** under the supervision of Dr. Natrah binti Saad.

In this regard, I hope that you could kindly provide assistance and cooperation for him to successfully complete the research. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

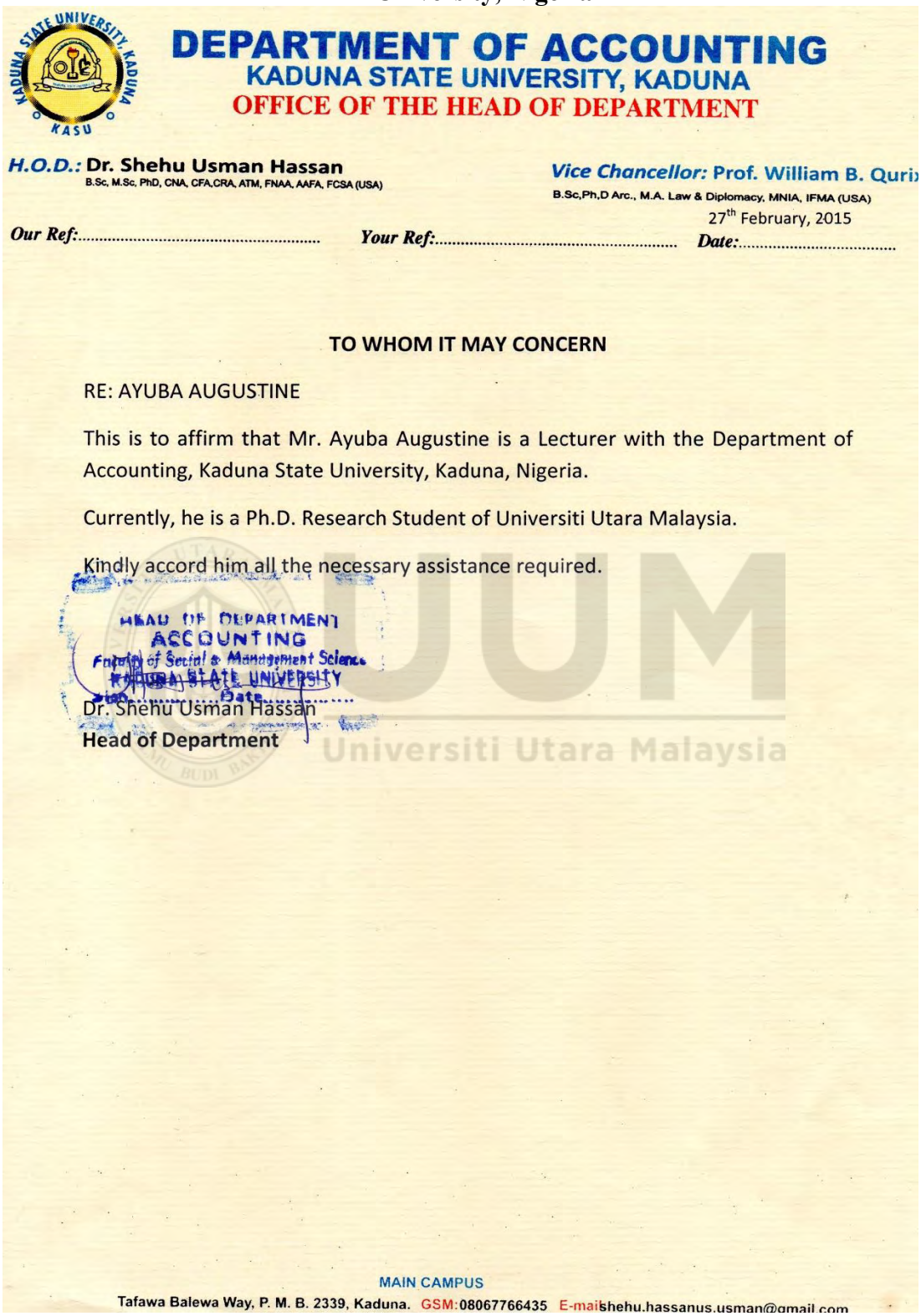
"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully

ROZITA BINTI RAMLI
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Supervisor
- Student's File (95509)

Appendix B: Letter from the Department of Accounting, Kaduna State University, Nigeria



DEPARTMENT OF ACCOUNTING
KADUNA STATE UNIVERSITY, KADUNA
OFFICE OF THE HEAD OF DEPARTMENT

H.O.D.: **Dr. Shehu Usman Hassan**
B.Sc, M.Sc, PhD, CNA, CFA,CRA, ATM, FNAA, AAFA, FCSA (USA)

Vice Chancellor: **Prof. William B. Qurix**
B.Sc,Ph.D Arc., M.A. Law & Diplomacy, MNIA, IFMA (USA)

Our Ref:..... ***Your Ref:***..... ***Date:***.....

27th February, 2015

TO WHOM IT MAY CONCERN

RE: AYUBA AUGUSTINE

This is to affirm that Mr. Ayuba Augustine is a Lecturer with the Department of Accounting, Kaduna State University, Kaduna, Nigeria.

Currently, he is a Ph.D. Research Student of Universiti Utara Malaysia.

Kindly accord him all the necessary assistance required.

HEAD OF DEPARTMENT
ACCOUNTING
Faculty of Social & Management Science
KADUNA STATE UNIVERSITY
Sign..... Date.....

Dr. Shehu Usman Hassan
Head of Department

MAIN CAMPUS
Tafawa Balewa Way, P. M. B. 2339, Kaduna. GSM:08067766435 E-mail:shehu.hassanus.usman@gmail.com

Appendix C: Acknowledgement from SMEDAN, Federal Capital Territory, Abuja, Nigeria

OTHMAN YEOP ABDULLAH
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KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

UUM/OYAGSB/K-14
18 February 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER FOR DATA COLLECTION AND RESEARCH WORK

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In this regard, I hope that you could kindly provide assistance and cooperation for him to successfully complete the research. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

SMEDAN RECEIVED DATE 2-3-2015 ABUJA

"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully

ROZITA BINTI RAMLI
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Supervisor
- Student's File (95509)

Appendix D: Acknowledgement From Kaduna State Board of Internal Revenue Services

OTHMAN YEOP ABDULLAH
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KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

Office of the Executive Chairman
Kaduna State Board of Internal Revenue
13 MAR 2015
RECEIVED
Sign.....

UUM/OYAGSB/K-14
18 February 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER FOR DATA COLLECTION AND RESEARCH WORK

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Thank you.

"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully

ROZITA BINTI RAMLI
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Supervisor
- Student's File (95509)

Appendix E: Acknowledgement from Kano State Board of Internal Revenue Services

OTHMAN YEOP ABDULLAH
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KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

UUM/OYAGSB/K-14
18 February 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

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"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully,

ROZITA BINTI RAMLI
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Supervisor
- Student's File (95509)

Appendix F: Questionnaire

Dear Respondent,

A SURVEY ON DETERMINANTS OF TAX COMPLIANCE BEHAVIOUR OF SMALL AND MEDIUM ENTERPRISES IN NIGERIA: THE MODERATING ROLE OF PERCEIVED SERVICE ORIENTATION AND PERCEIVED CORRUPTION

This questionnaire is designed purely for academic research purpose. It is meant to aid in data collection that can satisfy the requirement for the award of a Ph.D. degree in Accounting. The questionnaire is designed to source data on taxpayers' perceptions and opinions about the Nigerian SMEs income tax system. The main objective of the study is to determine factors influencing SMEs owners/managers' compliance behavior in Nigeria. As an owner/manager of the respective SMEs in the country, your participation in this survey is vital in order to obtain the necessary information needed for the success of this study. Your responses will be treated with ultimate confidence and used strictly for academic purposes.

Thank you in anticipation of your cooperation and assistance. In case of any enquiry, please contact the researcher through the following address:

Kindest regards
Ayuba Augustine, Ph.D. Candidate (Accounting)
School of Accountancy,
College of Business,
Universiti Utara Malaysia.
Email: ayubaaugustine@yahoo.com; ayuba.augustine@kasu.edu.ng
+2347034515396, +60166596979

Instructions:

1. Kindly complete the questionnaire attached herewith.
2. Please circle the number you consider appropriate for each question
3. Only one tick is to be made against each question.

PART 1: Tax compliance behaviour

Based on your own judgment, please state your agreement or disagreement for the following statements using the scale below. Please circle your response.

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

TCB1	Trading goods or services from one SME to another without reporting it in a tax return is permissible.	1	2	3	4	5
TCB2	Reporting income fully by SMEs, but not including a little extra amount of income is accepted.	1	2	3	4	5
TCB3	Being paid cash to an SME for a job and then not reporting it in the tax returns is permissible.	1	2	3	4	5
TCB4	Not reporting some earnings by the SME from interest earn or investment which the government would not be able to find out is allowed.	1	2	3	4	5
TCB5	Adding a little bit of what the SME actually spent when reporting in the business is permissible	1	2	3	4	5
TCB6	Since a lot of rich people pay no taxes at all, if SMEs underpay a little, its not a big deal.	1	2	3	4	5
TCB7	Tax rates are just too high, so it is not really cheating when SMEs find ways to pay less tax than they are supposed to.	1	2	3	4	5
TCB8	When SMEs are not really sure, whether or not they deserve a tax deduction, it makes sense to take a chance and take a deduction anyway.	1	2	3	4	5
TCB9	With the rising cost of living these days, it is okay for SMEs to cut a few corners on its tax returns just to help pay the bills.	1	2	3	4	5
TCB10	It is not wrong for SMEs to hold back a little bit on taxes since the government spends too much anyway.	1	2	3	4	5
TCB11	When the SME know, it deserves a deduction that the government will not let it take, it makes sense to take it some other place where they will not know.	1	2	3	4	5
TCB12	It is not so wrong to under - report certain income since it does not really hurt anyone.	1	2	3	4	5
TCB13	The chances of getting caught are so low that, it is worthwhile trying to cut corners by the SME,	1	2	3	4	5
TCB14	It is all right to occasionally under-report certain income or claim an undeserved deduction if the SMEs are generally law abiding.	1	2	3	4	5
TCB15	Stretching self-relief deductions by the SME owner/manager to include some deductions that are not really self-relief deductions.	1	2	3	4	5

PART 2: Work family financial commitment

The following statements refer to some of the statement placed on work family financial commitment. Using the scale below, please state your agreement or disagreement to the following statements.

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

WFFC1	SME work keeps me from my family activities more than I would like.	1	2	3	4	5
WFFC2	The time I must devote to my business keeps me from participating equally in household responsibilities and activities.	1	2	3	4	5
WFFC3	I have to miss family activities due to the amount of time I must spend on work responsibilities.	1	2	3	4	5
WFFC4	The time I spend on family responsibilities often interfere with my business responsibilities.	1	2	3	4	5
WFFC5	The time I spend with my family often causes me not to spend time in activities at work that could be helpful to the SME.	1	2	3	4	5
WFFC6	I have to miss business activities due to the amount of time I must spend on family responsibilities.	1	2	3	4	5
WFFC7	When I get home from work I am often too exhausted to participate in family activities/ responsibilities.	1	2	3	4	5
WFFC8	I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.	1	2	3	4	5
WFFC9	Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	1	2	3	4	5
WFFC10	Due to stress at home, I am often preoccupied with family matters at work.	1	2	3	4	5
WFFC11	Because I am often stressed from family responsibilities, I have a hard time concentrating on my business.	1	2	3	4	5
WFFC12	Tension and anxiety from my family life often weakens my ability to fulfill my business obligations.	1	2	3	4	5
WFFC13	The problem-solving behaviors I use in my business are not effective in resolving problems at home.	1	2	3	4	5
WFFC14	Behavior that is effective and necessary for me at home would be counterproductive at my business domain.	1	2	3	4	5
WFFC15	The behaviors I perform that makes me effective at work do not help me to be a better parent and spouse.	1	2	3	4	5
WFFC16	The behaviors that work for me at home do not seem to be effective at work.	1	2	3	4	5
WFFC17	Behavior that is effective and necessary for me at home would be counterproductive at work.	1	2	3	4	5
WFFC18	The problem-solving behavior that work for me at home does not seem to be as useful at work.	1	2	3	4	5

PART 3: Fuel subsidy removal

The following statements refer to some of the statement placed fuel subsidy removal. Using the scale below, please state your agreement or disagreement to the following statements.

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

FSR1	Fuel subsidy removal increases the cost of energy consumption to SMEs.	1	2	3	4	5
FSR2	Fuel subsidy removal increases the cost of electricity consumption to SMEs.	1	2	3	4	5
FSR3	Fuel subsidy removal has a positive impact on SMEs production.	1	2	3	4	5
FSR4	Fuel subsidy removal has a negative impact on the cost of raw materials used by the SMEs	1	2	3	4	5
FSR5	Fuel subsidy removal has a positive impact on SMEs disposable income.	1	2	3	4	5
FSR6	Fuel subsidy withdrawal has stimulated a general increase in the prices of goods and services.	1	2	3	4	5
FSR7	Fuel subsidy removal has improved comparative advantage of exports.	1	2	3	4	5
FSR8	Fuel subsidy removal has improved the comparative advantage of trading by a local SME and other SMEs outside the country.	1	2	3	4	5
FSR9	Fuel subsidy removal has negative impact on the SMEs internal cost of transportation.	1	2	3	4	5
FSR10	Fuel subsidy withdrawal has a negative impact on public budget in Nigeria.	1	2	3	4	5
FSR11	Fuel subsidy removal has a negative impact on national investment in renewable energy.	1	2	3	4	5
FSR12	Fuel subsidy removal has brought untold hardship to the masses and the SMEs.	1	2	3	4	5
FSR13	Fuel subsidy removal poses an obstacle to SMEs in obtaining credit facilities from the commercial banks.	1	2	3	4	5

PART4: Tax rates

The following statements refer to some of the statement placed on tax rates. Using the scale below, please state your agreement by circling 1 - 5.

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

TR1 It is absolutely okay that, the higher the profit declared by the SMEs the higher the rate of income tax.	1	2	3	4	5
TR2 It is not okay that, SMEs who earned higher returns on its investment proportionately pay higher taxes compared to those who earned less.	1	2	3	4	5
TR3 An appropriate tax rate should be the same for every SME regardless of their income.	1	2	3	4	5
TR4 The share of the total income taxes paid by SMEs who declared higher profit is not too much high.	1	2	3	4	5
TR5 SMEs who declared moderate profits typically pay more than fair share of the income tax burden.	1	2	3	4	5
TR6 The share of total income taxes paid by the SMEs who declared lower profit is not too high.	1	2	3	4	5

PART 5: Probability of detection

Please indicate the extent of your agreement with each statement by circling 1 - 5, based on the following scale:

(A). Imagine AYUBCO ENTERPRISES has been paid some amounts in cash for services offered to other enterprises. AYUBCO ENTERPRISES did not declare it on its income tax return. Indicate the extent of your agreement or disagreement with the statements below:

PD1	There is low chance that AYUBCO ENTERPRISES will be caught by the tax authority, if the amount paid is just N10,000.	1	2	3	4	5
PD2	There is high chance that AYUBCO ENTERPRISES will be caught by the tax authority, if the amount paid is N100,000.	1	2	3	4	5

(B). Imagine AYUBCO ENTERPRISES claimed some amounts as deductions when the expenses are not actually deductible. Indicate the extent of your agreement or disagreement with the statements below:

PD3	There is high chance that AYUBCO ENTERPRISES will be caught by the tax authority, if the amount it claimed as deduction is N50,000.	1	2	3	4	5
PD4	There is low chance that AYUBCO ENTERPRISES will be caught by the tax authority, if the amount it claimed as deduction is N5,000.	1	2	3	4	5

(C). Assuming AYUBCO ENTERPRISES is caught for not declaring and deducting the amount stated in (PD1) and (PD2) above respectively, indicate how much a problem do you think the following legal consequences would be to

AYUBCO ENTERPRISES.

PD5	Pay the tax they owe with interest.	1	2	3	4	5
PD6	Pay substantial fine and pay the tax they owe with interest.	1	2	3	4	5
PD7	Taken to court and pay the tax they owe with interest.	1	2	3	4	5
PD8	Taken to court, pay substantial fine and pay the tax they owe with interest.	1	2	3	4	5

PART 6: Tax complexity

Please indicate the extent of your agreement with each statement based on the following scale:

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

TC1 I think the term used in tax publications (e.g., SBIRS guide books) and in tax return forms are difficult.	1	2	3	4	5
TC2 The sentences and wording in the SMEs Income Tax Return Guide are lengthy and not user-friendly.	1	2	3	4	5
TC3 The rules related to SMEs income tax are clear.	1	2	3	4	5
TC4 Most at times our SME do refer to others for assistance in dealing with tax matters.	1	2	3	4	5
TC5 Our SME do not always have a problem with completing and filing the tax return form(s).	1	2	3	4	5
TC6 As an SME, we find it tedious to maintain all our relevant records for the whole year for tax purposes.	1	2	3	4	5
TC7 As an SME we do not have to make a lot of effort to understand the explanations given in the State Internal Revenue Service (SIRS) guide books and other similar explanatory material.	1	2	3	4	5

PART 7: Incentives (Positive inducement)

The following are statements placed on incentives (positive inducement). Using the scale below please state your agreement or disagreement to the following statements.

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

IPI1 Tax collection on SMEs would increase, if incentives were given to the SMEs taxpayers' who are honest.	1	2	3	4	5
IPI2 If government plans to give positive inducement to compliant SMEs, the inducement should be given both in kind and cash.	1	2	3	4	5

PART 8: Tax knowledge

Please indicate the extent of your agreement with each statement by circling 1 - 3, based on the following scale:

1	2	3
I don't know	**No**	**Yes**

TK1 Is interest on savings account taxable under the SMEs income tax law?	1	2	3
TK2 Rent received from sub-letting part of the SME building is taxable under the Nigerian income tax law	1	2	3
TK3 Dividend received by the SME from another investment is taxable under the Nigerian income tax law.	1	2	3
TK4 Are provision for doubtful debt and other business/personal expenses allowed for deduction under the Nigerian SMEs income tax law?	1	2	3
TK5 Medical expenses and other business expenses allow for deduction under the Nigerian SMEs income tax law?	1	2	3
TK6 Loss on sale of assets and other business/personal expenses allowed for deduction under the Nigerian SMEs income tax law?	1	2	3

PART 9: Public governance quality

Please indicate the extent of your agreement with each statement by circling 1 - 5, based on the following scale:

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

PGQ1	I trust the National Assembly in making good laws for Nigeria.	1	2	3	4	5
PGQ2	There is no free and fair election in Nigeria.	1	2	3	4	5
PGQ3	I have access to the published accounts and the annual report of the Federal Government.	1	2	3	4	5
PGQ4	I am not satisfied with the quality of general infrastructure in Nigeria.	1	2	3	4	5
PGQ5	I am satisfied with the manner the government is handling the health services	1	2	3	4	5
PGQ6	I am not satisfied with the manner the government is handing the education system.	1	2	3	4	5
PGQ7	I trust the financial honesty of Nigerian politicians.	1	2	3	4	5
PGQ8	The diversion of public funds due to corruption is common in Nigeria	1	2	3	4	5
PGQ9	Political stability is not declining in Nigeria.	1	2	3	4	5
PGQ10	Ethnic and religious conflict is not a threat to stability in Nigeria.	1	2	3	4	5
PGQ11	Nigeria‘s Judiciary is free of interference of other arms of government.	1	2	3	4	5
PGQ12	Justice is not fairly administered in Nigeria.	1	2	3	4	5
PGQ13	Nigerian police force is effective in combating crime.	1	2	3	4	5

PART 10: Perceived Service Orientation

Please indicate the extent of your agreement with each statement by circling 1 - 5, based on the following scale:

1	2	3	4	5
Completely disagree	**Disagree**	**Indifferent**	**Agree**	**Completely Agree**

The tax authority:						
PSO1	Does everything possible to serve SMEs and other people in general	1	2	3	4	5
PSO2	Treats SMEs and its businesses with respect	1	2	3	4	5
PSO3	Keeps its promises in relation to SMEs business	1	2	3	4	5
PSO4	Treats every SMEs fairly, and	1	2	3	4	5
PSO5	Makes SMEs circumstances sufficiently into account	1	2	3	4	5

PART 11: Perceived Corruption

To what extent do you think the following feature applies to the Nigerian system (Please circle all that apply).

1	2	3	4	5
Strongly Disagree	**Disagree**	**Indifferent**	**Agree**	**Strongly Agree**

PC1	Individuals pay bribes and tips to get things done.	1	2	3	4	5
PC2	Organizations pay bribes and tips to get things done.	1	2	3	4	5
PC3	If public officials act against rules, help can be obtained elsewhere.	1	2	3	4	5
PC4	Bribery and corruption is common in Nigeria	1	2	3	4	5

PART 12: Relate to the personal profile of the respondent and some general information about the SMEs.

Please tick (√) the right answer.

1) Gender:

- ☐ Male
- ☐ Female

2) Age (years):

- ☐ Less than 30
- ☐ 31-40
- ☐ 41-50
- ☐ Above 50

3) What is your highest educational qualification:

- ☐ Doctorate degree
- ☐ Master degree
- ☐ Bachelor degree or equivalent
- ☐ Diploma or A - level equivalent
- ☐ GCE or O - level equivalent

4) How many years of experience do you have in SMEs related business:

- ☐ 1 - 5
- ☐ 6 - 10
- ☐ Above 10

5) How long has your SME being in existence (in years):

- ☐ Less than 5years
- ☐ 6 - 10
- ☐ 11 – 15
- ☐ 16 - 20
- ☐ More than 20years

End of questions

Appendix G: Common Method Bias (Total Variance Explained)

Table 6.4

Summary of Factor Analysis for Common Method Bias (Total Variance Explained)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.39	11.74	11.74	11.39	11.74	11.74
2	7.21	7.44	19.18	7.21	7.44	19.18
3	6.37	6.57	25.76	6.37	6.57	25.76
4	5.53	5.70	31.47	5.53	5.70	31.47
5	4.65	4.80	36.27	4.65	4.80	36.27
6	3.85	3.97	40.24	3.85	3.97	40.24
7	3.42	3.53	43.78	3.42	3.53	43.78
8	3.03	3.13	46.91	3.03	3.13	46.91
9	2.83	2.91	49.83	2.83	2.91	49.83
10	2.34	2.41	52.24	2.34	2.41	52.24
11	2.22	2.29	54.54	2.22	2.29	54.54
12	2.11	2.18	56.72	2.12	2.18	56.72
13	1.94	2.01	58.73	1.95	2.01	58.73
14	1.89	1.95	60.68	1.89	1.95	60.68
15	1.76	1.82	62.50	1.76	1.82	62.50
16	1.74	1.80	64.29	1.74	1.80	64.29
17	1.61	1.66	65.95	1.61	1.66	65.95
18	1.47	1.52	67.47	1.47	1.52	67.47
19	1.40	1.44	68.91	1.40	1.44	68.91
20	1.35	1.40	70.31	1.36	1.40	70.31
21	1.25	1.30	71.61	1.26	1.30	71.61
22	1.20	1.24	72.85	1.21	1.24	72.85
23	1.15	1.19	74.04	1.16	1.19	74.04
24	1.14	1.19	75.22	1.15	1.19	75.22
25	1.09	1.12	76.35	1.09	1.12	76.35
26	1.04	1.07	77.42	1.04	1.07	77.42
27	1.02	1.06	78.48	1.03	1.06	78.48
28	0.99	1.02	79.50			
29	0.95	0.98	80.48			
30	0.92	0.95	81.43			
31	0.88	0.91	82.34			
32	0.83	0.86	83.20			
33	0.81	0.84	84.04			
34	0.76	0.78	84.82			
35	0.75	0.78	85.60			
36	0.73	0.76	86.37			
37	0.71	0.74	87.11			

38	0.69	0.72	87.82
39	0.65	0.67	88.49
40	0.63	0.65	89.15
41	0.61	0.63	89.78
42	0.58	0.60	90.38
43	0.56	0.59	90.97
44	0.55	0.57	91.53
45	0.53	0.55	92.08
46	0.51	0.54	92.62
47	0.48	0.50	93.11
48	0.45	0.46	93.58
49	0.43	0.45	94.03
50	0.42	0.44	94.47
51	0.40	0.42	94.89
52	0.38	0.40	95.28
53	0.35	0.37	95.65
54	0.35	0.36	96.01
55	0.33	0.34	96.36
56	0.31	0.32	96.68
57	0.30	0.31	96.99
58	0.29	0.30	97.29
59	0.27	0.28	97.57
60	0.25	0.26	97.83
61	0.24	0.26	98.09
62	0.20	0.21	98.30
63	0.19	0.20	98.50
64	0.18	0.19	98.69
65	0.16	0.17	98.86
66	0.16	0.17	99.03
67	0.14	0.15	99.18
68	0.12	0.13	99.31
69	0.11	0.12	99.43
70	0.11	0.12	99.55
71	0.09	0.10	99.64
72	0.07	0.08	99.72
73	0.06	0.07	99.79
74	0.05	0.06	99.85
75	0.04	0.04	99.89
76	0.03	0.04	99.93
77	0.03	0.03	99.96
78	0.01	0.02	99.98
79	0.01	0.02	99.99

80	0.00	0.01	100.00
81	0.00	0.00	100.00
82	0.00	0.00	100.00
83	0.00	0.00	100.00
84	0.00	0.00	100.00
85	0.00	0.00	100.00
86	0.00	0.00	100.00
87	0.00	0.00	100.00
88	0.00	0.00	100.00
89	0.00	0.00	100.00
90	0.00	0.00	100.00
91	0.00	0.00	100.00
92	0.00	0.00	100.00
93	0.00	0.00	100.00
94	0.00	0.00	100.00
95	0.00	0.00	100.00
96	0.00	0.00	100.00
97	0.00	0.00	100.00

Appendix H: PLS Output

PLS Quality Criteria Overview

Constructs	Composite Reliability	AVE	R Square	Cronbach's Alpha	Communality	Redundancy
FSR	0.921082	0.594019		0.907729	0.594019	
IPI	0.831635	0.712757		0.607082	0.712756	
PC	0.743382	0.591737		0.310575	0.591737	
PD	0.862117	0.677019		0.775894	0.677019	
PGQ	0.829682	0.619305		0.697705	0.619305	
PSO	0.752558	0.504107		0.510263	0.504107	
TC	0.826293	0.704881		0.589856	0.704881	
TCB	0.948005	0.64646	0.682888	0.939444	0.64646	0.019171
TK	0.859754	0.681523		0.733782	0.681523	
TR	0.899984	0.693959		0.857411	0.693959	
WFFC	0.950141	0.634922		0.943675	0.634923	

Latent Variable Correlations

	FSR	IPI	PC	PD	PGQ	PSO	TC	TCB	TK	TR	WFFC
FSR	1.0000										
IPI	-0.12218	1.0000									
PC	0.00904	-0.04927	1.0000								
PD	0.00676	0.109054	-0.012486	1.0000							
PGQ	-0.00435	0.119141	-0.006975	0.160276	1.0000						
PSO	-0.03786	0.043099	0.088243	0.117307	0.027516	1.0000					
TC	0.06672	-0.12556	-0.046207	-0.01862	-0.04486	-0.01324	1.0000				
TCB	-0.19676	0.791446	-0.134622	0.197982	0.207207	0.11173	-0.14521	1.0000			
TK	0.04249	-0.10648	-0.070234	-0.01445	0.047187	-0.31039	-0.00434	-0.10275	1.0000		
TR	0.06780	-0.00031	0.016314	0.075529	0.029088	-0.04791	-0.02841	0.021389	0.012553	1.0000	
WFFC	0.11032	-0.21402	0.008843	-0.01624	0.000103	-0.07122	-0.00284	-0.25894	-0.01709	0.0248	1.0000

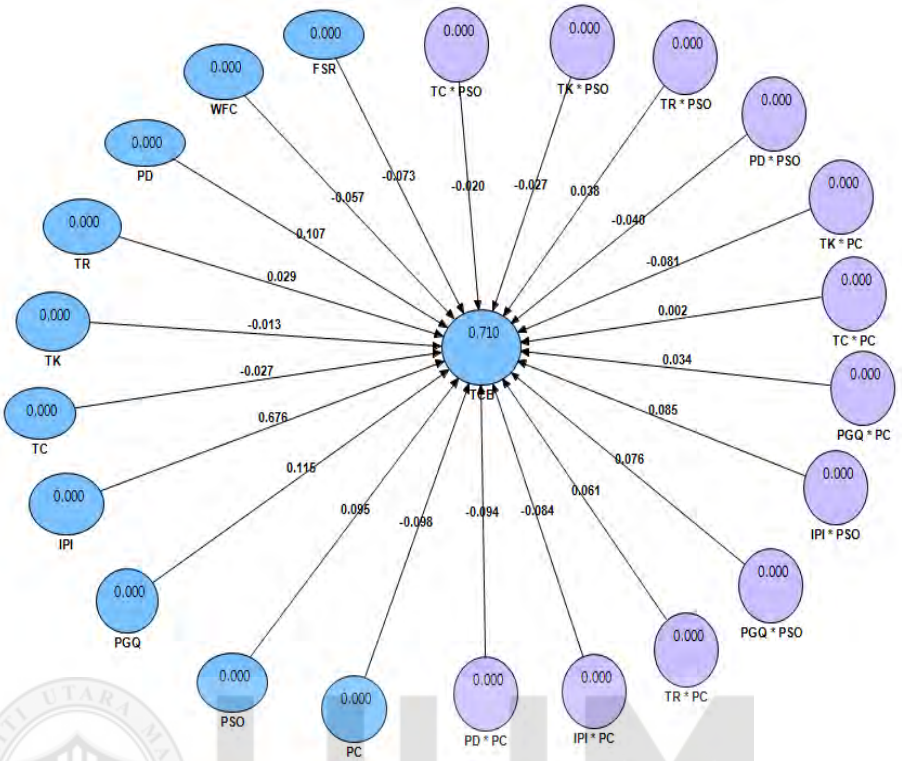
Cross loadings

	FSR	IPI	PC	PD	PGQ	PSO	TC	TCB	TK	TR	WFFC
FSR1	**0.777164**	-0.008552	-0.034236	-0.016511	-0.101465	-0.059457	0.09028	-0.087903	-0.033796	0.074398	0.051692
FSR2	**0.738822**	-0.143922	0.026046	0.043599	-0.118404	0.032081	0.020355	-0.154096	-0.007997	0.01659	0.116151
FSR3	**0.827717**	-0.131257	-0.02262	-0.013028	0.075918	-0.071844	0.070479	-0.200088	0.100395	0.073673	0.073724
FSR4	**0.775077**	-0.020954	-0.030134	0.001737	-0.113128	-0.000789	0.126341	-0.079901	-0.011774	0.085222	0.04236
FSR5	**0.719736**	-0.103421	0.050563	-0.001698	-0.105116	-0.027733	0.012133	-0.119227	-0.00474	0.019767	0.1038
FSR6	**0.788491**	-0.11109	-0.015563	0.014886	0.105229	-0.036604	0.057279	-0.210493	0.021223	0.046576	0.079982
FSR7	**0.822021**	-0.082983	0.058108	-0.026744	0.04322	-0.046985	0.02307	-0.147961	0.094693	0.064023	0.083339
FSR8	**0.707811**	-0.015199	0.043692	0.08377	0.03268	0.041326	0.048717	-0.044566	0.039402	0.066243	0.17397
IPI1	-0.083961	**0.900064**	-0.039923	0.134109	0.03865	0.057093	-0.121194	0.768958	-0.093239	-0.03405	-0.150317
IPI2	-0.132864	**0.784473**	-0.044948	0.034381	0.19107	0.007764	-0.086846	0.540307	-0.087224	0.047817	-0.228107
PC1	0.001724	-0.044636	**0.748976**	-0.001662	0.011094	0.084742	-0.023888	-0.099571	-0.025887	-0.044824	-0.005117
PC2	0.011818	-0.031704	**0.788992**	-0.016981	-0.020634	0.05233	-0.046398	-0.107381	-0.080187	0.065766	0.017864
PD1	-0.011326	0.131615	-0.033166	**0.814271**	0.121025	0.087367	-0.088391	0.192321	-0.008527	0.053905	0.014691
PD2	0.002663	0.076652	0.023553	**0.899556**	0.134585	0.111638	0.056379	0.174701	-0.023391	0.093499	-0.015776
PD3	0.051088	0.027638	-0.029192	**0.747541**	0.161836	0.093696	0.001786	0.083273	0.003506	0.02039	-0.07414
PGQ12	-0.048893	0.129941	0.019357	0.109531	**0.783269**	-0.031382	-0.039336	0.153659	-0.025495	0.044307	-0.015593
PGQ3	0.006135	0.084205	-0.028306	0.183736	**0.828911**	0.059255	-0.082373	0.19403	0.040543	-0.013418	0.016967
PGQ7	0.035379	0.067702	-0.000991	0.063495	**0.746533**	0.028589	0.037808	0.132003	0.105827	0.051826	-0.00649
PSO1	-0.084324	0.045503	0.0714	0.083548	0.009322	**0.751747**	0.042737	0.087294	-0.168568	-0.10017	-0.127099
PSO3	-0.020504	0.048627	0.069697	0.03234	0.000001	**0.714106**	-0.051927	0.08097	-0.283323	-0.026187	-0.044656
PSO4	0.03865	-0.009428	0.043949	0.144498	0.05603	**0.661249**	0.025745	0.068267	-0.214904	0.040823	0.039602
TC1	0.054286	-0.131926	-0.01482	-0.008282	-0.00577	0.008959	**0.783336**	-0.100892	0.043255	0.022485	0.010322
TC4	0.058069	-0.087643	-0.056755	-0.021192	-0.061366	-0.025848	**0.89227**	-0.1389	-0.037759	-0.057849	-0.011641

TCB1	-0.180065	0.447801	-0.132578	0.174241	0.271603	0.132963	-0.12163	**0.785258**	-0.087735	0.040459	-0.306553
TCB11	-0.106082	0.843332	-0.066813	0.135524	0.02648	0.061949	-0.109778	**0.788124**	-0.068556	-0.01105	-0.165635
TCB13	-0.061374	0.653863	-0.158112	0.102775	0.142574	0.062923	-0.078731	**0.821043**	-0.07432	0.048529	-0.31565
TCB14	-0.284154	0.504591	-0.064675	0.224573	0.20173	0.07828	-0.093248	**0.754773**	-0.039168	-0.00062	-0.077688
TCB2	-0.232111	0.564819	-0.130911	0.203168	0.261667	0.137813	-0.158463	**0.868272**	-0.11778	0.06938	-0.186734
TCB4	-0.096135	0.859691	-0.064736	0.127521	0.023141	0.062804	-0.119711	**0.789551**	-0.078139	-0.018352	-0.173085
TCB6	-0.053303	0.681061	-0.155673	0.094171	0.13803	0.059936	-0.093884	**0.827297**	-0.084899	0.036621	-0.326625
TCB7	-0.27502	0.529268	-0.063522	0.215998	0.197248	0.075572	-0.106032	**0.760727**	-0.048548	-0.010293	-0.08943
TCB8	-0.155284	0.472884	-0.130979	0.165045	0.270182	0.112503	-0.110027	**0.752666**	-0.089907	-0.036583	-0.23729
TCB9	-0.216379	0.606146	-0.12784	0.191617	0.254067	0.139205	-0.175296	**0.880977**	-0.133459	0.056689	-0.200734
TK1	0.014461	-0.071641	-0.134187	-0.056857	-0.035396	-0.326476	-0.101178	-0.074824	**0.558799**	-0.021476	-0.015298
TK2	0.033687	-0.102424	-0.032034	0.011855	0.087816	-0.226838	0.034492	-0.089897	**0.929681**	0.028723	-0.009965
TK5	0.05365	-0.085133	-0.01789	0.002442	0.051714	-0.220963	0.041331	-0.086523	**0.931669**	0.018617	-0.017106
TR1	0.043744	-0.007142	-0.003939	0.071248	0.047521	-0.03566	-0.019112	0.025139	0.036463	**0.921568**	-0.022734
TR2	0.058587	0.016068	0.032349	0.026946	0.06212	-0.078803	0.030748	0.011361	0.042613	**0.882977**	0.015643
TR5	0.072384	-0.003977	0.004919	0.085204	-0.002194	-0.014847	-0.079037	0.016889	-0.049705	**0.74761**	0.059409
TR6	0.068665	0.006758	0.067992	0.04739	-0.051998	-0.058205	0.001195	0.007137	0.011588	**0.766798**	0.092835
WFFC1	0.050769	-0.134462	0.030215	-0.019601	-0.093554	-0.044332	-0.01781	-0.198738	-0.017975	0.032075	**0.835866**
WFFC10	0.192914	-0.137135	-0.000207	0.003617	-0.004974	-0.124084	0.023581	-0.257351	-0.015363	-0.01063	**0.82359**
WFFC11	0.050279	-0.130074	0.024762	-0.017937	-0.094366	-0.04958	-0.018741	-0.198445	-0.017738	0.024643	**0.839088**
WFFC12	0.006847	-0.262925	-0.011654	-0.025797	0.125244	0.011171	-0.014424	-0.157579	-0.006316	0.044377	**0.732061**
WFFC14	0.050279	-0.130074	0.024762	-0.017937	-0.094366	-0.04958	-0.018741	-0.198445	-0.017738	0.024643	**0.839088**
WFFC15	0.006847	-0.262925	-0.011654	-0.025797	0.125244	0.011171	-0.014424	-0.157579	-0.006316	0.044377	**0.732061**
WFFC18	0.19431	-0.143488	0.006437	0.001538	-0.004565	-0.118449	0.024646	-0.259544	-0.01579	-0.001656	**0.826828**
WFFC2	0.007765	-0.267541	-0.004195	-0.027915	0.124749	0.017706	-0.013202	-0.158029	-0.006695	0.054022	**0.727559**
WFFC5	0.19431	-0.143488	0.006437	0.001538	-0.004565	-0.118449	0.024646	-0.259544	-0.01579	-0.001656	**0.826828**

WFFC6	0.049459	-0.124824	0.01913	-0.01615	-0.094564	-0.054521	-0.019552	-0.196855	-0.017384	0.017026	**0.836842**
WFFC7	0.005846	-0.255282	-0.019011	-0.023375	0.124308	0.004481	-0.015486	-0.155322	-0.005863	0.034185	**0.728203**

Full Model (Algorithm)



Structural model (Bootstrap with 281 cases)