

# **The Moderating Effect of Financial Condition on the Factors Influencing Taxpayer's Compliance Behaviour in Nigeria**

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*Income tax administration in Nigeria as in some other developing countries is characterised by low tax compliance level. A number of factors have been identified in the literature to proffer explanation for such phenomenon. However, the influences of these factors on tax compliance behaviour may be moderated by taxpayer's financial condition. This study investigates the moderating effect of financial condition on tax compliance behaviour and its determinants. The data of the study which were collected through a survey of individual taxpayers' opinion were treated statistically using multiple regression. The outcome of the study indicated that in presence of financial condition, greater explanation of tax compliance behaviour is obtained from the determinants.*

**Field of Research:** Taxation

## **1. Introduction**

In Nigeria, as in some other developing countries, tax noncompliance is a serious challenge facing tax income administration and hindering tax revenue performance. In relative term, tax revenue has continued to drop tremendously, for instance, the share of individual tax in the total federal and state revenue was 10.53 % in 1977 but dropped to 5.19 % in 1997 and further to 4.67 % in 2010, despite the fact that Nigeria's Gross Domestic Product grew by 61% between 1997 and 2010 (CBN 2008 & 2011). Furthermore, the severity of tax noncompliance in Nigeria is also reflected by the number of tax cases audited and investigated. There were 654 tax cases audited in 2008 resulting into NGN 92.2billion revenue to the Government and also 26 tax cases relating to both domestic companies and multinationals were investigated which yielded NGN 2.48billion as revenue in 2008 (FIRS 2009).

As a consequence of tax noncompliance, the study of Ariyo (1997) reported that Nigeria's fiscal deficit is a recurring feature. The available statistical data have revealed that the fiscal deficit of all levels of Government in Nigeria have been growing since 1980. For instance, the budget deficit of Federal Government and State governments increased from NGN 1.975 billion and NGN 3.417 billion in 1980 to NGN 47.379 billion and NGN 47.403 billion in 2008, respectively (CBN 2008).

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Although there are tax audit and investigation departments in all the revenue offices at both federal and state levels together with adequate provisions for sanctions against noncompliance under Nigerian tax laws, the problem of tax noncompliance still persists (Alabi 2001; Sani 2005; Nzotta 2007). However, from all the taxes, personal income tax has remained the most disappointing, inefficient, unproductive, and problematic in Nigerian tax system (Asada 2005).

A number of factors have been identified in tax compliance literature as factors influencing taxpayers' compliance behaviour. The classical theory of tax compliance otherwise known as A-S models developed by Allingham and Sandmo (1972) which relied basically on Becker's (1968) deterrence theory identified tax rate, audit probability and penalty structure as the factors influencing taxpayers' behaviour in complying with tax obligation. However, Jackson and Millron (1986) comprehensively expanded the classic model and came up with fourteen key determinants for tax compliance. Fischer, Wartick and Mark (1992) categorised these key determinants into four group constructs. This study is undertaken primarily to investigate the moderating effects of taxpayers' financial condition on the factors identified in the Fischer's model to be influencing tax compliance behaviour. To achieve this objective, the remaining parts of this paper are structured as follows: the second part reviews the relevant literature on factors influencing tax compliance behaviour and the effect of financial condition while the third part is on methodology used in the study. The results and discussion are presented in the fourth part and this is followed by conclusion in the fifth part.

## **2. Literature Review**

### **2.1 Factors Influencing Tax Compliance Behaviour**

In Fischer's model, tax system structure, attitude, and noncompliance opportunity were factors identified to be having direct influence on taxpayer's compliance behaviour. Tax system structure is a major determinant of tax compliance behaviour (Jackson & Millron 1986; Fischer et al. 1992). The factors that determine the effectiveness of the tax system structure of any country include probability of detection, penalty, tax rate and complexity of tax system (Fischer et al. 1992). Taxpayers engaging in a noncompliant act may be detected through the process of tax audit and investigation. The primary aim of tax audit is to detect taxpayers not complying with the submission of income tax returns and the payment of income tax. Alm, Deskin and McKee (2004) stated that tax audits not only have a direct deterrent effect on taxpayers being audited but also an indirect deterrent effect on taxpayers not being audited. Under deterrence theory, the position of the probability of detection in relation to tax compliance is that a high rate of detection will reduce tax noncompliance. According to Chau and Leung (2009), higher audit probability will encourage tax compliance. Some empirical studies have established relationships between tax audit and tax compliance. The study of Friedland, Maital and Reuentberg (1978), which was one of the pioneer studies to determine the effects of deterrence variables on tax noncompliance, reported that tax audits have a strong effect on tax compliance behaviour. Equally, a study of Witte and Woodbury (1985) also found that there is a significant positive relationship between tax audit and rate of tax compliance. So did the findings in the studies of Dubin and Wilde (1988), and Slemrod, Blumenthal and Christian (2001).

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The taxpayer caught in the process of audit or investigation is penalized by the tax authority. Penalty is associated with sanctions or punishment. The penalty to be assigned to an offence depends on the gravity of the offence. Theoretically, Allingham and Sandmo (1972) stated that tax compliance could be increased by increasing the associated penalties. Doran (2009) stated that tax penalties remain important for two reasons. First, the norm model assumes that certain taxpayers will not comply with tax obligations and those taxpayers must be deterred by the threat of legal sanctions and, second, taxpayers who complied must be assured that noncompliant taxpayers will be sanctioned. Similarly, Chau and Leung (2009) argued that tax penalty is an important factor affecting tax compliance and that the idea is that the fear of penalty will prohibit the noncompliance tendency. Some studies have proven the relationship between tax penalty and tax compliance empirically. The study of Witte and Woodbury (1985) established a significant relationship between the severity of criminal sanctions and tax compliance.

Tax rate is another factor of the tax system structure, which influences tax compliance behaviour. According to the deterrence theory, an increasing tax rate increases tax compliance. However, Allingham and Sandmo (1972) pointed out that the effects of tax rate on compliance include income and substitution effects. They stated that a higher tax rate would reduce after-tax-income and increase compliance, assuming a decreasing risk aversion. They referred to this scenario as the income effect. A higher tax rate will also make acts of noncompliance more profitable. This is what they referred to as the substitution effect. They therefore concluded that the net change in tax compliance behaviour due to the effect of tax rate is ambiguous. However, Martinez-vazquez and Rider (2005) revealed that a higher tax rate is linked with less tax compliance.

The complexity of the tax system is another factor with an impact on tax compliance behaviour (Millron 1985). According to Jackson and Millron (1986) as tax laws and regulations of a country become increasingly complex, complexity must be recognized as a possible reason for tax noncompliance. They said that taxpayers should be able to understand the rules for computing their taxes and that these rules must be made simple, understandable and clear so as to promote tax compliance behaviour. Devos (2005) provided empirical evidence indicating that tax complexity is significantly related to tax noncompliance.

Furthermore, an individual's attitude towards the tax system may predict his tax compliance behaviour. Theoretically, Ajzen (1991) claimed that attitude is an indication of behaviour. Attitude towards an event, object, function or person may be favourable or unfavourable. Kirchler, Hoelzl and Wahl (2008) stated that a taxpayer with a favourable attitude towards tax evasion is expected to be less compliant and equally a taxpayer who has an unfavourable attitude is likely to be more compliant. Empirically, Eriksen and Fallan (1996) revealed that taxpayer's attitude towards tax system has influence on reinforced desire towards tax evasion and compliance. Chan, Troutman and O'Bryan (2000) reported that Hong Kong taxpayers have less favourable attitude towards tax system resulting in a lower level of compliance. Similar result was reported in Trivedi, Shehata and Mestelman (2005).

Also in Fischer's model, source of income, level of income and occupation are factors affecting the relationship between noncompliance opportunity and tax compliance behaviour. According to Andreoni, Erard and Feinstein (1998), most of

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the theoretical models indicate that as income increases, tax compliance should decrease. Studies have proved this assertion (Chau & Leung 2009; Ritsema & Thomas 2003). On source of income, Aitkin and Bonneville (1980), and Groenland and van Veldhoven (1983) found that individuals with untraced source of income are more likely to be noncompliant than individuals whose income is reported by third party. Similar result was also reported in Clotfelter (1983). On occupation, the study of Groenland and vanVeldhoven (1983) reported that taxpayers who are self employed are more likely to commit various form of tax noncompliance.

### **2.2 Financial Condition as a Moderator of Tax Compliance and its Determinants**

However, the inconsistency of findings on the relationship between tax compliance and some of its determinants (Dubin & Wilde, 1988), has encouraged suggestion in the literature that the relationship may be moderated by certain variables (Kirchler et al. 2007). There are indications in other behavioural studies that financial condition (requirement) and family obligations moderate the relationship between individuals' commitment and performance (Brett, Cron & Slocum 1995; Doran et al. 1991). Specifically, the finding of Brett and his colleague (1995) provides proof that when financial condition is moderating individual commitment and performance, the relationship between commitment and performance is high vis-à-vis. This implies that financial burden might moderate individual commitment to discharge obligations, including tax payment. Torgler (2007) argued that the financial condition of the individual might create a sense of distress, particularly when payment is to be made including taxes and such distress may encourage an individual to be dishonest in complying with tax laws.

## **3. Methodology**

### **3.1 Research Instrument**

Tax system structure was measured using 15 items structured on 5 point likert scale and these items were originally developed by Gilligan and Richardson (2005), James, Murphy and Reinhart (2005), and Wenzel (2004) . The overall mean score for tax system structure (see table1) was 2.43 and this indicated that taken together the respondents regarded Nigerian tax system structure as less efficient.

Taxpayer's attitude towards tax evasion was measured using 8 items structured on 5 point likert scale and these items followed after the study of Eriksen and Fallan (1996). The overall mean score for taxpayer's attitude was 3.58 and this indicated that in the aggregate the respondents had less favourable attitude towards tax evasion.

Financial condition was measured categorically using options of "dissatisfy" and "satisfy" as was done in (Torgler 2007) and was re-coded into dichotomous values of (0) and (1) respectively. Noncompliance opportunity variables were also measured using categorical data. For this purpose, dummy variables were designed for the respondents' income level, income source and occupation as was done in Manaf (2004).

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Tax compliance behaviour was measured with four items covering the four components of tax compliance using hypothetical scenario case as was done in Bobek (1997) and Chan et al. (2000). Respondents were asked to indicate (1) the Naira (NGN) amount of income and deduction they would report on their tax return if they were in a similar situation to the scenario case (2) the date they would file their income tax returns if they were in a similar situation to the scenario case, (3) how many days after receiving an assessment notice it would take them to pay their income tax if they were in a similar situation to the scenario case. The scores of (1), (2) and (3) was assigned to the options under each item of the scenario case and the values are interpreted as somewhat compliant, moderately compliant and fully compliant. The aggregate mean score for tax compliance behaviour was 2.06 which indicated that on the whole respondents had moderate tax compliance behaviour. Table 1 shows the summary the descriptive statistics for continuous latent variables.

**Table1: Descriptive Statistics for Continuous Latent Variables**

<b>Statistics</b>	<b>Tax System Structure</b>	<b>Attitude to Tax Evasion</b>	<b>Tax Compliance</b>
Mean	2.434	3.577	2.055
Median	2.400	3.625	2.000
Mode	1.930	3.250	2.000
Std Deviation	0.632	0.902	0.586
Skweness	0.131	- 0.236	-0.334
Kurtosis	-0.454	-0.602	-0.552
Minimum	1.000	1.250	1.000
Maximum	4.330	5.000	3.000
Range	3.330	3,750	2.000

### 3.2 Samples

The samples of the study were selected from the population of 175,609<sup>1</sup> individual taxpayers residing in Abuja city (Federal capital city of Nigeria)<sup>2</sup> using multi-stage cluster random sampling technique. The sample size of 382 was determined using Krejcie and Morgan's (1970) rule of thumb as cited in Sekaran and Bougie (2010). However, the sample size was increased to 550 to compensate for non-response as suggested by Sekaran and Bougie (2010). A total of 550 questionnaires, which contains likert-type, dichotomous and categorical items were administered to these individuals. At the end of the field work, a total of 332 of usable questionnaires were retrieved representing approximately 60% response rate or 87% of predetermined sample size.

### 3.3 Model

This study extends Fischer's model of tax compliance to incorporate the moderating effect of taxpayers' financial condition to take into account the social, situational and environmental reality in Nigeria. Specifically, two regression models were set out for the purpose of the study. The first model estimates the predictive power of the main effect of the study, as recommended in Aiken and West (1991). The second regression model incorporates the moderating effect of taxpayers' financial condition. The regression models are presented below:

$$Tax\ Compliance = \beta_0 + \beta_1 Tax\ System\ Structure + \beta_2 Attitude\ to\ Tax\ Evasion + \beta_3 Income\ Source + \beta_4 Income\ Level + \beta_5 Occupation + U \dots \dots \dots 1$$

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Where  $\beta_0$  is the intercept,  $\beta_1 - \beta_5$  are coefficients and U is the error

$$\begin{aligned} \text{Tax Compliance} = & \beta_0 + \beta_1 \text{Tax System Structure} + \beta_2 \text{Attitude to Tax Evasion} + \beta_3 \text{Income Source} \\ & + \beta_4 \text{Income Level} + \beta_5 \text{Occupation} + \beta_6 \text{Financial Condition} + \beta_7 \text{Tax System Structure} * \text{Financial} \\ & \text{Condition} + \beta_8 \text{Attitude} * \text{Financial Condition} + \beta_9 \text{Income Source} * \text{Financial Condition} + \beta_{10} \text{Income} \\ & \text{Level} * \text{Financial Condition} + \beta_{11} \text{Occupation} * \text{Financial Condition} + U \dots \dots \dots 2 \end{aligned}$$

Where  $\beta_0$  is the intercept,  $\beta_1 - \beta_{11}$  are coefficients and U is the error

### 3.4 Hypotheses

The direct relationship between compliance behaviour and tax system structure, taxpayers' attitude, noncompliance opportunity are not reported in this study as findings on such relationship had been reported in other previous studies (Chan et al. 2000; Manaf 2004) as a result these variables served as control variables similar to what was done in Wenzel (2004). However, in the light of the literature provided in section 2, we propose the following hypotheses for validation:

**H<sub>1</sub>:** Taxpayer's financial condition moderates the relationship between tax system structure and tax compliance behaviour.

**H<sub>2</sub>:** Taxpayer's financial condition moderates the relationship between his attitude toward tax evasion and compliance behaviour.

**H<sub>3</sub>:** Financial condition moderates the relationship between taxpayer's types of occupation and tax compliance behaviour.

**H<sub>4</sub>:** Financial condition moderates the relationship between taxpayer's source of income and tax compliance behaviour.

**H<sub>5</sub>:** Financial condition moderates the relationship between taxpayer's income level and tax compliance behaviour.

## 4. Results and Discussion

### 4.1. Background of Respondents

The demographic information on the respondents as presented in Table 2 indicates that about 61% of the respondents were male leaving 39% as female and that the age grouping of the majority of the respondents falls between 20 and 40 years (72.2%). Furthermore, approximately 80% of the respondents had higher education background as graduates of tertiary institutions while on occupation, the majority of the respondents (58%) were nonprofessionals. The source of income for a little more than half of the respondents was the public sector and the average monthly income of about 66% of the respondents was between NGN 50,000 and NGN 99,999. Table 2 also reveals that all the ethnic and religious groups in Nigeria were represented in the study.

Table2: Demographic Information of the Taxpayers

Category	Frequency (N=332)	Percentage (Total=100)
<b>Gender</b>		
Male	204	61.3
Female	128	38.6
<b>Age groups</b>		
20 – 30 years	75	22.6
31 – 40 years	148	44.6
41 – 50 years	85	25.6
Above 50 years	24	7.2
<b>Education</b>		
Primary education	7	2.1
Secondary education	58	17.5
Higher education	267	80.4
<b>Occupation</b>		
Professional	141	42.5
Non Professional	191	57.5
<b>Source of income</b>		
Public sector	171	51.5
Private sector	81	24.4
Sole proprietor	80	24.1
<b>Income Level</b>		
Low income	218	65.7
Middle income	83	25.0
High income	31	9.3
<b>Race</b>		
Hausa	113	34.0
Yoruba	72	21.7
Igbo	61	18.4
Minority	86	25.9
<b>Religion</b>		
Islam	96	28.9
Christian	225	67.8
Traditional religion	11	3.3

#### 4.2 Multiple Regressions

Moderated multiple regression analysis was used to statistically test the hypotheses of the study in line with procedures recommended by Darrow and Kahl (1982). However, before the multiple regressions, the variables were centered to reduce the effect of multicollinearity as suggested by Aiken and West (1991).

The regression results indicating the moderating effect of financial condition on the independent variables as represented in model 2 are presented in Table3 alongside the result of model 1(main effect) for comparative analysis. The result of the main effect in model 1 shows taxpayer’s attitude towards tax evasion ( $\beta = .163$ ;  $P < .01$ ), income source from public sector ( $-.156$ ,  $P < .05$ ) and nonprofessional occupation ( $-.152$ ;  $P < .01$ ) significantly related to compliance behaviour. In model 2, financial condition and the product term of each independent variable and financial condition were entered and the regression result indicates that financial condition ( $\beta = -.380$ ;  $P < .01$ ) negatively related to tax compliance behaviour. Other than that, the result provides evidence in support of hypothesis ( $H_1$ ) indicating that taxpayers’ financial condition significantly moderated the influence of tax system structure ( $-.158$ ;  $p < .01$ ) on tax compliance behaviour. Surprisingly, the presence of the taxpayers’ financial

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condition in the relationship between the tax system structure and compliance behaviour transformed the relationship between the two variables from positive to negative. This suggests that the effect of financial condition had weakened the influence of the tax system structure on taxpayers' compliance behaviour. This finding is expected, considering that a great number of the respondents who were noncompliant were also not satisfied with their financial situation. Hence, the tax system structure had less influence on their compliance behaviour. The result on the moderating effect of the financial condition on tax system structure and compliance behaviour is not surprising for developing countries like Nigeria with a high poverty rate and inefficient tax system structure (Rotberg & Gisselquist 2009). This finding indirectly agrees with the suggestion in Ritsema and Thomas (2003) that individual taxpayers with meagre financial resources may be tempted by bad financial conditions to be less compliant.

The regression analysis also provides evidence that is consistent with hypothesis (H<sub>3</sub>) and it indicates that taxpayers' financial condition has negative moderating effect on the influence of nonprofessional occupation (-.101;  $p < .05$ ) on tax compliance behaviour. This suggests that the presence of financial condition may make individual taxpayers in nonprofessional occupations to be less compliant. Although evidence concerning the moderating effect of financial condition on relationship between occupation and tax compliance behaviour in the literature are rare, however, this result restated previous findings that taxpayers who are in nonprofessional occupations are more likely to be less compliant (Andreoni et al. 1998; Groenland & van Veldhoven 1983). Similarly, this finding is not surprising for countries like Nigeria where the economy is dominated by the informal sector (Asada 2005).

However, the regression results failed to provide evidence in support of other hypotheses (H<sub>2</sub>, H<sub>4</sub> & H<sub>5</sub>). This suggests that the presence of financial condition did not significantly moderate the relationship between taxpayers' attitude, income level as well as income source and tax compliance. In summary, this study provides new evidence in the tax compliance literature indicating that taxpayers' financial condition significantly moderates the influences of tax system structure and nonprofessional occupation on tax compliance behaviour.



Table3: The Interacting Effect of Financial Condition

Variable	Model1	Model2
Tax System Structure	.051(.848)	.141(2.384)**
Attitude to Tax Evasion	.164(3.227)***	.101(2.061)**
<b>Income Source</b>		
Public Sector	-.158(-2.577)**	-.092(-1.553)
Sole Proprietor	.085(1.391)	.079(1.327)
<b>Income Level</b>		
Low-Income	-.082(-1.451)	-.80(-1.496)
High-Income	-.071 (-1.289)	-.085(-.619)
<b>Occupation</b>		
Nonprofessional	-.152(-2.880)***	-.120(-2.386)**
Financial Condition		-.380(-7.228)***
Tax System Structure X Financial Condition		-.158(-2.806)***
Attitude to Tax Evasion X Financial Condition		-.069(-1.416)
<b>Income Source</b>		
Public Sector X Financial Condition		-.053(-.900)
Sole Proprietor X Financial Condition		-.051(-.850)
<b>Income Level</b>		
Low- Income X Financial Condition		.046(.866)
High-Income X Financial Condition		-.044(-.829)
<b>Occupation</b>		
Nonprofessional X Financial Condition		-.101(-2.018)**
R <sup>2</sup>	.271	.411
Adjusted R <sup>2</sup>	.234	.346
Change R <sup>2</sup>	.231	.411
F Value	7.329	6.308
P Value	.000	.000

Note: 1. *T* Statistics in parenthesis. 2. Significant levels are:\*\*\* P<.01, \*\* P<.05 and \* P<.10

## 5. Summary and Conclusion

This study extends the Fischer's model of tax compliance by incorporating the moderating effect of taxpayer's financial condition. The study's regression results indicate that taxpayers' financial condition significantly moderated the relationship between the tax system structure as well as nonprofessional occupation and tax compliance behaviour.

The findings of this study have some interested implications. This study demonstrates the importance of the moderating effect of taxpayer's financial condition on tax compliance and some of its determinants and such effect cannot be underestimated theoretically. The findings have provided proof in support of the suggestion from the literature that the relationship between compliance behaviour and its determinants may be moderated by certain variables (Kirchler et al. 2007). Furthermore, comparatively, the findings indicated that the presence of financial condition (adjusted R<sup>2</sup>35%) as a moderator in tax compliance model strengthened the capacity of the model to predict taxpayers' compliance behaviour better than without financial condition (adjusted R<sup>2</sup> 23%). Therefore, the findings of this study suggest that the further extension of the tax compliance model, particularly Fischer's model, to incorporate moderating effect of financial condition would further strengthen the predictive capacity of the model for better understanding taxpayers' compliance behaviour. The findings also suggest areas of focus to the Nigerian policy makers for improvement in taxpayers' compliance behaviour and this is

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particularly important now that the government requires revenue to support investment in infrastructure and human capital development towards realising the vision of making Nigeria one of the 20 leading economies in the world, in the year 2020.

However, this study is not free of limitations. The main limitation is that it relied on self-reported behaviour of the taxpayers like most compliance researches. The behaviour that taxpayers portray under this method may not be a truthful representation of their actual behaviour (Tanzi & Shome 1993). Furthermore, the focus of this study was on individual taxpayers but corporate taxpayers may have different opinions, perceptions and behaviour from the individual taxpayers. Therefore, caution has to be exercised in generalizing the findings of this study.

### Endnotes

1. The total population of individual taxpayers as at 3<sup>rd</sup> November, 2010 (Federal Inland Revenue Service).
- 2 Abuja city is Nigeria capital city and has representation from every spectrum of Nigeria society.

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