

# TAXPAYERS' BEHAVIOURAL RESPONSES AND MEASURE OF TAX COMPLIANCE GAPS IN NIGERIA

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## **Abstract**

*The study examined taxpayers' behavioural responses and measure of tax compliance gaps in Nigeria. To achieve this objective, the study adopted the survey research design and developed a questionnaire to elicit primary data from 100 selected SMEs owners/mangers in Port Harcourt metropolis. All variables were measured on an interval scale. A total of 23 statement items were used to measure the taxpayers' behavioural postures/responses. Four behavioural postures (disengagement, resistance, capitulation and commitment) and two dimensions of tax compliance gap (underreporting of income and overstating of deductions) were included. The study employed the cross-sectional regression analysis to examine taxpayers' behavioural responses and tax compliance gap. The result shows that the two non-compliant behavioural postures; disengagement and resistance, both have a positive but insignificant relationship with tax compliance gap, while the two compliant behavioural postures; capitulation and commitment, both have negative and highly significant relationship with tax compliance gap. The study recommends that to obtain greater levels of compliance with tax reporting, and bridge the 'tax compliance gaps or to encourage compliance, taxpayers' behavioural responses should be identified and considered by relevant tax authorities so as to design appropriate strategy to improve efficiency in tax compliance gaps.*

**Keywords:** Tax Compliance Gaps, Taxpayers' Behavioural Responses

## **Introduction**

By law, citizens are under obligation to make financial contributions to the government in form of tax payment. Revenue from taxes constitute major stable source of fund for government to finance budget. The importance of taxes as primary and stable source of budget revenue to government in supplementing and expanding government functions and activities has long been recognized and appreciated. Historically, revenue from taxes have been used to fund different government's functions, including the provisions of public infrastructure, law enforcement, national defense (security), and the operation of

government institutions. In modern societies, taxes are used to redistribute income and wealth, to influence production and consumption patterns of certain goods and services and for stabilizing national economy. However, these qualities of tax revenue to society are hindered by non-compliance. Taxation or revenue from taxes can only be used effectively and efficiently if only taxpayers comply with the society tax laws. The need to improve tax revenue and tax compliance by various successive governments has resulted in the various tax reforms in Nigeria. However, despite these tax reforms, tax revenue has remained rather low as revealed in the share of income tax revenue over the years. That is, tax compliance has decline sharply, revealing deeper weaknesses of tax revenue administrations, high level of corruption, malpractice and needs to improve tax administration as a way of meeting revenue needs. Literature on various tax reforms so far have focused on strengthening the traditional mechanisms (tax rate, penalty and detection probability) as well as demographic features as measures or factors influencing taxpayers' behavior toward tax compliance and collection without including taxpayers' behavioural responses insights that can cost-effectively reduce non-compliance, raise revenue and subsequently improve tax compliance gaps,.

Against this background information, the paper examined the relationship between taxpayers' behavioural responses and measures of tax compliance gaps in Nigeria. Following the introductory aspect of this study, the remainder is organized as follows. Section two explored the relevant literature on the tax compliance gaps and behavioural response measures and summarises the contributions of three theories on the study. Section three examined the methodology adopted and provides a simple model of the tax compliance gaps that integrates the insights from the taxpayers' behavioural responses. Section four discussed the data and result of the study while section five gave the conclusion and proffered recommendations

## **Literature Review**

### **Taxpayers' Behaviour Responses**

Literature suggests that the factors driving taxpayers compliance behaviour include tax audit probabilities and penalty rates, trust in government and tax fairness, tax code uncertainty, taxpayer socio-demographics, and numerous cultural and normative factors (Alm, 2012; OECD, 2012). Tax compliance can be in form of tax evasion or avoidance. The two differ in terms of legality, with evasion (illegal) and avoidance (legal) measures to reduce tax

liabilities. McBarnet (2001), while differentiating different forms of compliance, drew distinction between taxpayers who voluntarily comply with the law and taxpayers who comply with the law because of enforcement activities. She groups taxpayers into: (i) those who pay taxes willingly without complaint as “committed compliance taxpayers”; (ii) those who pay taxes reluctantly as “capitulated compliance taxpayers”; and (iii) those who seek to reduce taxes by taking advantage of opportunities to redefine income and deduct expenditures within the bracket of the law as “creative compliance taxpayers”. Jackson and Miller (1986) cited in Saad (2014) argued that sanctions, tax audits probability of detection, age, gender, tax rate, education, income level, occupation, peer information, source of income, attitude, ethics, tax knowledge and the perception of fairness are factors that influence tax compliance behaviour.

Oyedele (2016) established incoherent fiscal policies, complex and inefficient tax management system, high level of tax leakages, complex tax laws, lack of transparency on utilization of tax revenue and invisible development as reasons why Nigerians are tax averse. Meshak & Jeff (2014) attributed poor tax effort, corruption, weak administrative structure, tax evasion, reoccurring tax exemption or incentives as negative result of some of the tax bases to GDP in Nigeria. Research suggests that providing information on the purpose and benefits of taxation may increase satisfaction with tax payment. For instance, Sussman & Olivola (2011) show that asking individuals to consider the positive uses of their tax payments improves their negative attitudes towards taxation. James (2012) argued tax administration affects taxpayer morale because it influences a taxpayer’s perception of the tax system while Castro & Scartascini (2013) and Ortega, Ronconi & Sanguinetti (2013) suggest taxpayer attitudes are better and compliance rates are higher when taxpayers are satisfied with government performance and are able to see how tax revenue is spent.

### **Commitment and Tax Compliance**

Commitment reflects a high level of internalized acceptance of the rules and regulations associated with the tax system (meaning that surveillance is unnecessary and without complaint). In his contribution, Kirchler (2007) submitted that voluntary or commitment compliance is made possible by the trust and cooperation ensuring between tax authority and taxpayer and it is the willingness of the taxpayer on his own to comply with tax authority’s directives and regulations. It is a tax system based on taxpayers complying with the tax laws without being compelled by the tax authority to do so. Under this system

taxpayer are expected to report their income, calculate their tax liability and file a tax return.

### **Capture/Capitulation and Tax Compliance**

Capture reflects an explicit and conscious decision to comply, in the knowledge that the tax authority has power and will use it if necessary. McBarnet (2001) described capitulation compliance taxpayers as those who pay tax reluctantly

### **Resistance and Tax Compliance**

Resistance reflects a psychological increase in social distance between taxpayers and the regulatory system. Those who adopt these postures do not wish to be part of the tax system, are motivated to avoid it and are more likely to engage in conflictual behaviour in relation to it. Specifically, the less representative the government and Tax Office were perceived to be, the less compliant and more resistant taxpayers would be in their motivational postures towards tax compliance.

### **Disengagement and Tax Compliance**

Disengagement also reflects psychological increase in social distance between taxpayers and the regulatory system. Essentially, this posture describes an escalating process of non-compliance, accompanied by escalations in the degree to which surveillance and punishment are necessary to produce compliance with tax regulation.

### **Measures of Tax Compliance Gaps**

Tax gap may be defined from the institutional perspective of tax authorities as “the difference between tax collected and the tax that should be collected” (HMRC 2012) or otherwise “the difference between the true tax liability in any year and the amount of tax that is paid voluntarily and on time” (Holmgren 2013). According to Khwaja & Iyer (2014) tax gap is the difference between the revenue potential (legal) and the actual revenue collected. Tax compliance gap may arise due to assessment or collection gaps. The assessment gap measures the difference between the total amount of tax assessed and the total amount of tax theoretically collected. The tax assessed is an aggregate of the total amount of tax due based on tax returns and additionally assessed by audits. The assessment gap reflects both incomes that are underreported, overstated of deductions and returns not filed. The collection gap capture the difference between the total amount of tax actually collected and the total amount of tax assessed and billed to the taxpayer. Thus, it reflects the underpayment of taxes which are billed to the taxpayer. The tax compliance gap can also be specified as either gross tax gap or net tax gap. The gross tax gap measures the difference

between the total amounts of tax theoretically collectable and the total amounts of tax actually collected on time for a given tax period. It represents the estimated aggregate level of all types of tax and sources of noncompliance. Thus, in the calculation of the amounts of tax actually collected, late payments and results of enforced collection are disregarded. In the concept of gross tax gap, the focus is on voluntary compliance. While the net tax gap refers to as the gross tax gap less enforced and late payments. This means the net tax gap represents the gross tax gap less other taxes that will be subsequently collected, either paid voluntarily or the result of administrative and enforcement activities. In the concept of net tax gap the focus is more on tax administration's (enforcement) activities. Tax compliance gap can also be broken into: (i). By Behaviour: Tax gap by behaviour can be described as the tax that is lost through a range of taxpayer behaviour activity. Such as non-payment, avoidance, evasion, criminal attacks, legal interpretation, failure to take reasonable care, error, and hidden economy on the tax system; (ii). By Tax Types: Tax gap by type of tax shows the composition of different taxes collected in tax system. In Nigeria, these include Value-Added Tax (VAT), Personal Income Tax (PIT), Company Income tax (CIT), Petroleum Profits Tax (PPT), Gas income (GI), Capital Gains Tax (CGT), Education Tax(ET), Excess Dividend Tax (EDT), Customs and Excise Tax, Minerals and Mining, and Stamp Duties (SD); and (iii). By Customer Group: Tax gap by customer group includes contribution by small and medium-sized enterprises, large businesses, individuals, and criminals.

## **Theoretical Framework**

### **The Rational Choice Theory- Deterrence model**

The rational choice theory on which the economic deterrence model was based, states that individuals use rational calculations to make rational choices and achieve outcomes that are aligned with their own personal objectives. It explains social phenomena by assuming rational choices at the actor's level. This means that individual has preferences among the available alternatives that allow them to state which option they prefer. The rational choice theory originated with the work of Cesare Beccaria but was popularized by Adam Smith, one of the first economists to develop the ideas of rational choice theory through his studies of self-interest and the invisible hand theory in mid 1770s. Here, the rational choice theory is used to model taxpayers' decision making actions as explained through rationality, in which, choices are consistent because they are made according to personal.

### **The Behavioural Theory**

The behavioural theory is a learning theory based on the idea that all behaviours are acquired through conditioning and that conditioning occurs through interaction with the environment. This theory argues that human decisions are not always optimal; human responses vary as they are framed by the environment in which individuals are socialized and trained. Thus it is the belief that the human mind should be analyzed relative to its environment. With this, behavioural theory creates a platform on which Social, fiscal Psychology and Economics formed a theoretical framework for studying taxpayers' behaviour. The theory critically evaluates the human behavioural aspect of taxpayers concerning their attitude and beliefs as they interact with the societal norms. Thus, the theory examines the human factors capable of affecting taxpayers' compliance attitude and behaviour.

### **The Benefit Received Theory of Taxation**

The theory argues that payment of tax by taxpayers should depend on the benefits received from the government. This implies that there should be a direct proportion between the burden of tax on an economic entity and benefits received by the economic entity. This beneficial exchange of relationship between government and citizens depends on the provision of essential services and the level of tax paid should be in line with the service provided. In the *Wealth of Nations* (1776), Adam Smith argued that taxation should follow the four principles of fairness, certainty, convenience and efficiency.

### **Empirical Studies**

Using Ordinary Least Square (OLS) regression techniques Anyaduba, Eragba & Moduyu (2012) examined the effects of deterrent tax measures in tax compliance in Nigeria. The study result suggests inadequate deterrent measure capable of promoting tax compliance in Nigeria, and that tax compliance will be enhanced upon fostering voluntary compliance and enhancing tax payers' morale. The study concludes that no single appropriate tax compliance strategy in Nigeria.

Sapiei, Kasipillai & Eze (2014) examined tax compliance behavior with respect to corporate income tax reporting requirements in Malaysia. Survey research method was adopted to generate data for analysis. The paper findings suggest that business age, tax liability and tax complexity consistently influence the likelihood of tax non-compliance. However the study conclude that tax compliance costs relationship with non-compliance behaviour of corporate tax

payers is insignificant. This suggests that tax compliance is behavioral and depends on attitude and character of the tax payer towards obeying tax laws..

Meshak & Jeff (2014) conducted a study on the productivity of the Nigeria Tax system using a time series data covering 30 years, from 1983 to 2012. The study adopted the tax elasticity and buoyancy approach and employed the regression in Mintab statistical software. From the findings of the study, individual tax sources were all significant at 5% level of significance. The buoyancy result showed that PPT, custom ED (CED) and total tax revenue (TTR) were negative and less than unity. VAT and company income tax (CIT) exhibited a buoyancy excess of unity. The negative result of TTR indicates that the tax revenue collection was negatively responsive to changes in GDP. They concluded that the negative result of some of the tax bases to GDP can be attributable to poor tax effort, corruption, weak administrative structure, tax evasion, reoccurring tax exemption or incentives. The result of the analysis also revealed that two out of the four tax base have buoyancy above unity with VAT as the most buoyant among all. This supports the thinking that VAT will constitute a major source of revenue generation in both short and long run to meet government spending requirement.

Fauziati, Minovia & Nasrah (2016) examined the impact of tax knowledge on tax compliance. The study adopted a survey research design to obtain data for examination with the aid of linear regression statistical model to estimate the relationship between tax knowledge and tax compliance, while t-test was used to examined the study variables. The study result suggests insignificant impact of tax knowledge on tax compliance. Consequently, the study recommended the need to improve tax payer knowledge that will be impactful on compliance and by extension improve revenue generation in Indonesia.

Ebi & Aladejare (2016) examined how much economic growth has boosted government tax revenue in Nigeria using time series data covering 1980 to 2013. The study adopted the auto-regressive distributive lag approach to examine the short and long run buoyancy of government revenue sources which were decomposed into: TTR, oil revenue and non-oil revenue. Results revealed very weak buoyancy of government revenue in both the short and long run periods. Based on the findings, it was recommended that pervasive corruption at both the collection and remittance point of revenue should be tackled in the system, and that the development of the non-oil sector should not be taken lightly.

A study by Gberegbe & Umoren, (2017) on the relation between the perception of tax fairness and personal income tax compliance in Rivers state of Nigeria using spearman correlation coefficient and multiple regression analysis, shows that distributive, procedural and redistributive fairness and perception of tax fairness have positive significant influence on personal income tax compliance.

## **Methodology**

### **Data and Sample**

This study focuses on small and medium scale enterprises (SMEs) in Port Harcourt metropolis, Rivers State. A structured questionnaire titled “Taxpayers’ Behavioural Responses and Tax Compliance Gap” was administered by hand to the study participants who are owners/mangers of 100 selected SMEs in Port Harcourt. Random sampling technique was used, and the response rate was 85%. The preliminary analysis indicated that 80% of the respondents are male, 70% attended at least primary education, and more than 60% fall within the age group of 31-50years.

### **Measurement, Validity and Reliability**

All variables were measured on an interval scale. A total of 23 statement items were used to measure the taxpayers’ behavioural postures/responses. Four behavioural postures (disengagement, resistance, capitulation and commitment) were included. These statement items were adopted from Taylor (2001). On the other hand, a total of 5 statement items were constructed to measure the two dimensions of tax compliance gap (3 for underreporting of income and 2 for overstating of deductions) based on the literature review. Each statement item was rated on a four-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). The ordinal responses on the Likert items were converted into interval scale through the SPSS variable conversion window. Both validity and reliability of the instrument were established. Specifically, while the instrument was validated by two teaching professionals in the Department of Finance at University of Port Harcourt, the reliability of the scale was determined using the popular Cronbach Alpha method as shown in Table 1. The Cronbach Alpha threshold is 70% or 0.7.

**Table 1: Alpha Reliability Coefficients**

S/n	Scale	Alpha Coefficient
1	Disengagement	0.968
2	Resistance	0.971
3	Capitulation	0.984
4	Commitment	0.961
5	Underreporting	0.980
6	Overstating	0.891

**Source: SPSS output, 2019**

**Method of Data Analysis**

The study employed the cross-sectional regression analysis to examine taxpayers' behavioural responses and tax compliance gap. The models are specified as follows:

**Functional Models**

Functionally, we specify the relationship between taxpayers' behavioural responses and tax compliance gap as follows:

$$TCG = F(BVP) \tag{3.1}$$

$$TCG = F(DE, RS, CP, CM)$$

(3.2)

Where;

BVR = Behavioural Postures/Responses, TCG = Tax Compliance Gap (the composite of underreporting of income and understating of deductions), DE = Disengagement, RS = Resistance, CP = Capitulation, CM = Commitment

**Empirical Models**

Given the functional models, the empirical models for taxpayers' behavioural responses and tax compliance gap relationship are specified as follows:

$$TCG_i = \beta_0 + \beta_1 DE_i + \beta_2 RS_i + \beta_3 CP_i + \beta_4 CM_i + \epsilon_i$$

(3.3)

Where  $\beta_0$  is the regression intercept;  $\beta_1$  is the slope coefficient that capture the effect of disengagement on tax compliance gap;  $\beta_2$  is the slope coefficient that captures the effect of resistance on tax compliance gap;  $\beta_3$  is the slope coefficient that capture the effect of capitulation on tax compliance gap; and  $\beta_4$  is the slope coefficient that capture the effect of commitment on tax compliance gap. Further,  $\epsilon_i$ , is the classical error term.

### **Data Analysis and Hypothesis Testing**

#### **Descriptive (Scale) Analysis**

The descriptive analysis of the responses would be based on the following decision criteria.

**Table 2: Decision criteria for descriptive scale analysis**

<b>Original Rating</b>	<b>Mean Range</b>	<b>Decision</b>
1	1.00 – 1.49	Strongly Disagree
2	1.50 – 2.49	Disagree
3	2.50 – 3.49	Agree
4	3.50 – 4.00	Strongly Agree

### **The Independent Variables**

#### ***Disengagement Scale***

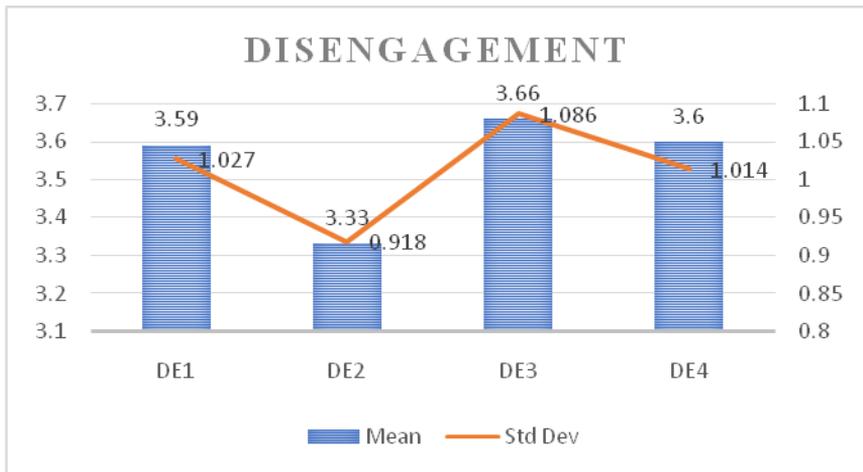
Table 3 and Figure 1 show the descriptive means, standard deviations and reliability coefficient for disengagement scale.

**Table 3: Disengagement Scale (Alpha = 0.97)**

<b>Item</b>	<b>Description</b>	$\bar{x}$	$\sigma$	<b>Decision</b>
DE1	I don't care if I am not doing the right thing by the Tax Office	3.59	1.027	Strongly Agree
DE2	I personally don't think that there is much the	3.33	0.918	Agree

	Tax Office can do to me to make me pay tax if I don't want to			
DE3	I don't really know what the Tax Office expects of me and I'm not about to ask	3.66	1.086	Strongly Agree
DE4	If I find out that I am not doing what the Tax Office wants, I'm not going to lose any sleep over it	3.60	1.014	Strongly Agree
<b>Scale</b>		<b>3.54</b>	<b>0.967</b>	<b>Strongly Agree</b>

**Source: SPSS output based on survey data, 2019**



**Figure 1: Mean and Standard Deviation for Disengagement Scale**

**Resistance Scale**

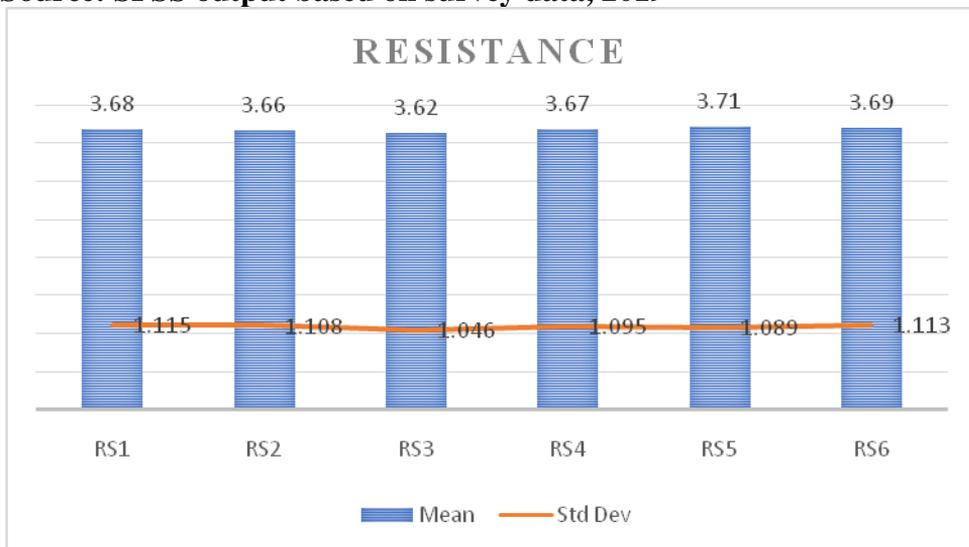
Table 4 and Figure 2 show the descriptive means, standard deviations and reliability coefficient for resistance scale.

**Table 4: Resistance Scale (Alpha = 0.97)**

Item	Description	$\bar{x}$	$\sigma$	Decision
RS1	It's impossible to satisfy the requirements of the Tax Office completely	3.68	1.115	Strongly Agree
RS2	Tax officials are more interested in catching you for doing the wrong thing, than helping	3.66	1.108	Strongly Agree

	you do the right thing			
RS3	It's important not to let the tax officials push you around	3.62	1.046	Strongly Agree
RS4	Once the tax officials have you branded as a non-compliant taxpayer, they will never change their mind	3.67	1.095	Strongly Agree
RS5	As a society, we need more people willing to take a stand against the Tax Office	3.71	1.089	Strongly Agree
RS6	If you don't cooperate with the Tax Office, they will get tough with you	3.69	1.113	Strongly Agree
<b>Scale</b>		3.67	1.023	Strongly Agree

**Source: SPSS output based on survey data, 2019**



**Figure 2: Mean and Standard Deviation for Resistance Scale**

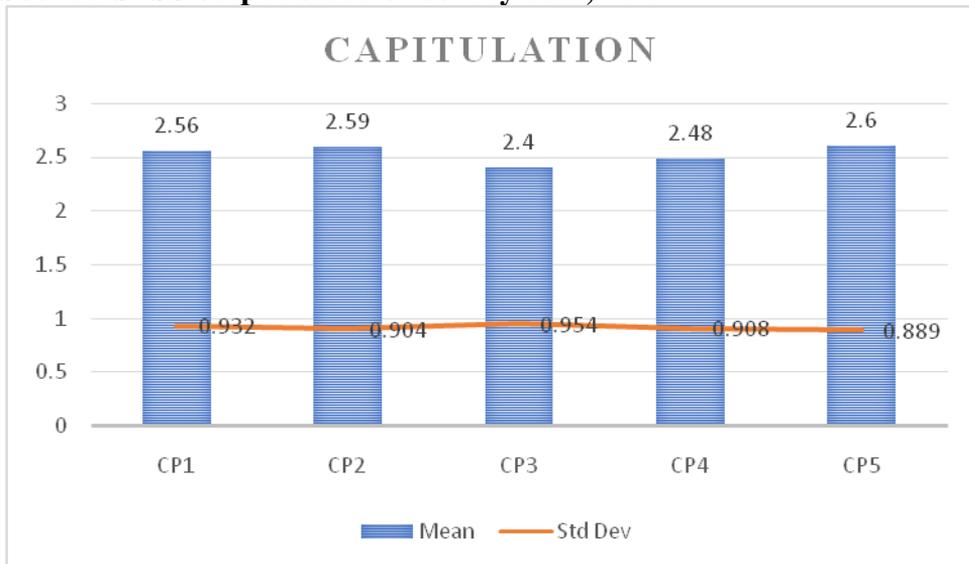
**Capitulation Scale**

Table 5 and Figure 3 show the descriptive means, standard deviations and reliability coefficient for capitulation scale.

**Table 5: Capitulation Scale (Alpha = 0.98)**

Item	Description	$\bar{x}$	$\sigma$	Decision
CP1	The Tax Office is encouraging to those who have difficulty meeting their obligations through no fault of their own	2.56	0.932	Agree
CP2	If you cooperate with the tax officials, they are likely to be cooperative with you	2.59	0.904	Agree
CP3	Even if the tax officials find that I am doing something wrong, they will respect me in the long run as long as I admit my mistakes	2.40	0.954	Disagree
CP4	The tax system may not be perfect, but it works well enough for most of us	2.48	0.908	Disagree
CP5	No matter how cooperative or uncooperative the Tax Office is, the best policy is to always be cooperative with them	2.60	0.889	Agree
<b>Scale</b>		2.52	0.890	Agree

**Source: SPSS output based on survey data, 2019**



**Figure 3: Mean and Standard Deviation for Capitulation Scale**

**Commitment Scale**

Table 6 and Figure 4 show the descriptive means, standard deviations and reliability coefficient for commitment scale.

**Table 6: Commitment (Alpha = 0.96)**

Item	Description	$\bar{x}$	$\sigma$	Decision
CM1	I feel a moral obligation to pay my tax	2.46	0.867	Disagree
CM2	Overall, I pay my tax with good will	2.59	0.678	Agree
CM3	I feel happy paying tax	2.32	0.848	Disagree
CM4	I accept responsibility for paying my fair share of tax	2.61	0.757	Agree
CM5	I think of taxpaying as helping the government do worthwhile things	2.27	0.878	Disagree
CM6	Paying tax is the right thing to do	2.69	0.724	Agree
CM7	Paying tax is a responsibility that should be willingly accepted by all Nigerians	2.35	0.896	Disagree
CM8	Paying my tax ultimately advantages everyone	2.29	1.010	Disagree
<b>Scale</b>		2.44	0.742	Disagree

**Source: SPSS output based on survey data, 2019**



**Figure 4: Mean and Standard Deviation for Commitment Scale**

**The Dependent Variable**

***Tax Compliance Gap***

Table 7 and Figure 5 show the descriptive means, standard deviations and reliability coefficient for underreporting scale.

**Table 7: Underreporting (Alpha = 0.98)**

Item	Description	$\bar{x}$	$\sigma$	Decision
UR1	I cannot let tax officials know all that I earn from this business.	3.82	1.002	Strongly Agree
UR2	I deliberately hide some of my current earnings from tax people	3.79	1.013	Strongly Agree
UR3	When tax officials come here, I normally give them anything I like	3.71	0.911	Strongly Agree
<b>Scale</b>		3.77	0.957	Strongly Agree

**Source: SPSS output based on survey data, 2019**

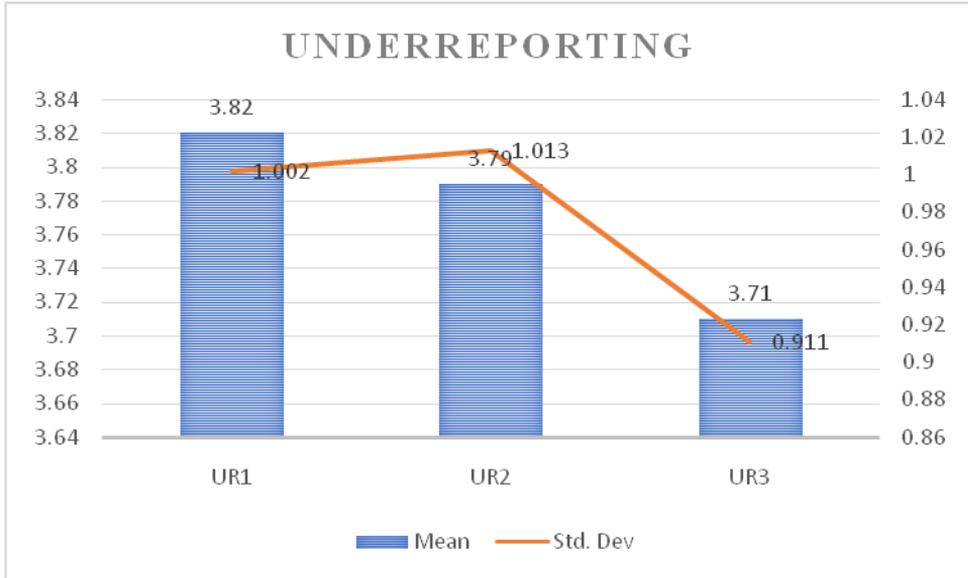


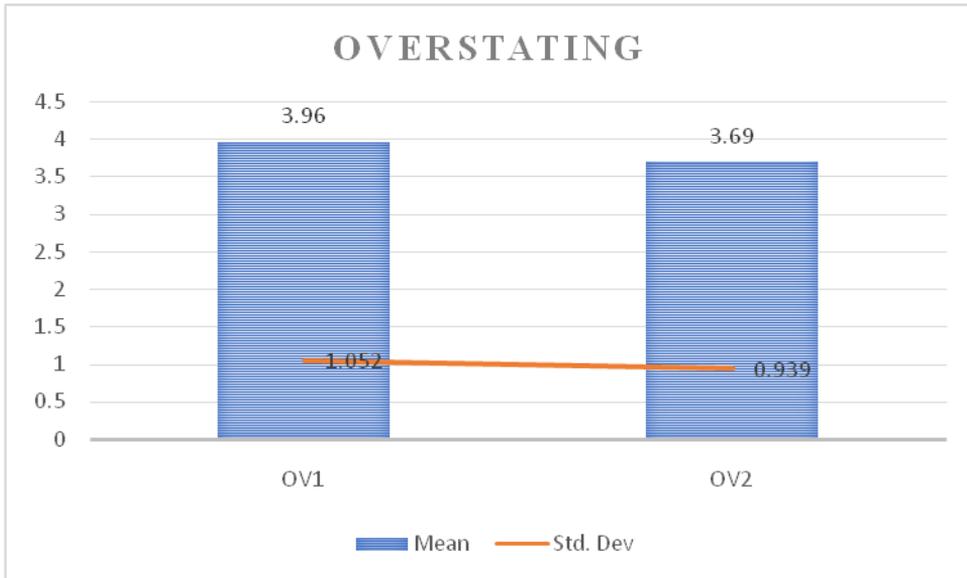
Figure 5: Mean and Standard Deviation for Underreporting Scale

Table 8 and Figure 6 show the descriptive means, standard deviations and reliability coefficient for Overstating scale.

Table 8: Overstating (Alpha = 0.89)

Item	Description	$\bar{x}$	$\sigma$	Decision
OV1	I report more children and dependents than I have so that I can avoid paying more tax	3.96	1.052	Strongly Agree
OV2	I claim more amounts of deduction in my tax form	3.69	0.939	Strongly Agree
<b>Scale</b>		3.82	0.946	Strongly Agree

Source: SPSS output based on survey data, 2019



**Figure 6: Mean and Standard Deviation for Overstating Scale Empirical Analysis and Hypothesis Testing**

**Estimation of Empirical Model 1**

Table 9 presents the empirical results for the relationship between tax compliance gap (underreporting of income and overstating of deductions) and the four taxpayers' behavioural postures (responses).

**Table 9: Regression Results for Empirical Model 1; DV = Compliance Gap**

Parameter	Estimate	P-value
$\beta_0$ (Intercept)	6.3717	0.0000
$\beta_1$ (DE)	0.0047	0.9530
$\beta_2$ (RS)	0.0249	0.7602
$\beta_3$ (CP)	-0.9829	0.0000

$\beta_4$ (CM)	-1.0193	0.0000
R2	0.7695	
R2	0.7580	
F-statistic (p-value)	66.78 (0.0000)	
Durbin-Watson	2.0361	

**Source: EViews output, 2019**

Table 9 shows that all the estimated model parameters have their expected signs, with  $\beta_1(= 0.0047)$  and  $\beta_2(= 0.0247)$  having negative values, and  $\beta_3(= -0.9829)$  and  $\beta_4(= -1.0193)$  having positive values. This indicates

that tax compliance gap has a positive relationship with both disengagement and resistance but has a negative relationship with both capitulation and commitment. This implies that the more disengaged and resistant people are to tax rules and regulations, the more likely they would avoid paying tax by understating their income and overstating their deductions. Thus, non-compliant behaviours move in the same direction with underreporting of income and overstating of deductions. On the contrary, the results suggest that the more committed and capitulated people are to paying tax, the less likely they would avoid paying tax. Thus, tax compliant behaviours move in opposite direction with underreporting of income and overstating of deductions. However, the p-values of 0.9530 and 0.7602 indicate that the effects of both disengagement and resistance are statistically insignificant, while the p-values of 0.0000 and 0.0000 indicate that the effects of both capitulation and commitment are highly statistically significant. Thus, while we do not reject hypotheses 1 and 2, we strongly reject hypotheses 3 and 4. The R2 of 0.7580 indicates that our estimated model is highly fitted. The F-statistic is very high at 66.78 and is associated with a zero probability, indicating that our regression results are highly significant. The Durbin Watson, although, not usually interpreted in the context of cross-sectional regression, is approximately 2, suggesting that the model is not plagued with specification error. Thus, approximately 78% of the variance of tax non-compliance are due to variations in behavioural postures, that is, disengagement, resistance, capitulation and commitment.

### **Conclusion and Recommendations**

This study examines empirically the relationship between taxpayer's behavioural responses and tax compliance gap in Nigeria, focusing on the SMEs in Port Harcourt Rivers State. Taxpayers' behavioural response was measured using the four dimensions of motivational postures that classify taxpayers into compliant and non-compliant behaviours. Compliant behaviours are capitulation and commitment while non-compliant behaviours are disengagement and resistance. The tax compliance gap is measured in terms underreporting of income and overstating of deductions. The empirical sample comprises 100 owners/managers of randomly selected SMEs in Port Harcourt. Thus, there is evidence that the two non-compliant behavioural postures; disengagement and resistance, both have a positive but insignificant relationship with tax compliance gap, while the two compliant behavioural postures; capitulation and commitment, both have negative and highly significant relationship with tax compliance gaps. The study recommends that to obtain greater levels of compliance with tax reporting, and bridge the 'tax compliance gaps or to encourages compliance taxpayers' behavioural responses should be identified and considered by relevant tax authorities so as to design appropriate strategy to improve efficiency in tax compliance gaps.

### **References**

- Alm, J. (2012). Measuring, explaining, and controlling tax evasion: Lessons from theory, experiments, and field studies. *International Tax and Public Finance*, 19(1):54-77.
- Anyaduba, J. O., Eragba, E. & Moduyu, P. K. (2012) Deterrent tax measures and tax compliance in Nigeria. *European Journal of Business and Management*, 4(11): 23-31
- Castro, L. & Scartascini, C. (2013). Tax Compliance and Enforcement in the Pampas: Evidence from a Field Experiment. *The Inter-American Development Bank*. Retrieved from <https://publications.iadb.org/bitstream/handle/>
- Ebi, B.O. & Aladejare, S.A. (2016). By how much will faster economic growth boost government revenue in Nigeria? *Journal of Economics and Development Studies*, 4(2), 145-158.

- Fauziati, P., Minovia, A. F. & Nasrah, R. (2016). The impact of Tax Knowledge on Tax Compliance. Case study in Kota Padangu, Indonesia. *Journal of advanced research in Business*
- Gberegbe, F. B., & Umoren, A. (2017). The Perception of Tax Fairness and Personal Income Tax Compliance of SMEs in Rivers State. *Journal of Research in Business and Management*, 5(2): 40 - 45
- HMRC (2012). *Measuring Tax Gaps 2012*. 3.
- Holmgren R.D. (2013). *The Internal Revenue Service Needs to Improve the Comprehensiveness, Accuracy, Reliability, and Timeliness of the Tax Gap Estimate*. Department of the Treasury, Washington, August 21, 1.
- Internal Revenue Service (2012). Tax gap for tax year 2006 overview
- Jackson, B. R., & Millron, V. C. (1986). Tax compliance research: Finding, problem and prospects. *Journal of Accounting Literature*, 5, 125-165.
- James, S. (2012). Behavioural Economics and the Risks of Tax Administration. *EJournal of Tax Research*, 10(2), 345-363.
- Khwaja, M.S. & Iyer, I. (2014). *Revenue Potential, Tax Space, and Tax Gap. A Comparative Analysis*. The World Bank, May.
- Kirchler, E. (2007). *The Economic Psychology of Tax Behavior*. Cambridge: Cambridge University Press.
- McBarnett, D. (2001). When compliance is not the solution but the problem: From changes in law to changes in attitude. In V. Braithwaite, *Tax democracy: Understanding tax avoidance and evasion*. Aldershot: Ashgate Publishing Ltd.
- Meshak, I. & Jeff, O.O. (2014). The productivity of the Nigerian tax system. *Canadian Open Accounting and Taxation Journal*, 1(1), 1-11.
- OECD (2012). What drives tax morale?
- Ortega, D., Ronconi, L. & Sanguinetti, P. (2013). Reciprocity and Willingness to Pay Taxes: Evidence from a Survey Experiment in Latin America, *CIAS*, 1-23.
- Oyedele, T. (2016) Guess how many Nigerians pay tax and how our government spends the money: PWC Nigeria
- Saad, N. (2014). Tax knowledge, tax complexity and tax compliance: Taxpayers" View, *Procedia-Social and Behavioural Sciences*, 109: 1069-1075.

Sapiei, N. S., Kasipillai, J. & Eze, U. C. (2014). Determinants of compliance behaviour of corporate taxpayers in Malaysia. *Journal of tax research*, 12(20), 383-409

Taylor, N. (2001). Understanding taxpayer attitudes through understanding taxpayer identities. Centre for tax system integrity, working paper No. 14

## Regression Results

Dependent Variable: TCG

Method: Least Squares

Date: 09/02/2020 Time: 08:28

Sample: 1 85

Included observations: 85

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	6.37	0.530	12.0	0.0
DE	0.00	0.079	0.059	0.9
RS	0.02	0.08	0.300	0.7
CP	-0.98	0.10	-9.330	0.0
CM	-1.01	0.12	-7.950	0.0
R-squared	0.76	Mean dependent var		3.77
Adjusted R-squared	0.75	S.D. dependent var		0.95
S.E. of regression	0.47	Akaike info criterion		1.38
Sum squared resid	17.7	Schwarz criterion		1.53
Log likelihood	-53.9	Hannan-Quinn criter.		1.44
F-statistic	66.7	Durbin-Watson stat		2.03
Prob(F-statistic)	0.00			