COMPARATIVE ANALYSIS OF TAX BURDENS OF SALARIED AND SELF-EMPLOYED TAXPAYERS UNDER PERSONAL INCOME TAX LAWS IN NIGERIA

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ABSTRACT: *Amendments in personal income tax laws are part of tax reform programmes of governments for regulating economic and social policies, and such statutory changes affect the welfare and spending profiles of individuals. This paper examined the comparative effects of changes in Personal Income Tax Act (PITA) 2004 and Personal Income Tax Amendment Act (PITAM) 2011 on tax burdens of salaried and self-employed taxpayers in Nigeria. Widespread speculations on whether the changes made in the two tax laws have differential effects on salaried and self-employed taxpayers and widen income gaps among taxpayers on different income levels were the major concerns of this study. The ex-post facto research design was adopted in this study. The sample size used is made up of all the 259 income levels/points available on the Unified Salary Structure for all staff in Federal Universities in Nigeria, and 60 self-employed taxpayers purposively selected based on established criteria. Data on the gross income and domestic circumstances for four groups of taxpayers were collected from each of the teaching staff, non-teaching staff and self-employed taxpayers. Descriptive and t-test statistics were used in analysing the data. Results indicated no significant difference between the tax burdens of salaried and self-employed taxpayers under PITA 2004 but significant differences were found to exist under PITAM 2011; hence the new Act altered existing equality in tax burdens in favour of salaried taxpayers. Results further revealed that the effects of changes in PITAM 2011 on tax burden differed significantly among the four groups of income earners while the general decrease in tax burden across all the groups favoured the low income earners more than the high income earners. The study therefore concluded that changes in PITA have significant effects on the tax burdens of taxpayers with a strong potential of narrowing the income gap between the rich and the poor. The study recommends the introduction of Entrepreneurship Relief Allowance in favour of self-employed taxpayers to adjust the observed inequality in tax borne between salaried and self-employed taxpayers. The paper also recommends further reductions in tax rates and the widening of the tax band to enhance voluntary compliance and government collectible revenue in Nigeria.*

KEYWORD: Tax Law Changes, Income Inequity, Tax Burden, Voluntary Compliance.

INTRODUCTION

There is hardly a more contentious issue in public finance than those associated with taxation and public debt management. The importance of taxation lies largely on the need to raise revenue necessary to fund legitimate government programmes and to regulate a variety of economic and social policy actions. It is a potent instrument for influencing the direction and level of business activities, for adjusting income inequalities, as well as the welfare and spending profiles of individuals. These explain why governments all over the world embark on tax reform programmes to strengthen its economic and social objectives and policies. Such reforms have become a major feature of the Nigerian tax system which has tended to provide a legal framework for taxing income of persons in Nigeria. For instance, the president of the Federal Republic of Nigeria, acting in consonance with the National Tax Policy, signed into law the Bill for an Act to amend the provisions of 36 sections of the PITA 2004 and modified the 1st, 3rd and 6th schedules to the Act effective June, 14th 2011. This new Act, cited as Personal Income Tax (Amendment) Act, 2011, was enacted to make the principal Act more responsive to the tax policies of the Federal Government and to enhance its implementation and effectiveness. While acknowledging that these amendments are geared at achieving two seemingly conflicting primary goals (reducing the burden of taxation on individuals and simultaneously enhancing government collectible tax revenue), the amendments equally generated a number of contentious issues with unintended consequences.

PITAM 2011 made wide spread adjustments in personal reliefs and removed the limits on taxable income items under Section 3 (1) of PITA, 2004. The new Section 33(1) increased the fixed and variable components of personal reliefs and renamed it as Consolidated Relief Allowance (CRA). Also, the sixth Schedule to the principal Act was substituted for a new 6th Schedule which however provided for CRA at rates/amounts which appear to many taxpayers and commentators to be in conflict with Section 33(1) of the same Act. It is contended that these conflicting CRA provisions could have different effects on the resulting tax burdens of taxpayers.

Again, paragraph 2 of the 6th Schedule of the new Act introduced five tax exempt income items including gratuities, which were not in the previous Act. The intent of the new Act in including *gratuities* as part of taxable “gross emoluments” under Sections 3(b) and 33(2), and as “tax exempt income” under paragraph 2 of the new 6th Schedule are yet to be investigated. Prior to the 2011 amendment Act, gratuities payable to public sector retirees were exempted from tax with effect from 1986 while all gratuities payable to private sector retirees were exempted from tax with effect from 1996 (Ezejelue and Ihendinihu, 2006). It is speculated that the inclusion of gratuities as both income and tax exempt income could result to material difference in the amounts of income to be charged to tax from what previously existed. There is also uncertainty as to whether these changes in the tax law have differential effects on different groups of income earners – high or low income earners and on salaried and self-employed taxpayers.

Studies that investigated the effect of personal income tax changes on taxable income, spending, and after-tax-wage of individual taxpayers are largely based on data drawn from advanced economies of US and Canada (Steindel, 2001; Yew, Milanov and McGee, 2015; Looney & Singhal, 2005; and Feldstein, 1995). Existing investigations on the effect of PITAM 2011 in Nigeria are very scanty and such works either evaluated the effect of the new Act on revenue generation or provided commentaries on the amendments and implementation challenges (Dabo, Aimuyedo and Muhammad, 2014; Onyekwelu and Ugwuanyi, 2014).

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The central problem of this paper therefore is to determine the effect of changes in Personal Income Tax Acts on tax burdens of individuals liable to tax under the Act. These changes gave rise to two specific questions for investigation viz:

1. To what extent does tax burden of salaried and self-employed taxpayers differ under the provisions of PITA 2004 and PITAM 2011?
2. How are tax burdens under PITA 2004 and PITAM 2011 distributed among different grades of income earners?

Accordingly, the paper is driven by the hypothesis that:
There is no significant difference in the tax burden of salaried and self-employed taxpayers based on the provisions of PITA 2004 and PITAM 2011.The remaining part of this paper is divided into four sections. The first provides a review of some key changes introduced in PITAM 2011. The part also reviewed some theoretical issues as well as related empirical works existing in literature. The second section describes the methodology adopted in carrying out the investigation, while results and discussions were reported in the third section. The paper ends with some recommendations for policy actions.

RELATED LITERATURE

Key Changes introduced in the Personal Income Tax (Amendment) Act, 2011

As earlier noted, 36 Sections of the PITA 2004 were amended by PITAM, 2011 and the sections which affect the process of determining and tax burden of individuals relate to Section 3 (Income chargeable), Section 33 (on Personal Reliefs and allowances), Section 37 (Charge of Minimum Tax), the 3rd Schedule (Income Exempted), and the 6th Schedule to the Act (on Consolidated Relief Allowance, income tax table, and tax exempt Incomes).

Income Chargeable. Section 3 outlines employment income that is liable to Personal Income tax and the limits of such income items that could be assessed for tax purposes. The amendment to Section 3 is to the effect that tax free allowances are no longer available under the new Act. Consequently, the old paragraph 'b' was substituted with a new paragraph 'b' that states:

any salary, wage, fee, allowance or other gain or profit from employment including compensations, bonuses, premiums, benefits or other perquisites allowed, given or granted by any person to any temporary or permanent employee other than so much of any sums as or expenses incurred by him in the performance of his duties, and from which it is not intended that the employee should make any profit or gain.

Prior to the PITAM, 2011, tax free allowances were permitted on specified allowances received by an employee from his employment as follows:

- Rent or Housing Allowance; maximum of ₦150,000.00 per annum.
- Transport Allowance; maximum of ₦20,000.00 per annum.
- Meal subsidy or allowance; maximum of ₦5,000.00 per annum.
- Utility Allowance; maximum of ₦10,000.00 per annum.
- Entertainment Allowance; maximum of ₦6,000.00 per annum, and
- Leave Grant; maximum of 10% of annual basic salary per annum.

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Consequently, any amounts received in excess of the above limits were taxable under PITA 2004. However, with the amendments introduced in PITAM 2011, tax free allowances previously enjoyed by employees under this section were withdrawn, with the exception of reimbursement of expenses incurred by employees in the performance of their duties and from which the employees are not expected to derive any profit or gain.

Personal Reliefs and Allowances: Section 33 makes provisions for personal reliefs and allowances. The amendments to this section increased the statutory reliefs claimable by individual taxpayers. Under Section 33(1) of PITA 2004, a personal relief of ₦5000, plus 20 per cent of earned income was available for claim but the new Section 33(1) replaced the relief by providing for a Consolidated Relief Allowance (CRA). The new sub-section provides that:

there shall be allowed a consolidation relief allowance of ₦200,000 subject to a minimum of 1% of gross income whichever is higher plus 20% of the gross income and the balance shall be taxable in accordance with the income table in the Sixth Schedule to this Act.

The new law offers a higher claim both in the fixed and variable components. A minimum fixed component of ₦200,000 is claimable under PITAM 2011 while ₦5,000 could maximally be claimed under the old Act. Again, the variable component of the old law is 20% of *earned income* while PITAM 2011 allows claims for 20% of *gross income*. Since Gross Income will normally be higher than Earned Income, PITAM 2011 offers a higher amount of relief for taxpayers than PITA 2004. There is observable inconsistency in the basis for computing CRA in PITAM 2011. While section 33(1) of the PITAM provides that CRA be computed as the higher of ₦200,000 and 1% of gross income, plus 20% of gross income, paragraph 1 of the new sixth schedule however specifies that the CRA be granted on income at a flat rate of ₦200,000 plus 20% of gross income. This is likely to create implementation challenges for taxpayers whose annual taxable incomes are in excess of ₦20,000,000.

It should further be noted that a new sub-section 2 was inserted which defined *Gross Emolument* as *wages, salaries, allowances (including benefits in kind), gratuities, superannuation and any other incomes derived solely by reason of employment.* The old sub-sections 2 and 3 covering claimable personal allowances were respectively renumbered as sub-sections 3 and 4 in the new Act. Thus, claims for alimony, child allowance, dependant relative allowance, and additional personal allowance for disabled persons are still claimable under PITAM 2011. This is contrary to commentaries expressed on the new Act to the effect that these allowances are no longer claimable under the PITAM.

Based on the provisions of Section 3 of the PITAM, 2011 all 'benefits in kind' (BIK) or 'perquisites' provided to employees by their employers are taxable. BIKs are also to be considered in determining an employee's gross emolument for CRA purpose as stated in Section 5 of PITAM. However, not all expenses (aside from cash emoluments) incurred on employees qualify as benefits or perquisites to the employees. For example, protective clothing provided by employers for use by their employees in the discharge of their duties are not deemed to be perquisites but as working tools for the employees.

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Charge of Minimum Tax: Charge of minimum tax is provided under S.37 of the Act. The minimum tax payable under the PITA has been increased from 0.5% of total income to 1% of gross income in the PITAM. Minimum tax here means that when a person's taxable income (after all permissible deductions) is nil or lower than a certain percentage of his total income, such a person will be required to pay a minimum tax. The implication of this is that low income earners (e.g. NYSC members, Interns and Contract staff) are now to pay taxes. As a result of the increase in minimum tax rate, the tax to be paid by those who were hitherto paying minimum tax would double.

1. Third Schedule: The 3rd Schedule deals with classes of income exempted from Personal Income Tax. There are three significant amendments to this schedule viz:

a. PITAM 2011 deleted paragraphs 2 and 3 of this schedule and now require that the official emoluments of the president, vice president, governors and deputy governors will no longer be exempted from personal income tax. Accordingly, President, vice president, etc. will now pay tax on their official emoluments.

b. Exemption of interest on any loan granted by a bank on or after 1st January 1997 to a person engaged in

- Agricultural trade or business, and
- The fabrication of any local plant and machinery.

c. Tax exemption of income from bonds and short term securities:

The PITAM inserts a new paragraph which exempts from income tax, the income earned from bonds issued by Federal, State and Local Government; bonds issued by corporate firms, including supra-nationals as well as interest earned by holders of the bonds, and listed short term securities.

2. Sixth Schedule: The PITAM 2011 replaced the sixth schedule of the PITA 2004 with a new schedule. The new Sixth Schedule contains the personal relief, the new Income Tax Table, and tax exempt incomes.

Personal Relief - Paragraph 1 of the new 6th schedule specifies that the Consolidated Relief Allowance (CRA) will be granted on income at a flat rate of ₦200,000 plus 20% of gross income. This specification is inconsistent with the definition given in Section 33(1) because the option of choosing between the higher of ₦200,000 and 1% of Gross Income under Section 33(1) is not included in the 6th Schedule. This obvious inconsistency creates serious implementation challenges for tax administrators and compliance problems for taxpayers whose gross incomes are in excess of ₦20 million given that the two provisions for CRA will not give the same amount of CRA and will consequently result to different taxable income, tax liability and tax burden.

Income Tax Table – The income Tax Table under PITA 2004 is materially different from that under PITAM 2011. The Income Tax Table under the two Acts are as follows:

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Table 1: Personal Income Tax Rates under PITA 2004 and PITAM, 2011

Income tax rate under PITA 2004	**Income tax rate under PITAM 2011**
First 30,000 at 5%	First 300,000 at 7%
Next 30,000 at 10%	Next 300,000 at 11%
Next 50,000 at 15%	Next 500,000 at 15%
Next 50,000 at 20%	Next 500,000 at 19%
Above 160,000 at 25%	Next 1,600,000 at 21%
	Above 3,200,000 at 24%

Note that PITAM 2011 completely replaced the old income tax table in terms of tax rates and widened the tax band. It is expected that these changes would affect liability to tax, after-tax wage, tax burden and other indices that influence the spending or demand profile of taxpayers.

Tax Exempt Income - While noting that the new income tax table is different from the old table in terms of tax rates and bands, it is instructive to note that paragraph 2 of the new 6th schedule created five tax exempt income items which were not part of the old tax law. These exempt items are National Housing Fund Contribution (NHF), National Health Insurance Scheme Contribution (NHIS), Life Assurance Premium (LAP), National Pension Scheme (NPS), and Gratuities. These tax exempt income items have different implications for salaried and self-employed taxpayers in Nigeria. While all five items are claimable by salaried taxpayers, the self-employed taxpayers have only two (NHF and LAP) upon which to make claim on. This could create inequity (in tax burden) resulting from unequal amount of exemptions to be granted under the new Act for the two groups of taxpayers. Again, the inclusion of Gratuities as part of Gross Emoluments under Section 33(2) offers double advantage to salaried taxpayers by increasing the base for computing CRA and reducing taxable income by including it as *tax exempt income* under Paragraph 2 of the 6th Schedule. These opportunities are not available to self-employed taxpayers who cannot make any claims for gratuities.

THEORETICAL FRAMEWORK

This paper is driven by ability-to-pay theory of taxation. The ability-to-pay theory is a dominant progressive taxation theory which says that money for public expenditure should come from "him that hath" instead of from "him that hath not" Kendrick (1939). The theory is built on the fairness and equity principles of taxation, which treats individuals with the same characteristics/circumstances similarly for them to pay the same taxes (horizontal equity), while individuals with higher ability-to-pay or those who receive more from the government services should be taxed more (vertical equity). Applying this principle to determine when equal sacrifice implies progressive taxation, Young (1987) noted that equality of sacrifice means apportioning the contribution of each person towards the expenses of government (taxes) so that he shall feel neither more nor less inconvenience from his share of the payment than every other person experiences.

This theory underpins the present study as it investigates the extent to which changes in existing reliefs, tax rates and bands by PITAM 2011 have altered the tax burden/sacrifice of different groups of individual taxpayers in Nigeria. To an individual taxpayer therefore, sacrifice is

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synonymous with tax and any changes in tax laws must be driven by the taxpayers' ability-to-pay and weighed against both vertical and horizontal equities.

Empirical Review

Studies on the effects of tax components and changes in tax laws on a number of macro and micro economic variables exist in literature but such studies are predominant in advanced economies. For instance, Steindel (2001) investigated how income tax changes in US affected consumer spending and personal savings rate. The challenge was to determine how actual consumer responses to income tax changes compared with those predicted by the life cycle-permanent income theory. In the study, he tracked the effects of three major federal income tax changes (the 1968 Tax Surcharge, the 1975 Tax Rebate and the 1982 Tax cut) on the personal savings rate and consumer spending. Using hypothetical case study approach, he observed the behaviour of the personal savings rates around the time a tax change becomes effective and noted that, while the tax and benefit changes examined prompted changes in consumer spending, the magnitude of the responses varied greatly. The spending effect was larger when the tax change was legislated to have a permanent effect on tax liabilities. He therefore concluded that consumer spending changes when a tax change affects take-home pay and that consumers measure the size of a tax change by its immediate effect on tax payment.

Yew, Milanov & McGee (2015) explored the impact of a major tax reform on individual tax morale in a transition economy. The study was carried out in Russia following the implementation of a flat tax system in 2001 using survey data from WVS (World Values Survey, 2014) for 2006 and 2011, and from EVS (European Values Survey , 2014) for 1999. An Ordered Probit Regression Model was used to investigate the effects of income level, sector of employment, demographic and institutional variables on tax morale index. Results from their study revealed significant coefficient for income scale and employment sector variables with negative marginal effects on tax morale. Socio- demographic variables had varying effects on tax morale while institutional variables were reported to have positive correlation to individual tax morale for the three years. The authors detected linear trend associations and concluded that individual tax morale for Russia did not change in the years before and after the flat tax reform.
For a period of six years (2011 to 2016) when the amendments were affected on PITA 2004 in Nigeria, no serious research effort has used income and domestic data of individual taxpayers to evaluate how the changes in the tax law affected the taxpayers. Dabo, Aimuyedo & Muhammad (2014) investigated the effect of personal income tax (Amendment) Act on Revenue Generation in Nigeria. They used Chi-square and t- test statistics to evaluate data collected from Kaduna Board of Internal Revenue Service. The paper reported that the new tax law has not encouraged taxpayers to voluntarily comply with self-assessment and has not driven the force of change that will minimize the incidence of tax avoidance and evasion. They concluded that the PITAM, 2011 has not improved revenue generation in Kaduna State and called for further review of the Act to address inherent loopholes that offer opportunity for undue manipulation by taxpayers.

Onyekwelu & Ugwuanyi (2014) conducted an opinion pool of 80 respondents on the effect of PITAM, 2011 on revenue generation in Nigeria. The paper had as part of it specific objectives the intension to determine the effect of the Act on taxpayer's income and relevant tax authority. Descriptive statistics were used to capture the socio-economic characteristics of the respondents

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and the effect of PITAM, 2011 on revenue generation, taxpayer revenue and the tax authorities. The Chi-square technique was used in testing the three hypotheses set for the study. The test results formed the basis for rejecting all the three null hypotheses.

In a recent study, Alpheaus, Ihendinihu & Azubike (2015) measured the effects of changes in Personal Income Tax Act on chargeable income of individual taxpayers in Nigeria. The main objective was to resolve speculations that chargeable income under the new Act is higher than previously existed among taxpayers of different income brackets. Data on income and domestic circumstances of sampled taxpayers in 2014 tax year were collected from Abia State Board of Internal Revenue and analysed using descriptive statistics, paired sample t-test, and Analysis of Covariance (ANCOVA). Results indicated that PITAM 2011 produces a significantly lower chargeable income than PITA 2004, and that this difference cuts across taxpayers in the identified income groups.

The present study extends the investigation by comparing the impact which personal income tax laws could have on tax burdens of salaried and self-employed taxpayers and how such burdens are distributed among taxpayers at different income levels using secondary data on income and other tax relevant economic dispositions of taxpayers. By this design, the present study not only overcame the weaknesses of bias and data manipulation associated with opinion pools but also used inferential statistics of t-test and Analysis of Covariance to locate any significant differences in tax burdens imposed under the old and new personal income tax laws in Nigeria.

METHODOLOGY

The study adopted ex-post facto research design because of the need to use existing data on income and domestic circumstances of individual taxpayers to determine the effects of the changes introduced in the PITAM 2011 on tax burdens. The population of the study comprised of all salary grade points of academic and non-academic staff in all Federal Universities in Nigeria as contained in their Unified Salary Structure (CONUASS and CONTISS) as well as all self-employed individuals who filed tax assessment records with the Abia State Board of Internal Revenue in 2014. There are a total of 64 salary grade points for academic and 195 salary grade points for non-academic in the Unified Salary Structure for Staff in Nigerian Universities and this constitutes a total population of 259 salary points for taxpayers on paid employment. The population for self-employed taxpayers in Abia State was estimated at 537,000 at the end of 2014 tax year. The two groups provided comparative data on the tax circumstances of taxpayers in business (self- employment) and those on salaried employment.

The sample size for this study is 319. This is made up of 100% of the salary grade points in the Unified Salary Structure for Staff in Federal Universities in Nigeria and a sample of 60 self-employed taxpayers in Abia State. The sampling technique adopted in selecting the self-employed taxpayers is purposive as the elements which constitute the sample were handpicked based on the researchers' prior knowledge that those elements would serve the purpose of the research. The sample for self-employed taxpayers was therefore selected based on the following criteria:

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a. The taxpayer filed assessment form and was duly assessed in the 2014 tax year.

b. The self-employed taxpayer had operated for not less than five (5) years by the end of 2014 tax year and has been assessed to tax for not less than four (4) consecutive tax years i.e. (2010, 2011, 2012 and 2013 YOA). This provides insight into at least one (1) year assessment under PITA 2004

c. Fifteen (15) taxpayers were selected for each of the four gross income groupings (ie low, moderate, high, and very high groups).

The 'low' income group considered self-employed persons who were assessed and qualified to pay tax at the minimum tax rate of 1% of gross income while the 'very high' income groups are net worth business owners whose income is large enough to be taxed at the maximum tax rate of 24%. The 'moderate' and 'high' income groups are intermediate stages between the two income extremes. A total of sixty (60) self-employed taxpayers were selected from this group.The summary of sample used for the study is summarized in table 1.

Table 1: Summary of study sample

Income Group		Gross Income	Paid Employment		Self-employment	Total
			Teaching	Non-teaching		
1	Low	0 > GI < ₦500,000	0	59	15	74
2	Moderate	≥ ₦500,000 < ₦2,500,000	28	102	15	145
3	High	≥ ₦2,500,000 < ₦5,000,000	28	31	15	74
4	Very high	≥ ₦5,000,000	8	3	15	26
Total Where GI = Gross Income			64	195	60	319

Analytical Procedures and Variable Specification

This study made two levels of investigations

- Test of significant difference in the tax burdens of salaried and self-employed taxpayers under the provisions of PITA 2004 and PITAM 2011, and
- Compared the distribution of mean tax burdens among taxpayers on difference income levels.

In executing these levels of investigation, data on income information and tax relevant domestic circumstances were extracted from the income tax assessment forms submitted by the sampled taxpayers. Based on the provisions of both PITA 2004 and PITAM 2011, the amounts of Gross Income were computed as follows:

$$GI = (GE+BTI+UI) - GC + BC - TEI - (BA + CA + LR) \quad (1)$$

Where:

GI = Gross Income
GE = Gross Emoluments
BTI = Business/ Trade Income (adjusted for tax purposes)
UI = Unearned Income

TEI = Tax Exempt Income (such as dividends and interest on income which suffered withholding tax at source and which deductions are final and conclusive).
GC = General Charges such as alimony of ₦300.00 provided under S.33(4)(a), and interest on loan taken to build owner occupier residential accommodation.
BC = Balancing charge on disposal of qualifying expenditures.
BA = Balancing allowance on disposal of qualifying expenditures
CA = Capital allowances claimed for the year
LR = Loss Reliefs

The taxable income was similarly computed using the specifications in equation 2 below:

TI = GI - (CRA + CA + DRA + DPA + NHF + NHIS + LAP + NPS + G) (2)

Where:
TI = Taxable Income
GI = Gross Income (as computed in equation 1)
CRA = Consolidated Relief Allowance - higher of ₦200,000 or 1% of gross income + 20% of gross income - section 33(1).
CA = Child allowance of ₦2,500 per qualified child up to a maximum of four (section 33(4)(b)
DRA = Dependant Relative Allowance (DRA) of ₦2,000 each subject to a maximum of any two relations (section 33(4)(c)
DPA = Disabled Person Allowance: Higher of ₦3,000 or 20% of earned/consolidated income for a qualified disabled person (section 33(4)(e)
NHF = National Housing Fund Contribution at 2.5% of (GE+ BTI)
NHIS = National Health Insurance Scheme at 2.5% of (GE+ BTI)
LAP = Life Assurance Premium at actual premium paid (in line with section 33(4) (d).
NPS = National Pension Scheme at 7.5% of (GE)
G = Gratuities at actual amount received.

Tax liabilities were conceptualized by the authors based on provisions of PITA AND PITAM and computed as follows:

$TL_{utL} = \sum_{t=1}^{n} ITR_i\,(TBI_i)$ (3)

Where:
TL_{utL} = Tax Liability of an individual taxpayer under a particular tax law
ITR_i = Income Tax Rates specified in paragraph 3 of the 6th schedule with i= 1, 2, . . ., 5 under PITA 2004 and i= 1, 2, . . ., 6 under PITAM 2011.
TBI_i = Tax Band Income i.e. the proportion of taxable income applicable to a specified tax band.

Equation 3 can be expanded to give:

$TL_{utl} = ITR_1\,(TBI_1) + ITR_2\,(TBI_2) + \ldots + ITR_n\,(TBI_n)$ (4)

Where
n = number of tax bands in the 6th schedule of the personal income tax law under which the tax liability is computed.

Tax burden was computed as:

$TB_t = \frac{TTPt}{GIt} \times 100$

Where:
TB_t = The Tax Burden of an individual in year t

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TTP_t = Total Tax Paid by the individual in year t (assuming that all computed tax liabilities are paid to the tax authority)
GI_t = Gross Income of the individual in year t
Any changes in tax laws that altered the income tax rates and the rates for reliefs and allowances claimable by taxpayers would affect the taxable income, and by extension, the tax liabilities and tax borne by individual taxpayers under the tax law. Data collected and computed during the study were analysed using descriptive statistics, t-test and the Analysis of Covariance (ANCOVA) with the aid of SPSS version 20.0.

RESULTS AND DISCUSSIONS

Comparative analysis of Mean Tax Burdens of Salaried and Self-Employed Taxpayers under PITA 2004 and PITAM 2011.

Table 1 evaluated the mean tax burdens of salaried and self-employed taxpayers under the provisions of PITA 2004 and PITAM 2011?

Table 1: Mean Tax Burden of Salaried and Self-employed Taxpayers based on PITA 2004 and PITAM 2011.

Tax Variable	Mean		Change in value	% change in value
	PITA 2004	PITAM 2011		
Tax burden (salaried)	19.55	7.49	12.06	61.69
Tax burden (self-employed)	16.57	8.66	7.91	47.74

Source: Computed by the authors with taxpayers' tax assessment data.

Results in table 1 revealed three important information. First, there is general reduction in the tax burden of both salaried and self-employed taxpayers from what existed under PITA 2004; leaving each group with higher take-home pay and improved spending capacity. Secondly, the results favoured salaried tax payers more than the self-employed tax payers with their tax burdens dropping by about 62% and 48% respectively. Thirdly, under the PITA 2004; self-employed taxpayers enjoyed a lower tax burden (16.6%) than salaried taxpayers with tax burden of 19.55%. Thus, PITAM 2011 transformed salaried taxpayers from bearing a higher tax burden under the Principal Act to bearing a lower tax burden under the new Act relative to the self-employed.

The result of the test of significant difference in tax burden of salaried and self-employed taxpayers based on the provisions of PITA 2004 and PITAM 2011 is presented in table 2.

H0: There is no significant difference in the tax burden of salaried and self-employed taxpayers based on the provisions of PITA 2004 and PITAM 2011.
This hypothesis aims at finding out whether the observed differences in tax burdens are statistically significant. Paired sample t-test was used in analysing the data and the results are shown in table 2.

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Table 2: Test of Significant Difference in Mean Tax burden between salaried and self-employed taxpayers based on PITA 2004 and PITAM 2011.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Tax Burdens of Salaried Taxpayers based on 2004 PITA - Tax Burdens of Self-Employed Taxpayers based on 2004 PITA	.7338	3.6788	.4749	-.2166	1.6841	1.545	59	.128
Pair 2	Tax Burdens of Salaried Taxpayers based on 2011 PITAM - Tax Burdens of Self-Employed Taxpayers based on 2011 PITAM	-6.8738	5.0539	.6525	-8.1793	-5.5682	-10.535	59	.000

Source: Computed by the authors with taxpayers' tax assessment data.

The t-value of the first pair (that is, the tax burdens of salaried and self-employed taxpayers based on PITA 2004) is 1.545 with a probability index of 0.128. Since this significant level is greater than the set alpha level of 0.05, we accept the null hypothesis and conclude that there is no significant difference in the tax burdens of salaried and self-employed taxpayers under PITA 2004. Consequently, the provisions of PITA 2004 imposed equal or even tax burdens on both salaried and self-employed taxpayers and do not tilt more favourably towards any of the two income earners.

It should however be noted that the t-value of the second pair (that is, the tax burdens of salaried and self-employed taxpayers based on PITAM 2011) is indicated as -10.535 with a probability index of 0.000. Since the set alpha level of 0.05 is greater than the probability value of t, we reject the null hypothesis and conclude that there is a significant difference in the tax burdens of salaried and self-employed tax payers based on the provisions of PITAM 2011. These results derive justifications from the enlarged amount of Gross Emolument provided under S.3 (1) of PITAM 2011 which has the effect of increasing the Gross Income of the salaried taxpayers. Under this section, the allowances accruing to an employee from his employment (such as rent, transport, meal subsidy, utility, perquisite, etc.) which were subject to certain limits under the principal Act, are freed from such limitations and as such are wholly taxable as part of Gross Emolument. The implication is that the value of Consolidated Relief Allowance (CRA) increased because the amount of Gross Income which is the base for computing CRA for salaried taxpayers has been increased by the removal of these income exempt limits. The natural effect of this increase in CRA is a drop in the chargeable income and tax liabilities of salaried taxpayers. In contrast, self-employed taxpayers did not register any adjustments in their income arising from amendments to S.3(1) of the principal Act, and this has the effect of further widening the differences in tax burdens of the two groups of taxpayers.

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Reductions in tax burdens arising from adjustments in tax rates and other fiscal reforms have several implications on taxpayers and tax administration. The favourable effects of such reductions on after-tax income, personal savings, taxpayer's spending profile, tax morale and voluntary compliance levels are of interest in this study. Previous studies have noted similar implications. For instance, Steindel (2001) had earlier concluded that consumer spending and personal savings rate are affected by income tax changes in US. That is, if the income tax change leads to a lower tax paid, the take-home-pay will increase, leaving them with more income to spend and save and vice versa. Yew, Milanov and McGee (2015) tried to link changes in major tax reforms with changes in tax burden and individual tax morale, concluding that when a smaller proportion of the taxpayer's income is paid as tax, it increases the taxpayer's morale for voluntary compliance. On the contrary, Dabo, Aimuyedo & Muhammad (2014) reported that PITAM 2011 has not encouraged taxpayers to voluntarily comply with self-assessment and has not driven the force of change that will minimize the incidence of tax avoidance and evasion. However, the empirical results from the present study and the weight of evidence provided in advanced economies have greater appeals, and give credence to align with our *a priori* expectation that a rational tax payer will tend more towards voluntary compliance with a lower tax burden than with higher tax burden. The multiplier effect of these on taxpayer financial capacity and tax administration remains positive.

The study further compared the mean tax burdens of the taxpayers at different income levels under the two tax laws, and the results are shown in table 3.

Table 3: Mean tax burdens of taxpayers at different income levels under PITA 2004 and PITAM 2011.

Income Level / Group	**Mean**		**Change in value**	**% change in value**
	PITA 2004	**PITAM 2011**		
1 (Low)	16.35	1.67	14.68	89.79
2 (Medium)	20.03	7.16	12.87	64.25
3 (High)	19.95	12.39	7.56	37.89
4 (Very High)	19.81	14.63	5.18	26.14

Source: Computed by the authors with taxpayers' tax assessment data.

Again, the distribution of tax burdens among taxpayers at different income levels under the two personal income tax laws indicated a general decrease in mean tax burden across all groups of income earners with taxpayers in the ***low*** income group having a higher percentage decrease in tax burden (89.8%) than others in the medium (64.3%), high (37.9%) and very high (26.1%) income levels. Thus, PITAM 2011 is shown to take a lower amount of tax per naira on income of all groups/levels of income earners than PITA 2004, with greater skewedness towards ***low*** income groups. This result is consistent with the vertical and horizontal equity principle of taxation where taxpayers in high income group pay a higher proportion of their income as tax than low income group, and vice versa.

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Summary of Findings

The findings from this study are summarised as follows:

1. No significant difference exists in the tax burdens of salaried and self-employed tax payers under PITA 2004. Hence the Act offered no discrimination in tax burdens based on the two sources of income (employment and non-employment income sources).
2. However, a significant difference in the tax burdens of salaried and self-employed taxpayers was reported based on the provision of PITAM 2011 with the salaried tax payers being more favoured than their self-employed counterparts.
3. There is a general decrease in tax burden across all groups of income earners with taxpayers in the low income group at more advantageous position than taxpayers in the very high income group.

CONCLUSION AND RECOMMENDATIONS

The findings from this study lend credence to the general conclusion that changes in provisions of tax laws are effective instruments for adjusting after-tax income of individual taxpayers and tax burdens among different groups of income earners. The effects of such changes on spending capacity and savings of individual taxpayers could be unequally distributed depending on the source of income to the taxpayer as evidence from this study has shown that changes introduced in PITAM 2011 significantly altered the existing equality in tax burdens in favour of the salaried taxpayers, and thus created a need for further amendments to neutralise this imbalance in tax burden. The study finally concludes that changes in Personal Income Tax Act has significant effects on tax burdens of taxpayers with strong potential for narrowing income gap and adjusting inequity in distribution of tax burden among tax payers at different income levels in Nigeria.
Based on the above findings and conclusions, the following recommendations were made.

1. The Government and her agencies responsible for formulating tax policies should consider the potential effects of changes in existing tax laws on taxpayers' after-tax income before such amendments are implemented. Evidence rom this study has shown that the amendments contained in PITAM 2011 showed inequity between salaried and self-employed taxpayers and this imbalance could have been resolved before the new law became effective / operational.
2. Further fiscal amendments in tax law should be considered in favour of self-employed taxpayers to adjust the existing inequality in tax borne between salaried and self-employed taxpayers under the new Act. Equity demands that individual taxpayers on the same income level and domestic circumstances should bear the same burden of tax. Such fiscal adjustments may take the form of *self-employed entrepreneurship reliefs or tax exempt* to be claimed by individual entrepreneurs based on their assessable income from the business for a year and included either as one of the tax exempt items listed under paragraph 2 of the sixth schedule to the new Act or as one of the relieving provisions under section 33(4) of the new Act. This recommendation is essential because all the five items listed under paragraph 2 of the sixth schedule relate to salaried taxpayers with only two (i.e. National Housing Fund and Life Assurance Premium) overlapping to favour self-employed taxpayers. The implementation of this recommendation will not only reduce/ eliminate the observed inequality in the distribution of tax burden between the

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two groups of taxpayers, but will also enhance taxpayer voluntary compliance and government collectible revenue from personal income tax in Nigeria.

3. Existing tax rates under paragraph 1 of the sixth schedule should be reduced and the tax band widened to further reduce the income gap between the rich and the poor. Although the resulting distribution of tax burden under PITAM 2011 among the four different groups of personal income earners sampled showed an attempt by the fiscal authorities to minimize income inequality between the individuals at the two income extremes, such adjustments in the rates and bands will further bridge the gap with positive trade-off effects on government tax revenue. Also the new minimum tax rate of 1% of gross income provided under section 37 of PITAM 2011 should be reversed to the previous 0.5% of gross income to further bridge this gap and enhance the after-tax income of low income taxpayers in the light of increasing cost of living in Nigeria.

It is envisaged that the suggested tax policy adjustments made in this paper will reduce tax burdens on individual taxpayers and enhance government revenue through improvements in the level of voluntary tax compliance. It is further expected that the findings in this paper will stimulate greater academic inquiry on, and government sensitivity to, the effects which changes in tax laws could have on income circumstances of taxpayers in particular and on tax compliance issues in general.

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