

## Assessment of Risk in the Internally Generated Revenue (IGR) Structure of Abia State, Nigeria

Philips O.O. Nto<sup>[a],\*</sup>

<sup>[a]</sup>Ph.D., Agribusiness and Management, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.

\*Corresponding author.

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### Abstract

The study assessed risk in the Internally Generated Revenue structure of Abia State, Nigeria. The specific objectives included (I) estimation of factors and significant input variables influencing risk in IGR structure of the State and (II) examination of risk reducing practices. Data which were collected from 50 management staffs of revenue yielding Ministries, departments and agencies in Abia State were analysed with factor analysis, Tobit regression analysis and descriptive statistics. The results of the factor analysis grouped the significant input variables which scored 0.33 and above into institutional and non-institutional sources of risk while that of Tobit regression analysis revealed that significant variables which cause variation between expected and realised IGR of the State are lack of database; mismanagement of fund by government; delay in payment of revenue by tax payers; difficulty in tracking tax evaders; and weak internal control mechanism. The results point to the fact that policy on tax identification number (TIN) should be strengthened and linked to the bank account of the tax payer so that relevant revenues are deducted at source.

**Key word:** Assessment; Risk; Internally generated; Abia State

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### INTRODUCTION

In recent time, continuous decline in the price of crude oil as well as oil theft has led to a decrease in the funds available for Federation Account Allocation Committee (FAAC) and its concomitant consequences to the beneficiary tiers of government in Nigeria (Adenugba & Ogechi, 2013; Nnanseh & Akpan, 2013). The need for both States and Local governments in Nigeria to generate adequate revenue from internal sources has become a matter of extreme urgency and importance to scholars and policy makers. This is so given the ever increasing cost of running government coupled with dwindling revenue from Federal Account Allocation Committee FAAC (Mbanasor, 2014) which depend largely on revenue from crude oil (Akpo, 2009; Udoudo & Ekpenyong, 2013; Nto, 2014).

The realization of adequate internally generated revenue (IGR) has been a major problem undermining the development of Nigerian economy, as it has led to dearth of both social and economic infrastructures. The need for the government to provide social amenities, embark on developmental projects that would improve the living standard of her citizenry as well as meet its overhead or recurrent expenses necessitate enhanced internal revenue generation efforts. IGR in normal day to day parlance refers to those revenue sources that are generated solely by the State or Regional Governments locally. Nnanseh and Akpan (2013) opined that improvement in basic infrastructure underscores the eagerness on the part of the state to look for new sources or become more aggressive and innovative in the mode of collecting revenue from existing sources. Nto (2014) noted that such strategies put in place by Abia State Government are direct bank lodgement; payment through point of sale; elimination of touts and agents in revenue collection process; harmonisation of fees and levies to stamp out multiple taxation; participatory taxation policy through

the establishment of institutions like Ministerial Revenue Coordinating Committee (MRCC), State Internally Generated Revenue Committee and State Revenue Summit, that formulate and approve tax and revenue policies for the State.

However, despite these initiatives, strategies and efforts of government, IGR in the state has not improved. There is a huge negative variance between budgeted amount and actual generated revenue as indicated in Table 1 for 2009-2013 fiscal years.

**Table 1**  
**Budgetary Targets and Actual IGR for Years 2009-2013**

Year	Budgetary amount (N)	Actual amount (N)	Variance
2009	7, 132, 515, 994	6, 762, 692, 282	369, 823, 712
2010	9, 338, 602, 187	6, 882, 559, 491	2, 456, 042, 696
2011	11, 200, 288, 344	10, 491, 120, 400	709, 167, 94
2012	22, 202, 318, 470	11, 141, 467, 399	11, 060, 851,071
2013	37, 964, 633, 410	11, 784, 131, 564	26, 180, 501, 846

Source: *Published Abia State Financial Statements (2009-2013)*.

The realization of budgetary target of 18 billion naira in the 2014 fiscal year from unorganised and informal sources like licenses, fees and fines, taxes, earnings from economic activities and miscellaneous sources (Eze et al., 2004) seems a mirage in view of high risk level associated with these local sources of generating revenue as observed in the highlighted period (Nto, 2014). Akpo (2009) identified the major components of risk structure that inhibit the actualisation of the set targets from the above sources as lack of reliable statistics and data base. This is complicated by fraud and corruption on the part of revenue collecting institutions. Despite several government mechanisms, revenue collectors still engage in fraudulent practices such as diverting government revenue to personal accounts as well as creating multiplicity of tax structure in the state. Available statistics reveal that over 70% of the ancillary taxes, levies and fines collected through IGR do not get into the government coffers while about 500 of such fees and levies existed in the state (Nto, 2014). In the same vein, Mbanasor (2014) observed that mismanagement and misappropriation of state government fund act as discouragement to tax paying community from compliance with internal revenue policy regime. Also, Abiola and Asiweh (2012) supported that diversion of generated fund, delay in remittance of the generated revenue to the state treasury and difficulty in identifying tax evaders for legal action as inhibitors to realise adequate internal lygenerated revenue.

In Nigeria, a state government especially that of Abia State that has about three major economic vibrant cities is supposed to be partners to the federal government in national development and thus are required to generate

enough internally generated revenue to enable them carry out their statutory developmental projects. But with these vagaries in revenue framework in Abia State, it may be difficult to meet with the state revenue target. This presents a research lacuna. As such, the need for a study of this nature to assess risk in the internally generated revenue structure of Abia State. Basically, to actualize revenue target from sustainable sources demands that considerations be given to options for improving state's revenue generating capacity. In the light of the foregoing, the specific objectives were to: (i) estimate factors and significant input variables influencing risk in IGR structure of the state and (ii) examine risk reducing practices.

## 1. METHODOLOGY

The study which was conducted in Abia State employed data from both primary and secondary sources. The primary data were collected using structured and pretested questionnaire administered on 50 management staffs of various revenue yielding Ministries, Department and Agencies (MDAs). Their choice was in line with the stakeholder theory incorporating an inside-out perspective where management becomes the focal point in deciding strategy for risk management. These members of management staff were purposively selected to provide useful and relevant information and data required for the study. However, the secondary data were elicited from the records of Ministry of Finance and Board of Internal Revenue between 2000-2014 fiscal years. The period selected was post military administration which provided for a more sustainable revenue and fiscal policy framework. In the course of data analysis, objective I was actualised using factor analysis also called principal component analysis and validated with Tobit regression analysis while objective II was analysed using descriptive statistics.

Factor Analysis was employed in identifying input variables influencing Variance (risk) between budgetary target and actual IGR in the State. The principal component method of factor analysis with varimax-rotation and factor loading of 0.33 was used. Therefore, variables with factor loading of less than 0.33 were discarded (Ashley et al., 2006; Madukwe, 2004). The principal component factor analysis model is stated thus:

$$Y1 = a11X1 + a12X2 + \dots + a1nXn, \quad (1)$$

$$Y2 = a21X1 + a22X2 + \dots + a2nXn, \quad (2)$$

$$Y3 = a31X1 + a32X2 + \dots + a3nXn, \quad (3)$$

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$$Yn = an1X1 + an2X2 + \dots + annXn. \quad (4)$$

Where:

Y1, Y2 ... Yn = observed group variables which constitute risk factors between budgetary target and actual

IGR in the State.  $a_1 - a_n$  = factor loadings or correlation coefficients while  $X_1, X_2 \dots X_n$  = input variables that enhance Variance (risk) between budgetary target and actual IGR in the State.

To model the determinants of level of budgetary variation in the study area, a Tobit regression model was used. This model (Chow, 1983; Maddala, 1983) has found several empirical applications in literature (Adesina & Baidu-Forson, 1995; Adesina, 1996; Holloway et al., 2004; Nkamleu, 2007). The dependent variable is level of budgetary variation, which was censored at zero. After factor scores are determined through principal component method, further analysis was performed using Tobit regression analysis. Tobit regression analysis is used to avoid the censoring bias that Ordinary Least Squares could generate (Chow & Fury, 2000; Nto et al., 2013). At Tobit censored at zero was used because the level of adoption smaller than zero was not observed. The Tobit approach conserves degrees of freedom and is relevant in this case where the independent variables have a continuous effect on the dependent variable.

Since the level of budgetary variation cannot be negative (the threshold is zero), the dependent variable can be written using an index function approach as;

$$I^*_i = \beta^T X_i + \epsilon_i, \quad (5)$$

$$Y_i = 0 \text{ if } I^*_i \leq T, \quad (6)$$

$$Y_i = 1 \text{ if } I^*_i > T. \quad (7)$$

Where  $Y_i$  represents a limited dependent variable which simultaneously measures probability and the intensity of budgetary variation,  $I^*_i$  is an underlying latent variable that indexes level of budgetary variation.  $T$  is an observed threshold level,  $X$  is the vector of independent variables affecting the probability and intensity of variation,  $\beta^T$  is a vector of parameters to be estimated, and  $\epsilon_i$  is the error term. If the non-observed value of  $I^*_i$  is greater than  $T$ , the observed variable  $T$  becomes a continuous function of the independent variables, and 0 otherwise. For the generalized case, the value of the log likelihood function is given as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, \epsilon). \quad (8)$$

Where:

$Y$  = Variation (risk) between budgetary target and actual IGR.

$X_1$  = Lack of data base

$X_2$  = Corruption among revenue officials.

$X_3$  = Multiple fees and levies

$X_4$  = Mismanagement of state fund by government.

$X_5$  = Delay in payment by tax payers

$X_6$  = Weak legal framework

$X_7$  = Difficulty in tracking tax evaders

$X_8$  = Over dependency on FAAC

$X_9$  = Weak internal control mechanism

$X_{10}$  = Poor logistics

$e$  = error term

Variables  $X_1$ -  $X_{10}$  were obtained through ranking between 1 and 5. The score 1 means the lowest rating and

5 means the highest rating. The respondents ranked the variables in that order.

## 2. RESULTS AND DISCUSSION

The report of the factor and Tobit regression analyses were presented in this section.

**Table 2**  
**Varimax-Rotated Factors That Enhance Risk Between Budgetary Target and Actual IGR in the Area**

No	Perceived variables	Factor 1	Factor 2
$X_1$	Lack of data base	0.656***	-0.470***
$X_2$	Corruption among revenue officials	0.527***	-0.041
$X_3$	Multiple fees and levies	0.186	0.343***
$X_4$	Mismanagement of fund by government	0.389***	0.012
$X_5$	Delay in payment by tax payers	<b>0.527***</b>	-0.405***
$X_6$	Weak legal framework	0.132	0.249
$X_7$	Difficulty tracking tax evaders	-0.605***	-0.491***
$X_8$	Over dependency on FAAC	0.005	<b>0.480***</b>
$X_9$	Weak internal control mechanism	-0.478***	-0.280
$X_{10}$	Poor logistics	0.242	-0.047

Note. Calculated from field survey data 2015.

Table 2 presents the varimax-rotated factors that enhance variation between budgetary target and realised IGR in the area. The input variables are grouped into two factors namely institutional factor and non-institutional factor. Institutional factor is those variables that can be controlled by the government institution charged with the responsibility of revenue collection. Two factors were abinitio extracted based on the response of the respondents. Only variables with factor loading of 0.33 and above at 10% over lapping variance were used in grouping the factors (Ashley et al., 2006; Panneerselvam, 2013). Variables that loaded in only one factor were viewed to have the highest influence in determining the variance between budgetary target and realised IGR. Thus,  $X_2, X_3, X_4, X_8$  and  $X_9$  made the highest contribution in determining risk level between the realised IGR and expected. Besides, variables that loaded in the two factors such as  $X_1, X_5$  and  $X_7$  made lower impact while those that scored less than 0.33 as in the case of  $X_6$  and  $X_{10}$  were discarded because they made no significant impact (Enete & Amusa, 2010) hence belonged to no factor.

In forming the factors, Kessler (2006) stated that each factor is giving a denomination based on the set of variables with similar characteristics. This procedure was adopted in grouping the variables into two major factors. The institutional factors include lack of data base; weak internal control mechanism; over dependency on FAAC and difficulty in tracking evaders. While non-institutional are

those like corruption among revenue officials; multiplicity of fees and levies collected by others like revenue agents; mismanagement of funding by government and delay in payment by tax payers. The above result could not provide basis for policy recommendation that will help to reduce the gap between expected and realised IGR hence, all the variables were further subjected to confirmatory analytical test using Tobit regression model.

The result of the analysis is presented in Table 3. According to the table, the Chi-square value of 14.87 was highly significant at 1.00% level of probability indicating best fit of the model used. The result also exhibited high  $R^2$  of 0.7077 hence, about 70% of the variables considered in the model explained variation between expected and realised IGR in the area for the period under consideration.

**Table 3**  
**Tobit Regression Estimate of the Determinants of Variation Between Budgetary Target and Actual IGR in the Area**

Variables	Coefficient	Std. error	T-value
Constant	$1.40 \times 10^8$	$9.10 \times 10^7$	1.54
Lack of data base ( $X_1$ )	4813053	1561064	3.08***
Corruption among revenue officials ( $X_2$ )	8641145	5625262	1.54
Multiplicity of fees and levies ( $X_3$ )	972497.4	4335167	0.22
Mismanagement of funds government ( $X_4$ )	6392232	1806414	3.55***
Delay in payment by tax payers ( $X_5$ )	9521317	4777711	1.99*
Weak legal framework ( $X_6$ )	7747817	4937879	1.56
Difficulty in tracking tax evaders ( $X_7$ )	4125798	1726855	2.39**
Over dependency of FAAC ( $X_8$ )	2300630	5830490	0.39
Weak internal control mechanism ( $X_9$ )	6535074	1143754	5.27***
Poor logistics ( $X_{10}$ )	6740185	5318291	-1.27
LR $\chi^2$	14.87***		
Pseudo $R^2$	0.7077		

Source: Calculated from field survey data 2015.

Note. \*\*\*, \*\* and \* are significant level at 1%; 5% and 10%, respectively.

The coefficient for lack of data base was positively significant at 1% probability. This implies that any increase in lack of data base will lead to widening gap between budgetary (expected) and realised IGR. Lack of database of all taxable adults and assets in the State has aided tax evasion and led to loss of revenue to government in any particular fiscal year. Abia State does not have statistics of all taxable buildings (both commercial and residential) vehicles of different types, factories, farms, economic activities in the area etc. hence budget proposals on IGR are set arbitrarily. Akpo (2009) observed that lack of data base is a major handicap to revenue collections as many business and self-employed persons do not keep books of account on all their transactions or any records to enable revenue authorities accurately assess their worth for tax purposes

Table 3 also revealed that variable  $X_4$  i.e. mismanagement of funding by government was positively related to variation between expected and realised IGR at 1% probability level. The implication is that increase tax payer's money mismanaged by government will lead to increase in gap between budgeted and realized IGR. Nto (2014) noted that mismanagement of funding due to the high level of corruption among government officials is a major disincentive to payment of relevant taxes, fees and

levies. When government does not leave up to expectation in the provision of basic infrastructures like street light, good roads, potable water, hospitals, sanitation, security etc. tax payers will be discouraged from voluntary tax compliance.

Furthermore, the result in Table 3 also depicted that coefficient of delay in payment by revenue payers ( $X_5$ ) was positively significant at 10% probability level. Most taxable adult deliberately refused to pay taxes or delay to pay until they have need for public transaction where presentation of tax clearance is made a prerequisite. Nto (2014) noted that apart from civil servants, whose taxes are deducted at source, all other tax payers are actually reluctant to pay tax except when compelled to do so. Also difficulty in tracking evaders is also positively related to variation between budgeted IGR and actual. The table shows that the coefficient was significant at 5% probability level. This is consistent with apriori expectation as the revenue collecting institutions of the State does not have adequate tracking devices to apprehend tax evaders. This is consistent with the earlier report on lack of data base in the State revenue collection platform.

According to Abiola and Asiweh (2012) increased tax evasion could be attributed to use of poor working devices, inadequate staffing of the tax collecting



organisation, poor funding, bad access road to the interior of the rural areas, poor enlightenment etc..

Table 3 further depicted that weak internal control mechanism had positive coefficient at 1% probability level. This implies that increase in weak internal control mechanism will lead to increase in variation between expected and realised IGR. The institutions in charge of revenue collections do not fully automate the process and procedure of payment hence creating loophole for diversion of fund into private pockets. This is in line with Nto (2014) which observed that 70% of the IGR are diverted by the revenue agents and officials because of poor revenue collection platform.

Table 4 summarised and presented appropriate methods of reducing the variation between budgeted and realised IGR in Abia State of Nigeria.

**Table 4**  
**Strategies Adopted in Reducing Variation Between Budgeted and Realised IGR in the Area**

Strategies adopted	Frequency	Percentage
Computerisation and automation of process	50	100
Strong legal framework	42	84
Provision of adequate logistics	45	90
Strong political will	28	56
Realistic budgeting of IGR	40	80
Use of banks	50	100
Adequate staff incentive	35	70
Provision of basic infrastructure	38	76
Public enlightenment	20	40

Source: Calculated from Field Survey data 2015.

Note. Multiple responses recorded.

According to Table 4, all the respondents (100%) were of the view that variation between budgeted and realised IGR can be reduced through computerisation and automation of the payment process as well as use of bank respectively. Effective use of modern computerised and automation systems of revenue collection makes computation, tax audit and collection easy (Akpo 2009). Nto 2015 noted that full automation of payment procedure and direct bank lodgements are the keys to enhancing revenue in Abia State rather than payment by cash through revenue agents. Bank lodgements makes collection easy and also help government to capture and confirm payments made instantly.

Table 4 also depicted that significant proportion (90% and 84%) of the respondent observed that the gap between budgeted and actual IGR could be bridged through government's provision of adequate logistics and strong legal framework respectively. Revenue collection officials need adequate logistics such as patrol vehicles for tax inspection; computers; as well as fund for public

enlightenment and advertisement etc.. Also, strong and reliable legal system makes prosecution of tax invaders faster and less cumbersome to the revenue officials. Table 4 also shows that 80%, 76% and 70% of the respondents also noted that risk in revenue generation can be reduced through realistic budgeting, provision of basic infrastructure by government and adequate staff incentive respectively. Nto (2014) noted that the budget proposal should be based on realistic assumption predication on extant statistics.

Mbanasor (2015) observed that the provision of basic amenities through proper management of tax payers' money act as further encouragement to tax paying community to comply with internal revenue policy regime of government.

## CONCLUSION

The study estimated factors influencing risk in IGR structure of Abia State and also examined appropriate risk reducing practices adopted in the area. Factor and Tobit regression analysis were used to analyse data collected from 50 staffs of revenue yielding ministries, departments and agencies. The result of the Tobit regression analysis indicated that lack of data base, mismanagement of fund by government and weak internal control mechanism were significant at 1% probability level thus point towards serious policy implication even as they also made useful impact through their loading on the determination of the various factors. The results point to the fact that policy on tax identification number (TIN) should be strengthened. Taxable adult in this bracket should beas a matter of compulsion link it to their bank account number and bank verification number (BVN) so that payable revenues are deducted at source immediately it is due.

Secondly, government should take steps to embark on asset enumeration using a reputable consultant so that all assets are captured in the database of BIR and Ministry of Finance as this will assist in realistic budgeting.

Also, all payment procedures should be fully automated to avoid leakages and policy on direct bank payment should be further strengthened. Revenue collected should be utilised by the government to develop physical infrastructures that have direct bearing on the life of the people. Such physical infrastructure should carry such boldly written inscription as "THIS IS YOUR MONEY". Also, government should set up special tribunal to prosecute revenue defaulters. The tribunal should comprise of lawyers and accountants who are conversant with tax and other revenue process and procedure.

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