Application of forensic accounting and domestic debt management on government revenue in Nigeria

The study empirically determined the extent at which Forensic Accounting and Domestic Debt Management (DDM) influence Government Revenue (GR) in Nigeria. The study adopted primary data with the use of self-administered structured questionnaire on chartered accountants with the knowledge of forensic accounting and public finance. Krejcie and Morgan (1970) formula was used to determine the sample size of 306. Logit regression technique was used in the analysis of data. The results of the empirical investigation from multiple regression show that t-calculated of 6.472 is greater than t-tabulated of 0.000 at 5% level of significance. This indicates that forensic accounting and domestic debt management have a significant positive nexus with government revenue. This means that when forensic accounting is applied along with domestic debt management, the mismanagement and inefficiency in revenue of government will show a downward trend. Consequent to these findings, the study recommended the need for the engagement of forensic accountants and adoption of efficient domestic management mechanism on the generation and allocation of government revenue in Nigeria for effectual actualization of monetary and fiscal policies.

Keywords: Domestic debt, forensic accounting, fraudulent practices, government revenue.

INTRODUCTION

The revenue of government is pivotal to the effective implementation of her policies and in the performance of her other constitutional roles. Revenue is the survival strength that the government rest upon for the actualization of her plans. Thus, it could be likened to the role of blood and water in the life of man. Consequently, government in Nigeria rely on different sources for her revenue – income from the sale of crude oil, income from agricultural products, taxes and levies on citizens and corporate bodies, foreign aids, among other sources. Regarding the desire to create a nexus between the planned programs as detailed in her expenditure budgets and performance, government also seek both foreign and domestic loans. These loans assist in augmenting the revenue accruing to the government.

In Nigeria, the feature of government’s fiscal expansion was the financing of deficit budget from domestic sources, which is largely due to the difficulty in obtaining foreign loans (Adofu and Abula, 2010). In the application of the principles of scarcity, states embark on foreign and domestic borrowing for the purpose of growing the economy, sustain development and ultimately improving the living standard of the citizens (Ewubare et al., 2017; Ngerebo-A, 2014). In line with this, the World Bank had undertaken a pilot program on public debt management and debt market development in developing transition countries (Campanaro and Vittas, 2004). The aim was to assist the emerging economies to modernize and manage their public debt; develop their debt markets; and assess if such economy is on a sustainable path or the nations face...
debt distress (Battaile et al., 2015; Campanaro and Vittas, 2004).

Studies have however, showed concern of the adverse effect of domestic debt on the economic growth and other revenue sources of government in Nigeria. (Ude and Ekesiobi, 2014; Igbodika et al., 2016; Ngerebo-A, 2014). This has called for the introduction of a more effective domestic debt management to halt the tide of this negative impact. While studies have also acceded that domestic debt has largely been sourced to finance deficit budget, it has also been established that one of the problems associated with borrowing is the shrinking revenue of government and unanticipated declines in revenue collection (Essien et al., 2016; Irabor, 2011; Adofu and Abula, 2010). The shrinking revenue of government has been moderately linked to corruption in the public sector, mismanagement of government revenue including domestic debt, the use of loans for non-productive activities, and individuals corrupt enhancement with consequential effect (Adofu and Abula, 2010; Okwori and Sule, 2016; Ngerebo-A, 2014; Ngerebo-A and Agundu, 2010; Okwori and Sule, 2016, citing CBN, 2012). Today, the issues of corruption and diversion of revenue are a source of concern to policy makers and scholars, resulting for engagement of forensic accounting experts.

The call for forensic accounting may not be unconnected with the fact that studies have established the possible effect that it has in stemming the menace of fraudulent practices including corruption, fraud, tax evasion, among others (Abdulrahman et al., 2020; Adesina et al., 2020; Akinadewo et al., 2019; Akinadewo and Akinkoye, 2019; Debajie, 2019; Bangura, 2020; Folayan and Adeniyi, 2018; Saidu, 2015; Oyedokun, Enyi and Dada, 2018; Modugu and Anyaduba, 2013; Enofe et al., 2015; Eiya and Otalar, 2013; Ehiohighe and Atu, 2016; Mansor and Gurama, 2016; Modugu and Omoye, 2014). Regarding the evidence in literature on the rising domestic debt as well as the negative impact on the other revenue of government, the study therefore, seeks to determine the extent at which forensic accounting and domestic debt management influenced government revenue in Nigeria.

**Literature review**

**Overview of Government Sources of Revenue in Nigeria**

There are different sources of revenue of governments in Nigeria. These revenue sources include the Personal Income Tax (PIT), Company Income Tax (CIT), Petroleum Profit Tax (PPT), Value Added Tax (VAT), Withholding Tax (WHT), Capital Gains Tax (CGT), Education Tax, and Stamp Duty, among others. Studies have also recorded that public loans are sought for the financing of deficit budget, and budgeted expenditure, among other reasons (Ude and Ekesiobi, 2014; Adofu and Abula, 2010; Lotto and Mmari, 2018; Igbodika et al., 2016, citing Alison et al, 2003; Ewubare et al., 2017; Ngerebo-A, 2014). Consequently, public borrowings – foreign and domestic loans - are also included as revenue sources of government. Thus, there are constitutionally conferred exclusive revenue sources to the three tiers of government – federal, state, and local. Studies have however, showed that mismanagement and misapplication of domestic debt have a negative impact on the other sources of revenue of government and economic growth (Irabor, 2011; Okwori and Sule, 2016, citing CBN, 2012; Ngerebo-A and Agundu, 2010).

The diversion of the borrowed fund and misapplication thereof, often result in the creation of loan repayment and interest cost burden on the other revenue sources of government. This overrides the objectives for borrowed fund – sustenance of development, improvement of citizens’ living standard, among others (Ewubare et al., 2017; Ngerebo-A, 2014).

**Forensic Accounting as a Mechanism Mitigating Fraudulent Practices**

The incidences of fraudulent practices (financial and economic crimes, corruption, bribery, money laundering, criminal hiding of assets of couples during divorce, financial statements manipulations), among others - have intensified the need for the application of forensic accounting for detection, prevention and deterrence thereof. Studies have shown that forensic accounting provides confidence in financial statements. It has impacted positively to eliminate unethical practices; effectively ameliorate financial frauds in Deposit Money Banks (DMBs); positively influence the detection and prevention of frauds in the banking sector; strengthen internal control; and have positive and significant effect on corporate governance and reduce tax evasion (Tapang and Ihendinihu, 2020; Adesina et al., 2020; Abdulrahman et al., 2020; Bangura, 2020; Akinadewo and Akinkoye, 2019; Akinadewo et al., 2019; Ocansey, 2017).

It has been established that forensic accounting possesses special and specific skills, required in the court of law during litigation (Ocansey, 2017).

**Domestic Debt Profile in Nigeria (2009-2018)**

The level of the domestic debt in Nigeria in the recent past, has become worrisome to stakeholders. This increase however, has been attributed to several factors, which include diversion of borrowed fund, misapplication of internal loans, and the mismanagement of public debt (Ayuba and Khan, 2019; Eyide and Nzewi, 2018; Adofu and Abula, 2010; Okwori and Sule, 2016; Ngerebo-A, 2014, citing James, 2006 and Oshadami, 2006; Ngerebo-A and Agundu, 2010). It is however, argued that long-term domestic debt reduces the immediate financial burden on the government (Mba et al., 2013; Essien et al., 2016). Studies have also established that the unending increase in internal debt will have negative impact on private investment and reduce the living standard of the citizens (Irabor, 2011; Okwori and Sule, 2016, citing CBN, 2012;
Figure 1: Nigeria’s Domestic Debt (2009-2018)

Source: DMO Annual Reports (2020)

Ngerebo-A and Agundu, 2010). This could also be as a result of application of the other revenue sources of government to fund the capital repayment and the interest cost of internal loans misapplied or mismanaged, without which it could have improved the nation’s economic growth. The domestic debts were N3,228.03 billion (2009), N4,551.82 billion (2010), N5,622.84 billion (2011), N6,537.54 billion (2012), N7,118.97 billion (2013), N7,904.02 billion (2014), N8,837.00 billion (2015), N11,058.21 billion (2016), N12,589.49 billion (2017), and N12,774.46 billion (2018). This is also shown in Table 1 and Figure 1.

Debt Default Theory

Government defaults in their debt obligations because of the inability to service the debt (Debrun et al., 2019). The theorists opined that countries at times believe that it is beneficial to default in loan obligations. It is argued that government would always take the option of debt default except the associated cost outweigh the benefit (Debrun et al., 2019, citing Eaton and Gersovitz, 1981). Default normally lead to unsustainable accumulated public debt. This theory states that the cost of debt default includes market exclusion; market discipline, legal sanctions, collective negotiation and domestic cost (Debrun et al., 2019, citing Eaton and Gersovitz, 1981).

Conceptual Framework

The framework adopted by this study makes easier identification of the nexus between the variables (Figure 2).

GR = Government Revenue = Dependent Variable
FA = Forensic Accounting = Independent Variable 1
DDM = Domestic Debt Management = Independent Variable 2

Empirical Review

In Nigeria, studies have documented the impact of forensic accounting on the reduction and detection of fraudulent practices in both the public and private sectors. It has also been established by literatures of the nexus between domestic debt and economic growth as well as other
Table 1. Nigeria’s Domestic Debt (2009-2018)

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Debt (Billion)</th>
<th>Instruments of Domestic Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>N4,551.82</td>
<td>Federal Government Bonds, Nigerian Treasury Bills, Treasury Bonds, and Development Stocks</td>
</tr>
<tr>
<td>2011</td>
<td>N5,622.84</td>
<td>Federal Government Bonds, Nigerian Treasury Bills, and Treasury Bonds</td>
</tr>
<tr>
<td>2012</td>
<td>N6,537.54</td>
<td>-Ditto-</td>
</tr>
<tr>
<td>2013</td>
<td>N7,118.97</td>
<td>-Ditto-</td>
</tr>
<tr>
<td>2014</td>
<td>N7,904.02</td>
<td>-Ditto-</td>
</tr>
<tr>
<td>2015</td>
<td>N8,837.00</td>
<td>-Ditto-</td>
</tr>
<tr>
<td>2016</td>
<td>N11,058.21</td>
<td>-Ditto-</td>
</tr>
</tbody>
</table>

Source: Authors’ Field Work from DMO Annual Reports (2020)

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related variables like government revenue. For instance, Abu (2019) examined the impact of forensic accounting on government revenue through the Federal Inland Revenue Service (FIRS) in Nigeria. The study adopted primary data through the administration of questionnaire to respondents. Descriptive statistics were employed to analyse data. The results show that forensic accounting has not contributed to the upward movement of the revenue of government. The study recommended the need to set up a special forensic accounting unit in FIRS to assist in revenue
generating activities to improve on the revenue profile of government. Akinadewo et al. (2019) examined the extent at which forensic accounting influenced direct tax revenue of government in the lottery industry. Primary data was employed through the administration of semi-structured questionnaire to respondents. The multiple regression analysis results forensic accounting is an effective control mechanism for the mismanagement of government revenue. The study recommended the need for engagement of forensic accounting experts on tax audit assignments. Raifu and Raheem (2018) determined the impact of the revenue of government on Nigeria’s economic growth. Autoregressive distributed lag method was employed by the study. The results show that government revenue is pivotal to economic growth. The study recommended for an effective and efficient use of government revenues. Imimole and Imoughele (2012), however, examined the unceasing increase of domestic debt profile in Nigeria and its resultant impact on economic growth as well as the crowding-out of private lending in the economy. Ordinary Least Square (OLS) regression technique and time series data from 1980-2009 were adopted for data analysis. The results indicate that domestic debt in Nigeria is inversely related to economic growth. The findings equally revealed that internal debt robustly crowds-out private lending in Nigeria. The study recommended the need for efficient and adequate macroeconomic policy that will restructure government revenue base. It also recommended the need for an analysis of the economic and social profitability of domestic debt finance projects to ensure self-liquidation.

Fasoye (2018) examined Nigeria’s domestic debt profile for 1980-2017. The study used pooled OLS regression technique to analyse data. The result shows that holding of government’s internal debt outstanding in the economy portends a huge fiscal problem, if the government access larger part of this debt from the banking industry. The study recommended the need for re-examination of domestic borrowings culture to forestall fiscal crisis. Otubor and Salawu (2017) assessed financial accountability and economic growth in Nigeria. The study adopted primary data with the administration of self-administered open-ended questionnaire on respondents. Chi-square statistical tool was used in the analysis of data. The findings reveal that the current practical process and timing of financial accountability in Nigeria have not enhanced economic growth. The study recommended for a brief and simple presentation of financial figures. Suleiman and Ahmi (2018) examined the efficacy of forensic accounting technique in the mitigation of corruption in Nigeria. The study employs qualitative methodology from the symbolic interactionism paradigm. The findings revealed that the technique is appropriate for investigation corruption in the public sector and also suitable for court purposes during prosecution of corrupt officers. The study recommended the need for the enhancement of the capacity of corruption investigators through adequate training and retraining.

Azih and Okoli (2015) examined the nexus between forensic accounting and efficient management of government owned establishment in Ebonyi State, Nigeria. The study adopted primary data with the use of administered structured questionnaire. Descriptive and inferential statistics were used to analyse data. The study showed that that forensic accounting is essential to calculate economic damage and to check on security fraud, among others. The study recommended the need for the teaching of forensic accounting at tertiary institutions and for its professional practice in all organizations. Okoye and Gbegi (2013) examined the role of forensic accounting on fraud detection and prevention in the public sector, in Kogi State, Nigeria. The study adopted secondary and primary data. Questionnaire and interview methods were used under primary data on staff of Kogi State government officials and secondary data sourced from the records of five ministries in the State. The study reveals the effectiveness of forensic accounting in fraud reduction in public sector. Despite these studies, no known study have been able to establish how forensic accounting and domestic debt management could jointly influence government revenue in the Nigerian context, which this study examined.

**METHODOLOGY**

The study used primary data with the administration of self-administered and structured questionnaire on chartered accountants experienced in the knowledge of forensic accounting and public finance. The target population was 1,500 and the sample size was 306, determined through Krejcie and Morgan (1970) formula. This study was achieved through the administration of structured questionnaire on respondents.

**Model specification:**

\[
GR = f \text{ (Forensic Accounting (FA) and Domestic Debt Management (DDM) )} \] \hspace{1cm} (1)

\[
GR = f \text{ (FA, DDM) } \] \hspace{1cm} (2)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.408 a</td>
<td>0.166</td>
<td>0.161</td>
<td>0.67418</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), FA, DDM*  
Source: Author’s Field Work (2020)
Table 3. ANOVA for Model Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
<td>13.689</td>
<td>30.119</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>302</td>
<td>.455</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>164.643</td>
<td>304</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Government Revenue  
b. Predictors: (Constant), FA, DDM

Source: Author’s Field Work (2020)

Table 4: Coefficients for Model Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.991</td>
<td>.308</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FA</td>
<td>.112</td>
<td>.058</td>
<td>1.933</td>
</tr>
<tr>
<td></td>
<td>DDM</td>
<td>.400</td>
<td>.065</td>
<td>6.156</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Government Revenue

Source: Author’s Field Work (2020)

GR = f (β₀ + β₁FA + β₂DDM + μ) ........... (3)

A priori expectation:  
The a priori expectation of this model = β₀, β₁, and β₂ > 0.

Test of Hypothesis  
Research Hypothesis: H₀ – Forensic Accounting and Domestic Debt Management have no significant influence on government revenue in Nigeria. The research hypothesis was tested with the use of multiple regression analysis.

Estimated Model:  
From output statistics in Table 3.  
GR = 1.991 + 0.112FA + 0.400DDM  
The a priori expectation: β₀ > 0, β₁,β₂ > 0.

DISCUSSION

The result of the regression analysis showed how much of the variation in the dependent variable is explained by the variation of the components in the independent variable. The decision rule is that the null hypothesis should be rejected since t-calculated of 6.472 in Table 4 is greater than t-tabulated of 0.000 at 5% level of significance. Thus, it can be concluded that Forensic Accounting and Domestic Debt Management have significant positive relationship with Government Revenue in Nigeria, hence, the null hypothesis is rejected.

The Coefficient of Determination (R²) of Model Specification

The value of R², the coefficient of determination was 0.166. This means that 16.6% of the variation in government revenue could be explained by FA and DDM, while the remaining 83.4% could be because of other variables not accounted for in this model. In Table 2, the model revealed that the relationship between the independent variables and the dependent variable is statistically significant (P = .000 < .05) with t-statistics = 6.472. The adjusted R² was 0.161, which is close to the R² value of 0.166. This shows that the model is fit for making generalization. Consequently, Forensic Accounting (FA) and Domestic Debt Management (DDM) have significant positive effect on government revenue.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The rising domestic debt in Nigeria has become a concern to policy makers as well as researchers. Studies have, however, opined that factors responsible to this include mismanagement and fund diversion, among others (Ayuba and Khan, 2019; Eyide and Nzewi, 2018; Adofu and Abula, 2010; Okwori and Sule, 2016; Ngerebo-A, 2014, citing James, 2006 and Oshadami, 2006; Ngerebo-A and Agundu, 2010). Thus, it has become a burden to other revenue sources of government through capital repayment and payment of interest cost. This study therefore, examined the effect of forensic accounting and domestic debt management on government revenue. This is with the expectation that the application of forensic accounting will stem the mismanagement of fund and the effective management of debt will reduce the adverse effect of it on the other existing revenue of government. The findings show that forensic accounting application and domestic debt management will reduce the incidence of mismanaged domestic loans with respective impact on government
revenue. This agreed with Akinadewo et al. (2019), and Imimole and Imoughele (2012) on their individual study between each of the independent variables and government revenue. In view of the findings, this study recommended as follows:

i. Government should engage the services of forensic accounting experts for their involvement in all the stages of domestic borrowing. This will also serve in preventing fraudulent practices on government revenue sources.

ii. The need for the review of the existing policy on domestic debt management for a more effective one. A periodic training should be organised for the public servants in charge of the management of government revenue, especially as it concerns revenue allocation, among others.

iii. The need for more emphasis on accountability from the managers of government revenue sources.

iv. The need to apply an efficient debt management mechanism on the generation and allocation of government revenue, which will enhance the promotion of the government monetary and fiscal policies.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of the paper.

REFERENCES


An Autoregressive Distributed Lag Model (ARDL) approach.


