





2022, vol. 9, issue 2, 40-53

RESEARCH ARTICLE

<https://doi.org/10.5281/zenodo.7474309>

## EFFECT OF TREASURY SINGLE ACCOUNT ON GOVERNMENT EXPENDITURE AND BORROWING: AN EMPIRICAL STUDY

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### ABSTRACT

The study assessed the effect of the Treasury Single Account (TSA) policy of the Federal Government of Nigeria based on whether the policy has ensured cash availability to meet Government expenditure and whether also the policy has in any way promoted efficiency in the management of national debt. Secondary data on Federal Government Revenue, Spending, and Borrowing were sourced from the Central Bank of Nigeria's Statistical bulletin and Debt Management Office quarterly reports. Chow test was deployed to test the formulated hypothesis. Findings showed that the implementation of TSA has achieved the objective of ensuring cash availability for government expenditure programmes. The implication of this is that government cash resources have increased and there are now more funds available for Government to carry out its various responsibilities towards improving the quality of life of citizens. It was also found that the TSA policy of the government has some impact on the nation's debt profile. The study is considered very important as it reveals to the government how the TSA policy is capable of blocking revenue leakages and promoting the availability of government cash resources. The study has contributed to the existing literature by showing that TSA has a significant impact on the availability of cash resources to the government. In practice, it has been shown that bringing the cash resources into one basket and eliminating multiple bank accounts enables the government to see the total resources at a glance, which helps it to decide whether to borrow or not.

**Keywords:** *Treasury Single Account, Government Revenue, Government Expenditure, National Debt, Nigeria.*

### INTRODUCTION

Every government is formed to cater to the basic needs of its citizens. According to Udeh & Nzewi (2014), the entire essence of government is in the interest of its citizens. Every government thus has the responsibility of making policies and engaging in activities that will enhance the quality of life of the citizens. Government responsibilities towards her citizens come as expenditures in the annual budget include. This includes such responsibilities as (1) securing the lives and properties of her citizens against both internal and external threats. To achieve this there must be effective policing and armed forces coupled with unbiased and prompt administration of justice. (2) Protection and general welfare of citizens. This is achieved through the provision of basic/essential needs such as various welfare programmes provision of basic/essential goods and services such as road, drinking water, waste management, health care services, education, and electricity. (3) Management of the economy. Governments are responsible for instituting policies that encourage local and

foreign investment, and ensure that inflation is put under control. It is also the responsibility of the government to manage the nation's foreign reserve, control the balance of payments deficits, and achieve high levels of employment. (4) Ensuring that the environment is protected through proper laws (Wizznote, 2017).

Government responsibilities and the various means by which they are met are usually stated in terms of expenditures and revenue in the national budget which is an authorized financial plan of the anticipated Government activities (Adebisi, 1999; Udeh & Nzewi, 2014). The Federal Ministry of Finance is charged with the responsibility to manage the finances of the Federal Government of Nigeria. The law provided that Government revenues collected by any Ministry, Department, or Agency (MDA) should be deposited in the Consolidated Revenue Fund (CRF) of the Federation although certain revenues are being specifically exempted from the consolidated revenue fund by the constitution and other Acts of National Assembly. There was no strong control over revenue collected by various ministries, departments, and agents due to a loophole in section 80 of the constitution. This section was silent over the time frame within which revenue collected by MDAs must be deposited in the CRF thereby encouraging the MDAs to conceal government funds in the various bank (Ministry of Finance, 2014). Before May 2015 when the TSA took effect in Nigerian nation, MDA that are charged with the responsibility of collecting revenues operated multifarious bank accounts without supervision by the Finance Minister (Accountant General of the Federation, 2017). MDAs determine what they remit to the government from revenue collected by them (Labinjo 2015). Hamisu (2015) as cited in Okoye & Okerekeoti (2017) submitted that an audit report by the Revenue Mobilization and Fiscal Commission revealed that about N12b in terms of government revenue meant for the Customs and the Federal Inland Revenue Service (FIRS) were kept in secret accounts at various commercial banks operated by various MDAs. Government funds were left idle in various commercial banks operated by the MDA thereby depriving the government of the resources with which to carry out its various activities (Ministry of Finance, 2014). The government was incurring borrowing costs to fund Ministries Departments and Agencies (MDAs) with debit balances while others (other MDAs) were carrying idle credit balances in various secret accounts (Chukwu, 2015). All of these were possible as a result of poor revenue control measures on the part of the government over her cash resources.

The above instances point to the direction that Government did not have full control of its revenue sources. According to International Monetary Fund (2010), the Government's failure to exert control over its cash resources will face consequences in multiple ways. For instance, the cash that was left idle in banks earns expected economic returns. Moreover, by not being aware of a surplus fund in one ministry, Department, or Agency, the government acquires avoidable borrowing costs on raising funds to cover a perceived cash shortage in another Ministry, Department, or Agency. Third, unused government funds in the commercial banking sector provide a free float for the banks which in turn are used to extend credit to customers including the government itself. It is observed that the CBN acquires additional costs when meeting treasury bills and other short-term loan obligations as a result of open market operation which drains the additional liquidity (Accountant General of the Federation - AGF, 2016). The establishment of a system that will guarantee effective budgetary control through close monitoring of government revenue and expenditure of MDAs becomes imperative. The banking arrangement of a country is very instrumental to the effective management and control of the government's cash resources. Nigeria, like many low-income countries, employed fragmented systems in handling government receipts and payments. It was argued that establishing a unified structure as recommended by the IMF, where all revenue of the government is put together in one account will provide a holistic view of all the cash resources. This will help to extend credit, improve the government's fiscal policy and avoid costs associated with unnecessary borrowing among other benefits to the government (CBN, 2012).

The need for accountability and transparency in government revenue collection brought about the establishing and implementation of the TSA scheme so that all Government cash resources are controlled by the government. The TSA policy is a sure way of addressing the menace of propagation of bank accounts managed by the MDA and it aids in promoting fiscal accountability among governmental organs (AGF, 2015). It was perceived that TSA will ensure that cash received is available for the government's expenditure programmes and for making payments promptly. During the introductory stage of TSA in Nigeria, Government made some pronouncements on treasury single account including the objectives that should be achieved. It

was argued by CBN (2015) that consolidating Government cash resources by way of TSA implementation will lead to the realization of the following:

- Identify all Government funds and bring them into the control and operational purview of the Ministry of Finance, to achieve a central, clear and responsible revenue management
- Promote efficiency and effective management of cash resources
- Ensure that cash resources are available to meet government expenditure
- Promote efficient management of National debt
- Reveal idle cash of the government which can be channelled into optimal investment
- By ensuring daily remittance into the TSA, loopholes through which revenue is stolen will be blocked
- Establish a mechanism that promotes efficiency in the collection and disbursement of Government funds
- Improve the liquidity position of the government
- Discourage the various MDAs from keeping multiple bank accounts and thereby saving the costs associated with maintaining them across multiple financial institutions

The treasury single account became operational in Nigeria by the year 2015. After six years of operation, it became necessary to evaluate the extent to which some of the above-stated objectives have been achieved.

#### **Statement of problem**

TSA has operated in Nigeria for six years but the effectiveness of the scheme in achieving the stated objectives is an issue for which there is no consensus. Proponents like Akande (2015), Chukwu (2015), Onyekpere (2017), and Obinna (2015) have variously lent their voices in favour of the TSA of the Federal Government. Akande (2015) posits that it was initiated for improving transparency and accountability in the managing of public fund. Chukwu (2015) and Onyekpere (2015) argued that with TSA implementation, Government will have a clear picture of daily revenue, leakages in revenue generation will be prevented, and spending of government revenue from a source which gives room for mismanagement of public funds will be controlled and spending by MDAs will now be backed by fiscal allocation. Obinna (2015) stressed that with a treasury single account more revenue will be available for the government because the TSA has the potential to prevent capital flight as well as other leakages of government funds arising from various unauthorized foreign accounts. However, critics like Balogun (2015), Labinjo (2015), Falae (2015), Jega (2016), Melaye (2015), and Fayose (2015) have expressed some worries over the implementation of the treasury single account. Balogun (2015) and Labinjo, (2015) contended that remitting all revenue collected into the TSA on daily basis could slow down the operations in the MDAs as provision was not made for MDAs to retain a certain proportion of the revenues collected to meet running expenses. They also opined that operations in some MDAs would be disrupted due to the likelihood of late approval of their budgets under the TSA scheme. Falae (2015) argued that including the public companies in the TSA may alter the confines linking the public and government sectors, and restrict their functioning sovereignty. Public entities like tertiary institutions may gravely lose their self-sufficiency. Similarly, the TSA policy of the Federal Government could be counterproductive and may not archive the desired purpose for which it was created (Chijioke & Orioha, 2016).

Others have also feared that the TSA scheme will amount to putting all cash resources into one basket and could be very risky. It was observed that by November 2015, fraud of about twenty-five billion naira (N25 billion) was committed due to the TSA scheme (Fredrick N, 2015; Channels news, 2015). Similarly, funds collected through the TSA were misused as they were diverted for political purposes by politicians (Wole, 2015). Although the Federal Government of Nigeria has since debunked the above allegation, the possibility of using the TSA policy to loot the Nigeria treasury cannot be ruled out given the level of corruption in Nigeria (Transparency International, 2017).

#### **Research Objectives**

The main objective of this study is to assess the effect of the TSA policy on cash available to meet government expenditures and efficient management of government borrowing.

Specifically, the study sought to:

- 1 Examine the effect of TSA implementation on Federal Government funds to meet spending

2 Assess the effect of TSA implementation on federal government cash resources and federal government borrowing

#### **Hypothesis**

HO<sub>1</sub>: Implementation of TSA has no significant effect on Cash availability to meet Government spending

HO<sub>2</sub>: The Federal Government TSA implementation has no significant effect on her management of national debt

#### **Scope of the Study**

The period covered by the study comprises 12 years periods before and after TSA implementation. The pre-TSA period runs from September 2011 to August 2015. While the post-TSA period runs from September 2015 to August 2020.

### **LITERATURE REVIEW**

TSA is a united structure of government accounting which warehouses government financial resources and through which funds to carry out various responsibilities are sourced. It is a connection of the central account with various subsidiary accounts in such a way that the closing balances in each subsidiary account are automatically moved into the main account by the end of each working day. TSA enables the government to have at a glance all its cash positions at every particular period. Yusuf and Chiejina, (2015).

The TSA, by bringing all the cash resources into one account, enables consolidation and promotes efficient management of funds. (Shah, 2007; Adeolu, 2015 and Oyedele, 2015). The idea is to enable the government to have full control of revenue that accrues to it as well as of expenditure payable by it. It is considered an effective tool that will help the government to exercise supervision and overall control of its cash resources. Obinna (2015) stated that maintaining TSA enhances funding of the government budget thereby making funds available for various governmental responsibilities. Chukwu (2015), stated that TSA is an interconnection of various smaller accounts with the central account enabling transactions to be carried out in the smaller accounts but daily, the closing balances in each of the smaller accounts are moved into the main account with the CBN. MDAs get their daily disbursements funded from the main account and their daily collections are swept electronically into the main account domiciled with the CBN.

In May 2015 the TSA was fully implemented in the Nigerian Government accounting. According to Sailendra & Israel (2010), three essential features are identified with the comprehensive execution of TSA; the first is the unification of the banking arrangement of the government for monitoring cash flows. Next is the prevention of other government agencies from using bank accounts without the supervision of the treasury. The last one is the holistic aggregation of all cash resources of the government taking into consideration budgetary and extra-budgetary.

#### **Technological Infrastructure**

The TSA Technological Infrastructure is the platform that is needed in other to achieve success in TSA implementation. In Nigeria, the technological infrastructure deployed by the CBN is called Remita. It is an electronic payment platform for the collection of government revenue and remitting what was so collected into a specified account known as Consolidated Revenue Fund (CRF) Account under the custody of the CBN.

#### **Various Accounts under the TSA Scheme**

The various forms of accounts under the TSA scheme according to Sailendra and Israel (2010) are:

**TSA major account:** This account is called the CRF. Where the TSA arrangement involves other smaller accounts, the main TSA account is needed as a central link. Every day, the cash balances in all the link accounts are transferred to the CRF.

**TSA subsidiary accounts or sub-accounts:** In the sub-account arrangement, a set of related transactions are put together while allowing the separate accounting ledger to be kept by the government. Balances in the Zero Balance Accounts at the commercial banks are transferred daily to the TSA sub-account domiciled with the CBN, while net offs are made on the balances in each of the sub-accounts against the TSA main account.

**Transaction accounts:** These are accounts kept to accommodate certain government transactions that are viewed as retail. A limit could be set on the amount of cash disbursement (for respective agencies) on a

particular transaction account. This helps in proper monitoring of cash disbursement through the concerned bank.

**Zero-balance accounts (ZBAs):** Just as the name sounds, the zero balance account shows nil balances at the close of every day. The accounts are managed by various MDA and are generally expected to close each day with nil balance. The zero daily balance is achieved by sweeping any available balance back into the TSA by the close of the day. The accounts are used in collecting and disbursements of government income, mainly non tax revenues. Delays associated with the interbank settlement are completely avoided by the ZBA in that it does not go through the usual interbank settlement process while ensuring daily settlement for all transactions.

**Imprest accounts:** The imprest accounts are kept to take care of petty transactions within the agencies. Unused balance in the imprest account is transferred into the central account daily.

**Transit accounts:** Transit accounts are created for a specific purpose and not for daily banking activities. For instance, transit accounts might be necessary (i) to monitor the collection and remittance of a major revenue stream through the banking operation or (ii) to smooth the progress of revenue sharing among the levels of government.

**Correspondent accounts:** These are separate accounts maintained for each correspondent entity. The account which is operated in real time enables an entity to know how much balance it has in the TSA at every point in time. The central bank provided funds needed by each correspondent to carry out its budget and also make disbursements concerning the balances being maintained in a correspondent's account.

#### **Government Cash Resources**

Government cash resources comprise Government revenue and Government borrowing. Government borrowings are resources raised from outside the Government in question which are intended to be repaid in line with the terms of the agreement. Government cash resources are credited into either the consolidated revenue fund or development fund depending on the nature of such revenue (Adebisi 1999).

#### **Government Expenditure**

Trading Economics (2017), views Government Spending as public expenditure on goods and services. Like government resources, government expenditure can either be recurrent or capital in nature. The capital expenditures are those that last for more than one year while the recurrent expenditure expires within one year. This expenditure ranges from as low as payment of workers' salaries to the construction of bridges, airports, seaports, electrification, solid waste treatment and disposal, security, etc (Wikipedia, 2018).

#### **Theoretical Framework**

This study is anchored on accountability theory, developed by Vance, Lowry, & Eggett (2013). In understanding the theory better, accountability is differentiated in its two common uses: - "virtue" and "mechanism". Under virtue, we view accountability as that excellence exhibited by a person's eagerness to welcome responsibilities. It is that quality which compels an officer to own up to his actions or inaction. Under mechanism, accountability is viewed as how a responsible officer must explain with regards to his actions or inactions to other persons who have the power to judge and punish the officer for such actions or inaction.

According to Vance, Lowry, & Eggett (2013), the theory put forward four components. The first one is Identifiability- having to do with the awareness that the result of one's action is connected to such a person and thus reveals the person's real personality. The second one is Expecting evaluation – this is the principle that people's performances are evaluated in line with established standards and several implicit penalties. The third one is Awareness of monitoring – this involves full consciousness that one's work is monitored. The fourth one is Social presence – this implies being aware that other people are using the system. In TSA arrangement, Government implements the TSA scheme which affects the overall economy of the nation and by extension affects the life of the citizens. To this end, Government is fully aware that its actions, policies, and programmes are being watched by the citizens to whom they are accountable. From time to time government performance is assessed based on the extent to which it has impacted positively on the citizens. Any policy that did not or is not capable of improving the living standard of the citizens is adjudged a bad policy. The whole idea behind the execution of TSA is to have full control of government revenue so that there will be available resources to execute government expenditures. This is government policy on revenue control and the policy is being

monitored by the citizen who from time to time assess if government policies are impacting positively on their lives or not. Since accountability theory is in agreement with government policy implementation as discussed above, the theory is considered appropriate for this study.

### Empirical Review

Obara, Ordu and Obara (2022) assessed the TSA policies and how it impacts the growth of the economy. The research work found that government revenue has flattened out within the post TSA period compared to how it was before the TSA implementation.

Chinomso (2022) assessed the effects which TSA has on the performance of some Federal Ministries. The paper found that adoption of TSA has not notably solved the problem of misappropriation of government finances.

Dorcas, Oshatimi, and Omilegan (2021) *determined the effects of TSA on the Nigerian government expenditure, revenue and borrowing. Their findings had it that adoption of treasury has some effect on government revenue and as well as government expenditure but has no effect on government borrowing.*

In a similar study, Abosede and Franklin (2021) aimed at determining the effects of the TSA adoption on the Nigerian banking sector specifically in areas of bank liquidity. It was found that TSA adoption has significant effects on the liquidity of deposit money banks in Nigeria.

Allison and Ndukwe (2021) examined the roles of TSA in attaining Accountability. Their findings showed that adoption of TSA improves accountability in dealing with public fund.

Ezinando (2020) examined if adoption of TSA has in any way improved the deposit mobilization of banks operating in Nigeria between the periods of 2011 to 2018. The study concluded that the TSA policy of the Federal Government has significantly contributed to increase in deposit mobilization of banks in Nigeria which by extension lead to increase in loans and advances granted by the banks.

Amaefule and Barigbon (2019) assessed whether TSA has in any way improved government performance specifically in terms of revenue generation, investment in capital project and growth in external reserve. It was found that the TSA policies only impacted negatively on government performance with regards to generation of revenue, investment in capital infrastructure and growth of external reserves.

Fatile and Adejuwon (2017) examined the impact TSA on Governance costs. The researchers argued that corruption rather than over-bloated bureaucracy is the major cause of an increase in the cost of governance. The paper concluded that TSA is dependable in managing public funds for allocating and applying government funds to projects that bring economic development and advance living standards.

Aliyu and Bello (2016) assessed Treasury Single Account (TSA) as an Effective Instrument of Financial Prudence and Management in Nigeria. Findings from their study suggest that proper execution TSA by the stakeholders will to a great extent reduce corruption, mismanagement of public funds, block leakages and promote transparency.

Odewole (2016) examines and discusses the various operational challenges facing the execution of TSA in Nigeria. They conclude that if the government fails to provide enabling environment, adequate legislative support as well as basic infrastructural and technological facilities that are so needed, the TSA scheme may not achieve its desired objective with regards to stopping revenue leakages, reducing corruption and financial carelessness by public officers, and promoting openness in the management of public resources.

Oti, Ibeng and Obim (2016) assessed the policy impact of the TSA to proffer solutions to the acknowledged problems. Questionnaires were administered to a sample size of 286 respondents. Finding shows the negative effect of TSA adoption on banks' liquidity, leading to the adoption of various cost minimization measures including salary reduction and downsizing of personnel. The researchers advised that government should embark on sensitivity analysis to evade an unexpected drop in GDP due to the winding up of corporations that are negatively affected by the unexpected economic shock.

Oguntodu, Adekunle and Adegbe (2015) assessed the TSA and Nigeria's Economy Between 1999 and 2015. The research employed the ordinary least square method to analyze secondary data obtained from CBN statistical bulletin (1999-2015). Findings from the study showed that TSA has positive significant impacts on economic growth. They however stressed that the impact was somehow restricted by some issues such as TSA

being introduced newly in Nigeria thereby limiting the amount of data available for the study. They recommended that government should initiate policies towards ensuring proper accountability of the funds entering into and going out of the Treasury Single Account. They suggested that any infraction to the laid down rules guiding the TSA policy be seriously viewed by the government.

Clementina (2016) looked at the impacts TSA on liquidity. The researchers focused the study on the Nigerian Banks. Results from their analysis showed that implementing the TSA has some negative effects on banks' liquidity and performance. The researcher charged the banks to look out for other means of generating funds rather than depend largely on government cash deposits.

Okerekeoti and Okoye (2016) accessed the implementation of TSA in Nigeria from a theoretical perspective. After assessing the contribution from various authorities as well as relevant publications on treasury single account, they came to the following conclusion: (1) TSA policy if fully implemented will identify and block various means by which government funds were being mismanaged. (2) Implementation of the TSA will help in full identification of all government revenue (3) The TSA system forced the Nigerian banks to stop the round-tripping of government deposits and start core banking operations.

Eme, Chukwura and Iheanacho (2015) in their study attempted to analyze the merits and demerits of the TSA policies in Nigeria. After assessing the contribution from various authorities as well as relevant publications on TSA, the researchers concluded that any decision in blocking leakages in revenue-generation is a worthwhile decision.

## METHODOLOGY

The *ex-post facto* research method was employed. It consists of exploratory, historic and descriptive types of research and deals with events that have already occurred and data already existed (Michael and Sunday, 2013). The researcher used secondary data for analysis. Data on Federal Government spending as well as Federal Government Revenue were extracted from the CBN statistical bulletin, while data on Federal Government borrowing was extracted from Debt Management Office quarterly report. Chow test was used in data analysis. Here we want to test whether there is any structural change in government expenditure as well as government borrowing after the execution of the TSA scheme in 2015. An F-test was used by the model in determining whether the supposed structural changes have any quantifiable effects periods in question.

### Model Specification

A general regression model

$$Y_1 = a_1 + b_1x_1 + u_1$$

Regression for the period before TSA implementation

$$Y_2 = a_2 + b_2x_2 + u_2$$

Regression for the period after TSA implementation

$$Y_3 = a_3 + b_3x_3 + u_3$$

Chow statistics is computed as follows:

$$F = \frac{[RSS_1 - (RSS_2 + RSS_3)] / K}{(RSS_2 + RSS_3) / (N_1 + N_2 - 2k)}$$

Where:

Y = the first variable of the study (i.e. the dependent variable)

X = the second variable of the study (i.e. the independent variable)

RSS1 = Sum Square Residual of pooled regression

RSS2 = Sum Square Residual of regression before TSA implementation

RSS3 = Sum Square Residual of regression after TSA implementation

k = number of variables used

n = sample size

For hypothesis one

Y = Government Spending, X = Government Revenue

For hypothesis two

Y = Government cash resources, X = Government Borrowing

**Decision Rule**

Reject the null hypothesis if chow statistics is greater than the tabulated f-value and vice versa

**DATA ANALYSIS AND RESULTS**

Model 1

A general regression model

$$Y1 = a1 + b1x1 + u1$$

Regression for the period before TSA implementation

$$Y2 = a2 + b2x2 + u2$$

Regression for the period after TSA implementation

$$Y3 = a3 + b3x3 + u3$$

Where:

Y = Government Spending, X = Government cash Resources

**Test of Hypothesis**

**Hypothesis One**

Ho: Implementation of treasury single account has no significant effect on Government spending

**Table 1: Pooled Regression (before and after the TSA implementation)**

**ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9105221.860	1	9105221.860	2.416	.159 <sup>b</sup>
	Residual	30151880.492	8	3768985.062		
	Total	39257102.352	9			

Source: Authors' computations using SPSS version 23

a. Dependent Variable: GVT.EXP

b. Predictors: (Constant), TSA

**Table 2: Separate Regression after the TSA implementation**

**ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13862022.996	1	13862022.996	11.135	.044 <sup>b</sup>
	Residual	3734561.749	3	1244853.916		
	Total	17596584.745	4			

a. Dependent Variable: GVT.EXP

b. Predictors: (Constant), TSA

**Table 3: Separate Regression before the TSA implementation**

**ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7985.371	1	7985.371	.070	.808 <sup>b</sup>
	Residual	342196.660	3	114065.553		
	Total	350182.030	4			

a. Dependent Variable: GVT.EXP

b. Predictors: (Constant), TSA

Chow statistics are used in testing this hypothesis

Sum of Square Residual for the pre and post-TSA periods = 30151880.492



Sum of Square Residual for the post TSA period = 3734561.749

Sum of Square Residual for the pre-TSA period = 342196.660

Chow statistics is computed as follows:

$$F = \frac{[RSS1 - (RSS2 + RSS3)] / K}{(RSS2 + RSS3) / (N1+ N2 - 2k)}$$

$$= \frac{[30151880.492 - (3734561.749 + 342196.660)] / 3}{(3734561.749 + 342196.660) / (5 + 5 - 6)}$$

$$= 8.53$$

At a 5% level of significance, 2 degrees of freedom for the numerator and 4 degrees of freedom for the denominator, the table value of F = 6.94. Since the computed value (8.53) exceeds the tabulated F value of 6.94, the null hypothesis is rejected and the alternative hypothesis which states that the implementation of a treasury single account has some significant effect on Government spending is accepted. This means that the TSA policy of the Federal Government has made a significant impact on government cash resources to finance expenditures.

Model 2

A general regression model

$$Y1 = a1 + b1x1 + u1$$

Regression for the period before TSA implementation

$$Y2 = a2 + b2x2 + u2$$

Regression for the period after TSA implementation

$$Y3 = a3 + b3x3 + u3$$

Where:

Y = Government borrowing, X = Government cash resources

**Hypothesis Two**

Ho: The Federal Government Implementation of the treasury single account has no significant effect on her management of the national debt

**Table 4: Pooled Regression (before and after TSA implementation)**

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	14338057.909	1	14338057.909	.847	.384 <sup>b</sup>
	Residual	135370874.546	8	16921359.318		
	Total	149708932.454	9			

a. Dependent Variable: DEBT

b. Predictors: (Constant), TSA

**Table 5: Separate Regression after TSA implementation**

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	27579715.989	1	27579715.989	3.999	.139 <sup>b</sup>
	Residual	20691165.001	3	6897055.000		
	Total	48270880.990	4			

a. Dependent Variable: DEBT

b. Predictors: (Constant), TSA

**Table 6: Separate Regression before TSA implementation**  
**ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	780633.158	1	780633.158	13.684	.034 <sup>b</sup>
	Residual	171144.487	3	57048.162		
	Total	951777.646	4			

a. Dependent Variable: DEBT

b. Predictors: (Constant), TSA

Chow statistics are used in testing this hypothesis

Sum of Square Residual for the pre and post-TSA periods = 135,370,874.546

Sum of Square Residual for the post TSA period = 20,691,165.001

Sum of Square Residual for the pre-TSA period = 171,144.487

Chow statistics is computed as follows:

$$F = \frac{[RSS1 - (RSS2 + RSS3)] / k}{(RSS2 + RSS3) / (N1-N2 - 2k)}$$

$$= \frac{[135,370,874.546 - (20,691,165.001 + 171,144.487)] / 2}{(1,119,104.805 + 886,667.549) / 20-4}$$

= 7.32

At a 5% level of significance, 2 degrees of freedom for the numerator and 4 degrees of freedom for the denominator, the table value of F = 6.94. The computed value (7.32) as shown above exceeds the tabulated F value of 6.94. Consequently, the null hypothesis is rejected and the alternative hypothesis which states that the implementation of a treasury single account has some significant effect on the composition of Government cash resources is accepted. This means that the TSA policy of the Federal Government has made a significant impact on the management of the national debt.

**SUMMARY, CONCLUSION AND RECOMMENDATIONS**

**Summary of results**

Concerning our computations above, the results revealed the following:

2. Implementation of TSA has made some significant impacts on cash available to meet Government expenditures
3. The implementation of TSA has made a significant impact on the management of national debt.

**Conclusion**

Five years into TSA implementation in Nigeria, the policy has started yielding the desired result. The study showed that implementing TSA have some positive impacts on Government expenditures that were initially being financed through borrowing. By bringing all Government revenue under the purview of the finance minister and enforcing compliance by all MDAs, the TSA policy has improved cash availability to meet Government expenditures. Again, the study revealed that the TSA policy of the Government has some significant effect on government borrowing. Although appendix 1 below showed some increase in government borrowing in the period after the TSA implementation, the amount of public debt could have been more. Cash resources may have significantly improved as a result of prompt remittance by ministries, departments, and agencies into the consolidated revenue fund as well as blockage of loopholes through which government revenues were being misappropriated.

Based on the data analyzed as well as the above summary of findings, we conclude that implementing the TSA has achieved its objective of ensuring cash availability to meet government expenditure. We also conclude that implementing the TSA policy has achieved its objectives of promoting efficient management of national debt among others.

### **Recommendations**

The researchers made these recommendations:

- 1, Government should not relent in enforcing discipline and punishing defaulters so as not to allow the TSA scheme to fizzle out.
- 2, Government should carry out an investigation to identify all her revenue sources to bring them into the TSA scheme.
- 3, An Incentive scheme should be introduced to encourage various MDAs for prompt remittance of revenue collected by them.
- 4, Government funds already in the TSA should be put into expenditure on public goods and services that will benefit the citizens rather than leaving it idle at CBN.
- 5, Government should ensure proper accountability by the Ministry of Finance, of the operation of the TSA, to the citizens.
- 6, As the TSA warehouses all funds of the government, any fraud committed on it, could be very devastating to the economy therefore; regular audit verification should be carried out on the TSA for prevention /early detection of fraud and irregularities.

### **SIGNIFICANCE AND CONTRIBUTIONS**

#### **Significance of the study**

The study is considered very important as it reveals to the government how the treasury single account policy is capable of blocking revenue leakages and promoting the availability of government cash resources. It is also beneficial to the various agencies that are charged with the responsibility of collecting government revenue as it reveals to them the importance of revenue in the effective functioning of government. This will encourage them to comply with the TSA directives through prompt remittance of revenue collected by them into the TSA account. Again the study serves as a reference document for scholars who are researching related literature.

#### **Contribution to literature and practice**

The study has contributed to the existing literature by showing that the TSA has significant impact on the availability of cash resources to the government. It has also revealed that in practice, bringing the cash resources into one basket and eliminating multiple bank accounts by various ministries, will enable the government to see at a glance the total resources and thereby make an informed decision as to whether there is any need to go borrowing or not.

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