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Impact of Treasury Single Account on Government Revenue and Economic Growth in Nigeria: A Pre – Post Design

Chijioke N. OFURUM, Promise C. OYIBO, Queeneth E. AHUCHE
Department of Accountancy, Imo State University, Owerri, Nigeria.
Email: cjofurum@gmail.com

Abstract
Since the implementation of Treasury Single Account (TSA) in 2015 by the present administration in government with the intention to control financial mismanagement which will consequently improve government revenue and economic growth; stakeholders, researchers and the general public are interested to know the extent to which these objectives have been met. This study empirically examined the extent to which TSA has improved Federally Collected Revenue (FCR) and Gross Domestic Product (GDP) of the economy. Secondary data sources from Central Bank of Nigeria statistical bulletin and economic reports were utilized for this study. The observations were recorded on quarterly basis from Q3-2013 to Q2-2017. The data were divided into two periods: Pre TSA period (Q3-2013 to Q2-2015) and Post TSA period (Q3-2015 to Q2-2017). A pre post analysis (difference in means test) was carried out using SPSS version 20. Analysis shows that the implementation of TSA has a negative and significant effect on FCR. However, further findings revealed that GPD of the country significantly increased after the implantation of TSA. It was recommended that periodic appraisal of each revenue generating sector should be made so that some sectors that are not performing as they ought to will not feel covered by those that are doing better.
Keywords: Treasury Single Account, Government Revenue, Economic Growth, Pre-Post Analysis, Paired Sample Statistics, Implementation.

Introduction

Treasury Single Account (TSA) is a financial policy used in several countries all over the world. It was introduced by the federal government of Nigeria in 2015 to consolidate all inflows from all agencies of government into a single account at the Central Bank of Nigeria. TSA was introduced so as help to monitor the government revenue, and also stifle the corruption in Nigeria. TSA is a relatively new public accounting system; it uses a single account or a set of linked accounts by the government. The primary purpose is to control the government revenue and make sure that all the payments have been made through a Consolidated Revenue Account (CRA).

The introduction of treasury single account is as a result of numerous corrupt practices that exist in Nigeria, such as lack of transparency and accountability (Kano, 2016). The policy was introduced to reduce the proliferation of bank accounts operated by ministries, Departments and Agencies (MDAs) and also to promote transparency and accountability among all organs of the governments to ascertain the amount that is accruing to its accounts on a daily basis. It is a financial tool that unifies all government accounts in a single pool for effective cash management (Odewole, 2016). TSA is believed to be an efficient and effective means of managing government revenue generation and system that provide and enforce sufficient self–control mechanism on revenue generation and budget implementation using a daily return from account balances of various MDAs into a central account (Adebisi & Okike, 2016).

However, since the implementation of Treasury Single Account, it is still unclear on how the new system has affected federal government revenue specifically, and the country's economic growth at large. It is against this background that we are motivated to examine the impact treasury single account has on revenue generation and economic growth in Nigeria.

Literature Review
Conceptual Framework

Treasury Single Account (TSA): The TSA is the federal Government's autonomous revenue collection platform. It can be defined as a public accounting system under which all government revenue, receipts and income are collected into one single account, usually maintained by the country's Central Bank and all payments done through this account as well. Chukwu (2015) posits that Treasury Single Account (TSA) is a network of subsidiary accounts that are linked to a main account such that, transactions are effected in the subsidiary accounts but closing balances on these subsidiary accounts are transferred to the main account, at the end of each business day. According to Akande (2016), it is an account that links all government revenues all over the federation into the federal government consolidated revenue fund account which is currently domiciled at the CBN via Remita e-collection payment system. Yusuf (2015) opined that Treasury Single Account is a unified structure of government bank accounts enabling consolidation and optimal utilization of government cash resources. The Treasury Single Account came into existence as a result of the quest of the government to nip corruption in the bud. TSA was introduced with the view to reduce the multiplication of bank accounts operated by the MDAs and to ensure transparency and accountability in handling of government finances.

However, the implementation of the TSA comes with some retail activities which could be well performed by the commercial banks. According to Akande (2016), this includes; the collection of revenues such as taxes, tenement rates, loyalties, custom duties etc and the disbursement of such monies meant to pay government and individuals in the country. Bashir (2016) the TSA through Remita payroll Module can be used to pay salaries of workers. Kanu (2016) and Emme & Chukwurah (2015), note that the central objectives behind the introduction of TSA were to engender accountability of government funds, and to avoid undue misappropriation of funds. With this new arrangement, unspent budgetary provision as allocated to MDAs would now be automatically brought over to a new year instead of being shared by the corrupt workers of such MDAs.

According to researchers such as Akande (2016), Bashir (2016), and Isa (2016), the pilot programme that led to what is today known as TSA came into being in 2012 where about 217

MDAS were used as a case study. In this exercise, over 500 billion was saved from frivolous government spending units.

Economic Growth: According to International Monetary Fund (2002). Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Therefore, for the purpose of this study, real GDP shall be used as the proxy for economic growth. The OECD (2017) defines GDP as "an aggregate measure of production equal to the sum of the gross values added of all resident and institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs). Gross domestic product (GDP) is a monetary measure of the market value of all final goods and services produced in a period. The country's GDP since 2013 has been steadily increasing. For instance, in 2013 the country's GDP was N80,092.56 million, it increased to N89,043.62 million in 2014 and N94,144.96 in 2015, currently the figure stood at N101,489.49. The thrust of this study is to examine the extent to which Treasury single account implemented in 2015 has affected the country's economic growth.

Theoretical Framework

Stakeholder Theory: This theory is conceptualized on the assumption that the adoption of Treasury Single Account (TSA) by the FGN was as a result of the pressure mounted on the government by the stakeholder for the eradication of corruption. Stakeholder theory is a theory of organizational management and business ethics proposed by Freeman, R.E. in 1984. Freeman (1984) asserts that managers must satisfy a variety of constituents (e.g. investors and shareholders, employees, customers, suppliers, government and local community organizations). Based on this theory, the researcher argued that the emergence of TSA was as a result of government response to the yearnings, demands and aspirations of critical stakeholders by way of developing strategic options towards eliminating corruption. The stakeholder's theory therefore explains the motivating factors that made the government to adopt and implement the TSA,

Public Finance Management Theory: This theory assumes that the government should endeavour to prudently manage her expenditure to the benefit of the citizenry. The theory also stress that the government's revenue should be well mobilized to disallow the looting of such into private pockets (Udo and Esara, 2016). These consist of resources prioritization, prioritization of programmes the budgetary process, efficient management of resources etc. (Bashir, 2016), therefore, the essence of TSA is to avoid misapplication of public fund..

Modern Monetary Theory (MMT): This theory `deals with how sovereign government should act, operate, especially in terms of the management of finance and the impact of her action on the economy. Udo and Esara (2016) are of the view that the government should aggregate all government revenue into one single account. This theory advocates for the concurrent existence of the Treasury Single Account (TSA) and the Central Bank of Nigeria such that the Central Bank of Nigeria, being the apex bank is allowed to be in charges and in control of the TSA. According to Éric and Wray (2013) Modern Monetary Theory labels any transactions between the government sector and the non-government sector as a vertical transaction. The government sector is considered to include the treasury and the central bank, whereas the non-government

sector includes private individuals and firms (including the private banking system) and the external sector – that is, foreign buyers and sellers.

Empirical Review

Oguntodu et al. (2016), in their study "Treasury Single Account and Nigeria's Economy Between 1999 and 2015: An Assessment" employed a longitudinal research design to examine the relationship between Treasury Single Account and economic performance in Nigeria. Their study made used of secondary data from CBN statistical bulletin from 1999 to 2015. The study used GDP which represents Nigeria economic performance as the dependent variable while TSA which was represented by Money Supply (MS), Credit with CBN (CR) and Deposit to CBN (DP) as the independent variables. OLS regression technique was employed to show the extent or degree of relationship between the independent and the dependent variables. The result shows that the Treasury Single Account has a positive significant impact on the country's economic growth.

Ndubuaku et al. (2017) examined how the introduction of Treasury Single Account has affected banks Credit to private sector, Deposit Mobilization, and Loans and advances in their study "Impact of Treasury Single Account on the Performance of the Banking Sector in Nigeria". The study employed descriptive and ex post facto research design. The population of the study was made up of the 24 commercial banks in Nigeria. The Time Series data used for the study were obtained from Central Bank of Nigeria Statistical Bulletin for the period 2010 – 2015. OLS Regression and correlation analysis were used to analyse the data. The study concludes that the introduction of Treasury Single Account significantly reduced Credit to private sector, Deposit Mobilization, and Loans and advances. The study recommends that the banks should avoid over-reliance of government funds and source for funds from other sectors of the economy.

Kanu (2016), in his study "impact of Treasure Single Account on the liquidity of the banks" used a selected sample of 10 banks in Nigeria to investigate the effect of Treasury Single Account on banks liquidity. The study employed a cross-sectional research design and utilized a primary data sourced through questionnaire. The work employs both descriptive and inferential statics for data analysis. The results obtained confirmed that the implementation of Treasury Single Account in the public accounting system impacted negatively on the liquidity base and the performance of banking sector in Nigeria

Bashir (2016) examine the extent to which Treasury Single Account can block financial leakages, promotes transparency and accountability in the public financial management in his study "Effects of Treasury Single Account on Public Finance Management in Nigeria". The study population covers Ministries, Department and Agencies within Bauchi metropolis using a sample of 72 respondents through judgment sampling. A Pearson correlation technique was employed as the data analysis method. The study result shows that Treasury Single Account (TSA) is capable of plugging financial loopholes, promoting transparency and accountability in the public Financial System. Thus, the researchers recommend that for the success of this policy government should promulgate more legislation to make it mandatory for all the three tiers of government in Nigeria.

Udo and Esara (2016) jointly carried out an empirical study to evaluate the benefit of the adoption and full implementation of TSA by the state governments of Nigeria. Descriptive cross-sectional survey design was adopted for the study. The population for the study consisted of 200 Professional Accountants in Akwa-Ibom State. Taro Yamane's statistical formula was used to select sample size of 133. Purposive sampling technique was used to select the 133

respondents/samples. The data obtained from questionnaire administration were analysed using descriptive statistics and t-test statistics. The finding reveals that, TSA adoption and full implementation by the state governments will be of greatest benefit.

Gap in Literature

Despite the fact that some studies has been conducted on TSA and how it affects revenue generation. Most studies formed their conclusions based on people's opinion and not on the government revenue data made available by central bank of Nigeria. Example, the study conducted by Udo and Esara (2016) made use of 200 Professional Accountants in AkwaIbom State to evaluate the benefit of the adoption and full implementation of TSA by the state governments of Nigeria. Also, Bashir (2016) used a sample of 72 respondents through judgment sampling to examine the effects Treasury Single Account has on Public Finance Management in Nigeria. Other studies focused on the commercial banking sectors such as Kanu (2016), Ndubuaku, Ohaegbu, and Nina (2017) etc. As a result, this study will examine the impact of TSA on revenue generation and economic growth in extension by comparing the total revenue generated before and during its introduction.

Materials and Methods
Nature and Sources of Data

The data used for this work is time series in nature. The variables investigated were Federally Collected Revenue (FCR) and Gross Domestic Product (GDP). The data were collected from Central Bank of Nigeria (CBN) on quarterly basis from third quarter 2013 to second quarter 2017 resulting into a total of 16 observations. However GDP has missing values for two quarters (Q1-2017 and Q2-2017) as the report for these periods have not been officially released. The data were divided into two periods: a. Period before the implementation of TSA (Q3-2013 to Q2-2015) b. Period after the implementation of TSA (Q3-201 to Q2-2017). To correct for the effect of GDP's two missing values, it's Q3 and Q4 for 2013 were excluded in the analysis. The table below shows the data collected for the purpose of this work.

Table 1. Government Total Revenue and Nominal Gross Domestic Product

Periods	FCR	GDP
Observations before the implementation of TSA		
Q3-2013	2,748.74	20638.04
Q4-2013	2204.55	21418.72
Q1-2014	2495.74	20314.81
Q2-2014	2613.3	21718.96
Q3-2014	2783.46	23062.12
Q4-2014	2210.81	24482.44
Q1-2015	2055.64	21019.69
Q2-2015	1,397.20	23296.47
Observations after the implementation of TSA		
Q3-2015	1,911.71	24512.07
Q4-2015	1,547.96	26359.39
Q1-2016	1,276.38	22554.79
Q2-2016	1,118.56	24223.75
Q3-2016	1,848.52	27132.63
Q4-2016	1,434.48	29284.23
Q1-2017	1,446.14	-
Q2-2017	1,573.88	-

Sources: CBN statistical bulletin and economic report (2013 – 2017).

Design and Analysis Technique

A Pre – Post Research design was adopted for this study. A pre-test post-test otherwise called "difference in mean" design is an experiment where measurements are taken both before and after a treatment. The design means that you are able to see the effects of some type of treatment on a group. The rationale for this design is because the study will compare the past revenues generated by Federal Government before the introduction of TSA and revenues generated after the introduction of TSA, so as to ascertain the effect TSA has on the revenue collected between this two periods. Also the economy's GDP will be compared in the same manner.

In view of the research design, paired sample t-test was used as the data analysis technique with the help of SPSS program (version 20). Paired sample t-test is a statistical procedure used to determine whether the mean difference between two sets of observations is zero. In a paired sample t-test, each subject or entity is measured twice, resulting in pairs of observations. The appropriateness of this method can be justified from the fact that each data was grouped into two observations: (before e-taxation implementation and after e-taxation implementation) hence the research design name "Pre-Post".

Decision Rule: If the Prob. Value is greater than 0.05, the null hypothesis of no significant effect will be accepted; if otherwise, reject the null and accept alternative.

Result and Discussion
Paired Sample Statistics

Table 2. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	FCRa	1519.703750	8	266.8118589	94.33
	FCRb	2313.7425	8	456.86206	161.52
Pair 2	GDPa	25677.810475	6	2400.5761268	980.031
	GDPb	22315.747060	6	1565.4462376	639.09

Source: researchers' computation

From the table above, Federally Collected Revenue after the implementation of TSA has a mean value of N1519.7 billion with a Standard Deviation of N266.82 billion while Federally Collected Revenue before the implementation of TSA has a mean value of N2313.74 billion with a Standard Deviation of N456.86 billion. Statistics also revealed that Nominal Gross Domestic Product before the implementation of TSA was N22315.75 billion with a Standard Deviation of N1565.47 billion while its value after the implementation of TSA was N25677.81 billion with a Standard Deviation of N1565.47 billion.

Test of Difference of Means and Hypothesis Testing

Table 3. Paired Samples Test

		Paired Differences			t	df	Sig.
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	FCRa - FCRb	-794.04	491.142	173.64	-4.573	7	.003
Pair 2	GDPa - GDPb	3362.06	2995.84	1223.04	2.749	5	.040

Source: researchers' computation

Result on Paired Sample Test shows that Federally Collected has a mean difference of (N794.04) billion. From the result, one can conclude that the implementation of Treasury Single Account has a Negative and significant impact on Federally Collected Revenue *t(7) = -4.57 (SD=491.14), p=.003.* On the impact of TSA on economic growth, Gross Domestic Product has a mean difference of N3362.06 billion, analysis shows that the implementation of TSA has a positive and significant impact on the country's economic growth *t(5)=2.75 (SD=29995.84), p=.04.*

Discussion

From the result above, it can be seen that the implementation of Treasury Single Account has not improved revenue generation in Nigeria. Instead, the analysis disclosed that Federally Collected Revenue significantly decreased during the period of its implementation. While the mean value of FCR before TSA's implementation was N2313.74 billion, FCR after TSA's

implementation has a mean value of N1519.7 billion resulting into a decrease of N794.04 billion (see Table 3). This result is contrary to the expectation of the Federal government towards TSA's implementation. In respect to the impact of TSA on economic growth, it could be seen from the result that country's Gross Domestic Product improved after the implementation of TSA from a quarterly average of N22315.75 billion to N25677.81 billion. Further findings revealed that this improvement was statistically significant. This result correlates with the findings of Oguntodu, et al. (2016), who confirmed that Treasury Single Account has a positive and significant impact on the country's economic growth.

Conclusion

Based on the result of the result of the pre-post analysis carried out on the effect of TSA on the country's revenue and economic growth. The study concludes that the implementation of Treasury Single Account has not improved revenue generation in Nigeria, however the economy's growth measured using Gross Domestic Product was positively and significantly affected by the new accounting system.

Recommendations

i. Appraisal of each revenue generating sector should be made periodically so that some sectors that are not performing as they ought to will not feel covered by those that are doing better.
ii. The federal government should initiate policies and various means to make sure that proper accounting of the funds into the Treasury Single Account follows due process and any subsequent foul play by any agencies, or even the CBN is duly prosecuted.

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