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Effect of Monetary Policy on Tax Revenue in Nigeria (1999 – 2020)

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ABSTRACT

This study determined the effect of monetary policy on tax revenue in Nigeria. Ex Post Facto research design was adopted. Data for the study were extracted from Central Bank of Nigeria (CBN) from 1999 to 2020. Regression analysis was employed to test the hypothesis. The finding showed that money supply has negative effect t on tax revenue and this effect was not significant at 5% level of significance. Sequel to the finding, the study recommended that policymakers should focus more on employing fiscal policy, or taxation, which was found to be accelerating the nation's growth rate, whenever it is practical to stimulate the economy through monetary policy.

Keywords: Monetary policy, Money supply and Tax revenue

Introduction

Given that macroeconomic variables are susceptible to changes in the economy, achieving the long-standing macroeconomic goals of full employment, price stability, high and sustained economic growth, and external balance has been a top policy concern for all economies, established and emerging (Yakubu, Umar and Aminu, 2014), There is little doubt that these aims need to be guided by policy in order to be realized. The goal of economic policy is represented by this policy direction. It can be said that money is the lifeblood of any organization; hence the efficient operation of any unit, whether it be an organization or a geographic area, is greatly dependent on finance. Nigeria, like the majority of other nations, needs a strong tax structure to enable her to satisfy the demands of her teeming population. Amidst the worldwide difficulties of overcrowding, unemployment, and poverty, harnessing additional sources of income has become essential despite the nation's abundance in natural resources, primary among which is oil.

The management of national tax revenue is the aggregation of all regional tax revenues, where regional tax revenue growth varies according to each region's potential for collecting taxes. The possibility of taxation varies by economic sector in each location. In comparison to places with more dominating economic activity in the agricultural, forestry, plantation, and fisheries sectors, locations with dominant economic activity in the manufacturing and trade industries will have a higher tax potential (Faisal and Rizal, 2019). According to the description above, the growth of the Gross Regional Domestic Product (GRDP) and the inflation rate have an impact on the growth of tax revenue. In general, the GRDP growth and low inflation rate can increase the purchasing power of the public consumption, which will ultimately increase tax revenue.

For a very long time, both the government and business owners lacked a basic understanding of taxation. This is especially common in Nigeria, a developing country with inadequate financial institutions that cannot efficiently monitor or regulate tax collection. Numerous studies have been conducted on the relationship between fiscal policy (taxation and/or revenue) and monetary policy (money supply), with generally conflicting results. However, the choice to conduct research on the impact of monetary policy on tax revenue in Nigeria was motivated by the need for better understanding of the mechanisms underlying tax revenue generation in order to assist government in better managing tax generation through the enactment of pertinent laws and to assist business owners in designing their enterprises to be both tax compliant and profitable. This study therefore, determines the effect of monetary policy on tax revenue in Nigeria.

Conceptual Review

Monetary Policy

From a variety of angles, specialists have defined the phrase "monetary policy." Any policy measure created by the federal government through the CBN to control cost availability and supply of credit is referred to be monetary policy, according to CBN (2006). It was also known as the CBN's regulation of the money supply and interest rate to curb inflation and maintain the stability of an economy's currency flow. A collection of policies meant to control the value, supply, and cost of money on an economy in accordance with the anticipated levels of economic activity is what the CBN

(1997) characterized as "monetary policy." The term "monetary policy" refers to a set of actions intended to control the amount, supply, and cost of money in an economy in accordance with the intensity of economic activity. It can be characterized as the art of managing the flow and movement of financial resources in order to promote economic expansion and price stability (CBN 1992). Macroeconomic stability is attained through the intentional use of monetary instruments (direct and indirect) available to monetary authorities, such as the central bank. The main tool for carrying out the mission of monetary and price stability is monetary policy. The main goal of monetary policy is to achieve preset macroeconomic objectives by controlling and regulating the availability of money to the public and the flow of credit. The central bank typically implements this program of action (Dwivedi, 2005).

Tax Revenue

Osasu and Sadiq (2019) contend that the sizeable burden of a government's commitment to its population and the necessity to raise the standard of living necessitate considerable financial government investment in a country's economic development. It has also been demonstrated that the governments of many developing nations are unable to deliver basic public services for a variety of reasons. The most important of these is the low income. And using the tool of taxation is one surefire way to bring in this money.

The recent variations in the price of crude oil in Nigeria have resulted in a decrease in the amount of money that is available for distribution to the federal, state, and local governments. Taxation is therefore a necessary internal funding source for the local and state governments. The main goal and purpose of business in the majority of nations is fundamentally to make money so that the government can fund services like defense, law enforcement, health care, and education. Tax revenue can also be used to fund infrastructure projects that build social and economic systems. All of them have been hampered by a variety of issues worldwide, but tax evasion is unquestionably thought to be the most difficult in developing nations like Nigeria. Taxes are "a compelled exaction of money by a public authority for public purpose and that taxation is a way of obtaining money by the government through contributions from individual persons or corporate bodies," according to Soyode and Kajola's (2006) definition of tax. According to Anyua (1996), the most crucial aspect of taxation is that it is a payment demanded by legislative power and imposes a financial burden on people, things, or the government. The government does not directly or specifically benefit from the tax revenue it collects. However, Soyode and Kajola (2006) separate a tax from other types of government collections including fines, fees, and penalties based on this attribute.

In order to exercise its sovereign powers, a country must levy a tax on a percentage of the goods and services produced by its residents' labor and property. This tax is used to fund the government, enforce the laws, and maintain the system of government. The Chartered Institute of Taxation of Nigeria (2014) defined tax as an obligatory financial contribution made in accordance with statutory authority. A tax is not imposed if there is no legal statute that authorizes it. Tax is imposed on people, things, institutions, or other entities that fall under the purview of the taxing authority in line with some logical rule of apportionment.

Money Supply and Tax Revenue

The tools used by the government or the relevant central bank to regulate an economy are fiscal (tax/revenue) and monetary (money supply) policies. Nigeria's monetary and fiscal policies have a variety of goals. These include an increase in the GDP growth rate, a decline in the unemployment and inflation rates, an improvement in the balance of payments, an increase in financial savings and foreign reserves, and stability in the CBN-set exchange rate for the naira (Yakubu, Umar and Aminu, 2014). In general, both monetary and fiscal policies aim to achieve a certain level of macroeconomic stability.

Price and exchange rate stability is the primary goal of monetary policy (money supply) in Nigeria. The monetary authority bases its strategy for managing inflation on the belief that inflation is fundamentally a monetary phenomenon. The Central Bank of Nigeria (CBN) chose a monetary targeting policy framework to attain its goal of price stability because it is thought that targeting money supply growth is a suitable technique of targeting inflation in the Nigerian economy. The CBN used a variety of indirect (market-determined) methods to accomplish its monetary goals, with the broad measure of money (M2) serving as the intermediate target and the monetary base serving as the operating target. These tools included the discount window, liquid asset ratios, Nigerian Treasury Bills (NTBs) open market operations, and reserve requirements (IMF Country Report, 2003).

Empirical Review

Olufemi and Oladope (2021) investigated how monetary, fiscal, and trade policy affected economic growth in Nigeria from 1985 to 2020. The endogenous growth model (AK model) is the study's chosen theoretical foundation. The variables' levels of stationarity are mixed, according to the findings of the unit root test. The ARDL long-run conclusion demonstrates that fiscal policies encourage economic growth while trade policies, on the other hand, restrain economic growth in Nigeria. The impact of monetary policies on the economy demonstrates that the interest rate promotes economic growth while the money supply restrains Nigeria's economic expansion. Finally, trade policies continue to have a detrimental impact on the economy both in the short and long terms. Shahriyar, Mustafa, Mayis, and Farid (2020) used time series data from 1991 to 2017 to analyze the effects of monetary policy (measured by money supply and interest rate) and tax revenue on foreign direct investment (FDI) in Jordan. Empirical estimations use the Vector Error Correction Model (VECM), Canonical Cointegrating Regression (CCR), and Fully Modified Ordinary Least Squares (FMOLS) approaches. The findings of the estimation show that while tax income has a negative effect on FDI in Jordan, the money supply has a positive and statistically significant impact on FDI. The effect of interest rates is also statistically insignificant. Ezejiofor, Oranefo, and Ndum (2021) evaluated tax revenue on Nigerian per capita income. An ex-post facto research design was employed in the study. The information for this study's data analysis was

acquired from statistics bulletins and publications from CBN, FIRS, and NBS. Correlation and Ordinary Least Square (OLS) regressions were used to evaluate the hypothesis. Data study shows that the impact of customs and excise taxes on per capita income in Nigeria is negligible. Nweze, Ogbodo, and Ezejiofor (2021) looked into how tax revenue from 2000 to 2019 affected per capita income in Nigeria. This study used time series data and an ex-post facto research design. According to the report, tax collection significantly increased Nigeria's per capita income. The importance of taxation as a tool for tackling the difficulties of inflation in Nigeria was addressed by Osasu and Sadiq in 2019. Annual Abstracts from the Federal Inland Revenue Service and the Office of the National Bureau of Statistics for a period of 20 years were used to compile the data for this study (1994 to 2014). All the variables (companies income tax, value added tax, and custom and excise charges) had a positive and non-significant connection with inflation, according to the analysis of the data done using the error correction model (ECM). Okoro (2013) tested the effects of interest rate, inflation, exchange rate, money supply, and credit on GDP in order to determine how monetary policy affected economic growth in Nigeria. These methodologies included the Augumente Dickey Fuller (ADF) test, the Philips-Perron Unit Test, the Co-integration Test, and the Error Correction Model (ECM). The findings demonstrate that there is an equilibrium link over the long run between monetary policy tools and economic growth. Oraka, Ogbodo, and Ezejiofor looked into how the Tertiary Education Tax Fund (TETFUND) affected management in Nigerian tertiary education (2017). Data from the National Bureau of Statistics were collected using financial ratios, and regression analysis with SPSS statistical software version 20.0 was performed to test the outcomes. The results show that there is no connection between ETF fund allocations to Nigerian tertiary institutions and enrolment rates. Choosing industrial companies that are listed on the Nigerian Stock Exchange, Erhirhie, Oraka, and Ezejiofor (2018) examined how corporation taxes affected the financing choices made by manufacturing enterprises (NSE). In an ex post facto study approach, data were extracted from the annual reports and accounts of three chosen manufacturing businesses and evaluated using the linear regression model. According to the research, there isn't much of a connection between corporation tax and dividends paid by companies like Nigerian Breweries Plc, Dangote Cement Plc, and PZ Cussons Plc, as well as fresh issues of common shares, retained earnings, and long-term debt. Umaru and Zubairu (2012) used the Augmented Dickey-Fuller technique to assess the unit root property of the series and the Granger causality test to examine the effects of inflation on economic growth and development in Nigeria between 1970 and 2010. Unit root results indicate that all model variables are stationary, and Causality results indicate that GDP drives inflation rather than inflation causing GDP. The findings also showed that inflation had a beneficial effect on economic growth by elevating output and productivity levels as well as the development of total factor productivity. Therefore, the rate of inflation in a nation may be blamed for the economy's strong performance in terms of growth in per capita income.

Methodology

Ex-Post Fact research design and time series data which is the aspect of statistic that involves the various techniques of describing data collections has been adopted for the purpose of this research. The population of this study was on Nigerian monetary policy and tax revenue represented by money supply and total tax revenues respectively from 1999 to 2020.

The data for this research were extracted from secondary sources. The data were collected from CBN statistical bulletins, National Bureau of statistic website. The data extracted include; total tax revenue and money supply.

Model Specification

The study model is in the following form:

$Y = \beta_o + \beta_1 X_1 + \mu$

Where:

Y = Tax Revenue (dependent variable)

X = Monetary policy (independent variable)

β_0 = constant term (intercept)

β_1 = Coefficients of revenue

μ = Error term (stochastic term)

Explicitly, the equation can be defined as:

Tax revenue = *f* (Monetary policy) + μ

Representing the equations with the variables of the construct, hence the equations below are formulated:

$TTRi_t = \beta 0 + \beta_1 MS2t + \mu_t$ ……………….………………...………………….....i

Where

TTR = Total tax revenue

MS2= money supply

μ_t = error term for period t

t denotes the annual time-period

Method of Data Analysis

The data collected for the study were analyzed using Ordinary Least Square Regression Method (OLS) with aid E-view 9.0

Decision Rule

Accept the alternative hypothesis, if the P-value of the test is less than 0.05. Otherwise reject.

Data analysis

Test of Hypothesis

Ho_1: Money supply does not significantly affect tax revenue in Nigeria.

H_{I1}: Money supply significantly affects tax revenue in Nigeria.

Table 1: Regression analysis between tax revenue and money supply in Nigeria

Dependent Variable: TTR
Method: Least Squares
Date: 07/06/22 Time: 09:22
Sample: 1999 2020
Included observations: 22

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2784444.	425128.6	6.549652	0.0000
MS2	-0.003365	0.006833	-0.492371	0.6278

R-squared	0.011976	Mean dependent var	2692587.
Adjusted R-squared	0.037425	S.D. dependent var	1759154.
S.E. of regression	1791770.	Akaike info criterion	31.72181
Sum squared resid	6.42E+13	Schwarz criterion	31.82100
Log likelihood	346.9400	Hannan-Quinn criter.	31.74518
F-statistic	0.242429	Durbin-Watson stat	0.376179
Prob(F-statistic)	0.627819		

In table 1, a panel least square regression analysis was conducted to test the effect between money supply (MS2) and total tax revenue (TTR) in Nigeria. The Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. The value of Adjusted R squared was 0.037, an indication that there was variation of 4% on tax revenue due to changes in money supply while 96% was explained by unknown variables that were not included in the model. The probability of the slope coefficients indicate that; P (0.628>0.05). The co-efficient value of; β_1= -0.003365 and t statistics value = -0.492371 implies that money supply is negatively related to tax revenue, and this is not statistically significant at 5%.

Decision

Since the Prob (F-statistic) of 0.627819 is greater than the critical value of 5% (0.05), the study therefore upholds that money supply (MS2) does not have significant effects on tax revenue in Nigeria.

Conclusion

This study determined the effect of monetary policy on tax revenue in Nigeria. Data for the study were extracted from Central Bank of Nigeria (CBN) from 1999 to 2020. Regression analysis was employed to test the hypothesis. The finding showed that money supply has negative effect t on tax revenue and this effect was not significant at 5% level of significance, implies that the increase in money supply leads to decrease in tax revenue. The study therefore, concludes that monetary policy has negative effect on tax revenue in Nigeria.

Sequel to the finding, the study recommended that policymakers should focus more on employing fiscal policy, or taxation, which was found to be accelerating the nation's growth rate, whenever it is practical to stimulate the economy through monetary policy.

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