The Distributional Effects of Fiscal Policy on Consumption and Employment in Nigeria: A Bayesian DSGE Approach

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Abstract

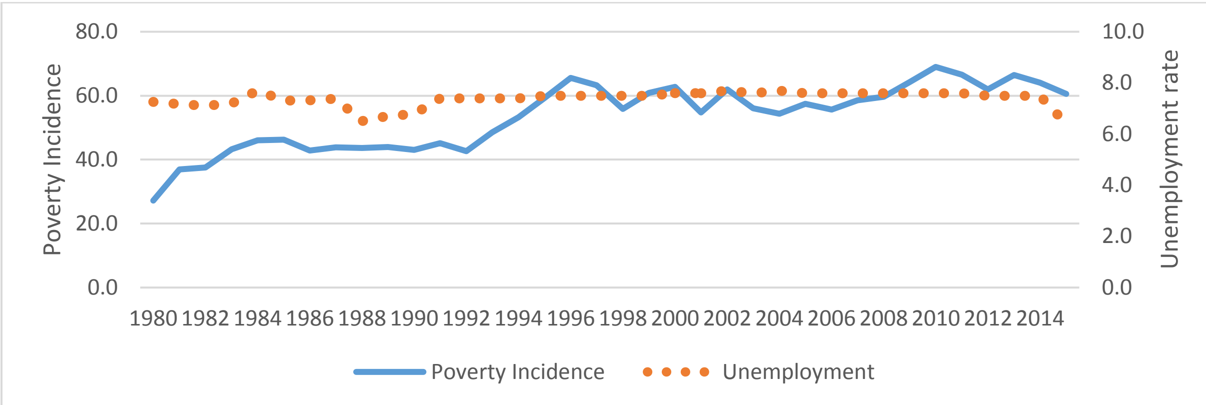
This study investigates the distributional effects of fiscal policy on consumption and employment in Nigeria using a Bayesian DSGE approach for the period 1981-2017. The empirical results show that government spending has higher positive effects on the employment and consequently the consumption of poor households. Also, government transfers have higher positive effects on the consumption of poor households. The study also shows that public investment has higher positive effects on the employment of poor households, but higher positive effects on the consumption of rich households. Consumption tax, capital tax and labor tax have higher effects on the consumption of the rich than of the poor households, but almost equal effects on the employment of both households.

Keywords: Distributional Effects, Fiscal Policy, Consumption, Employment
JEL Classification: E24, E32, E62, C11, H20, H50

Introduction

Over the years, poverty and unemployment have worsened in Nigeria (Muritala and Taiwo, 2011; Oladipo, 2017). By 2015 estimates, Nigeria has at least half of its population living in abject poverty (See Figure 1). Similarly, more than 50% of the population are unemployed. The general notion in many policy cycles is that a change in fiscal policy can have a multiplier effect on the economy because fiscal policy affects spending, consumption, employment and investment levels in the economy. In other words, fiscal policy, in the form of government spending, especially on social and economic infrastructure (e.g., electricity, transport, telecommunications, water and sanitation, education and health) could enhance or redistribute employment and consumption for both the rich and the poor (D'Acunto, Hoang and Weber, 2016; Francesco, Hoang and Weber, 2016; Deskar-Škrbić, 2018). However, such a proposition has not been tested in the literature for Nigeria.

Figure 1. Trends of Poverty and Unemployment in Nigeria



Data Source: NBS online database (accessed 13 June, 2016).

Essentially, compared to the huge empirical literature on the general effects of fiscal policy on growth (e.g. Nwaogwugwu and Evans, 2016; Evans and Saibu, 2017; Evans et al, 2018; Igwe, Emmanuel and Ukpere, 2018; Ono, 2018), the distributional effects of fiscal policy on consumption and employment have received much less attention (e.g. Higgins and Pereira, 2014), especially in Nigeria. An important question therefore is: "What are the distributional effects of fiscal policy on the consumption and employment of poor and rich households in Nigeria?"

The objective of this study therefore is to determine the distributional effects of fiscal policy on the consumption and employment of poor and rich households in Nigeria. In particular, the study is interested in the response of consumption and employment of poor (non-Ricardian) and rich (Ricardian) households to changes in fiscal policy variables. The empirical evaluation of the distributional effects of fiscal policy is conducted using a dynamic stochastic general equilibrium (DSGE) model.

Many recent key public debates in Nigeria highlight the significance of fiscal policy. By investigating the distributional effects of fiscal policy, the study will be useful in current policy discussions. The study is organized as follows: the next section describes the theoretical framework: the new Keynesian theory. Section 3 provides the benchmark new Keynesian DSGE model. Policy simulations based on this model from the empirical impulse responses are reported in Section 4. Section 5 provides discussion of results while the last section affords some policy implications and future directions.

1. The Theoretical Framework

There are many theories supporting fiscal policy or government intervention in the economy. Some of the theories are endogenous growth models, Ricardian equivalence theory, savers-spenders theory, Keynesian and new Keynesian theories (Barro, 1990; Mankiw, 2000; Fatás and Mihov, 2001; Mohanty, 2012). Among this, the most suitable theory for this study is the New Keynesian theory. The New Keynesian theory (also known as post-Keynesian economics) is the theory of modern macroeconomics that developed from the ideas of J. M. Keynes. Keynes wrote "The General Theory of Employment, Interest, and Money" in the 1930s, and his sway among policymakers and academics thrived through the 1960s. However, in the 1970s, new classical economists such as Robert Barro and Thomas J. Sargent questioned many of the norms of the Keynesian theory. The resultant adjustments to the original Keynesian theory led to the New Keynesian theory.

Three main assumptions define the New Keynesian theory: (i) Firms are not perfectly competitive. Rather, they are monopolistically competitive. (ii) Households and firms have rational expectations. (iii) Wages and prices are "sticky." Thus, New Keynesian theory assumes imperfect competition, rational expectations, and price stickiness. Imperfect competition in wage and price setting explains wage and price stickiness, which means that wages and prices may not adjust instantaneously to changes in economic conditions, preventing the economy from attaining full employment (Clarida et al, 1999; Mankiw, 2008). Rational expectations imply that households and firms look ahead to the future using all available information (Sargent, 2013). Therefore, the New Keynesian theory posits that more efficient macroeconomic outcomes (such as increased consumption and employment) can be achieved by the government (using fiscal policy). In other words, involuntary unemployment and market failures are possible, but government intervention in the economy can accelerate the markets return to equilibrium (Mankiw, 2008). Therefore, new Keynesian theory provides a rationale for government intervention in the economy, for example, via fiscal policy, in order to stimulate consumption and employment.

2. Methods and Data

2.1 The New Keynesian DSGE model

The New Keynesian DSGE model is used to model the New Keynesian theory. DSGE models, like other general equilibrium models in economics, can describe the behavior of the economy as a whole by evaluating the interactions of many microeconomic decisions (Kiley, 2016). The decision-makers in the model include households, firms, and the government or the central bank. This study therefore employs a DSGE model that replicates the fiscal behavior of the Nigerian economy and follows most of the empirical evidence in the literature that can be used for fiscal policy analysis in a developing economy like Nigeria. The model is developed in line with Galí et al. (2007), Kumhof and Laxton (2009), and González et al (2014). Consistent with Galí et al. (2007), the model incorporates poor (non-Ricardian) households, which is appropriate for the Nigerian economy in view of the high percentage of poor households in the economy (near 60 per cent according to NBS, 2016).

In the model, it is assumed there is a continuum of households in the economy. The Ricardian household maximizes its intertemporal utility function in terms of consumption ($C_{R,t}$) and leisure (with labour, $L_{R,t}$):

$$E_t \sum_{t=0}^{\infty} \beta^t \left[\frac{\left(C_{R,t} - \varphi_c C_{R.t-1}\right)^{1-\sigma}}{1-\sigma} - \frac{L_{R,t}^{1+\varphi}}{1+\varphi} \right] \tag{1}$$

Where E_t is expectation operator of information available at time t, β^t is intertemporal discount factor, $C_{R,t}$ is consumption of Ricardian households in the current period, $C_{R,t-1}$ is consumption of Ricardian households in the previous period, φ_c *is* habit persistence, $L_{R,t}$ is hours worked by Ricardian households, σ *is* relative risk aversion coefficient, φ*is* marginal disutility with respect to labour, t *is* time subscript

The first constraint is given by the budget equation is

$$P_t(1 + r_t^c)\left(C_{R,t} + I_t\ \right) + \frac{B_{t+1}}{R_t} = W_t L_{R,t}(1 - r_t^I) + R_t K_t\ \left(1 - r_t^k\right) + B_t + \omega_R P_t T_t \tag{2}$$

where P_t *is* price level, r_t^c is tax rate on consumption, I_t *is* investment, B_t *is* current government debt, B_{t+1} *is* government debt in the next period, R_t *is* official interest rate, W_t *is* wage rate, r_t^I *is* tax rate on labour income, K_t *is* capital stock in the current period, r_t^k *is* tax rate on capital income, ω_R *is* share of Ricardian households in the economy, T_t is government transfers.

The second constraint is specified by the law of motion of capital,

$$K_{t+1} = (1 - \delta)K_t\ \ + I_t\ \left[1 - \frac{\chi}{2}\left(\frac{I_t}{I_{t-1}} - 1\right)^2\right] \tag{3}$$

where δ *is* depreciation rate, κ *is* investment costs, χ *is* sensitivity of investments to adjustment costs. The non-Ricardian household maximizes its expected lifetime utility:

$$E_t \sum_{t=0}^{\infty} \beta^t \left[\frac{\left(C_{N,t} - \varphi_c C_{N.t-1}\right)^{1-\sigma}}{1-\sigma} - \frac{L_{N,t}^{1+\varphi}}{1+\varphi} \right] \tag{4}$$

Where $C_{N,t}$ is consumption of non-Ricardian households in the current period, $C_{N,t-1}$ is consumption of non-Ricardian households in the previous period, $L_{N,t}$ is hours worked by non-ricardian households.

The budget equation is given as:

$$P_t(1 + r_t^c)C_{N,t} = W_t L_{N,t}(1 - r_t^I) + (1 - \omega_R)P_t T_t \tag{5}$$

Where $1 - \omega_R$ *is* Share of non-Ricardian households in the economy

The definition of wages for both Ricardian and non-Ricardian households is:

$$\max_{W_{j,t}^{*}} E_t \sum_{i=0}^{\infty} (\beta\theta_W)^i \left\{ -\frac{1}{1+\varphi}\left[L_{x,t+i}\left(\frac{W_{t+i}}{W_{j,t}^{*}}\right)^{\psi W}\right]^{1+\varphi} + \lambda_{x,t+i}\left[W_{j,t}^{*}L_{x,t+i}\left(\left(\frac{W_{t+i}}{W_{j,t}^{*}}\right)^{\psi W}\right)(1-r_{t+i}^{I})\right]\right\} \qquad (6)$$

... d j, $W_{j,t}$ *is* wage chosen by household j, $W_{j,t}^{*}$ is optimal wage for household j, θ_W *is* probability of wages remaining fixed.

Consistent with Júnior (2016), the aggregate value for consumption and labour is of the form:

$$X_t = \int_0^{\omega_R} X_{R,j,t}dj + \int_{\omega_R}^{1} X_{N,j,t}dj = \omega_R X_{R,t} + (1-\omega_R)X_{N,t} \qquad (7)$$

Where $X_{R,j,t}$ is aggregate value of consumption and labour for ricardian household j, $X_{N,j,t}$ is aggregate value of consumption and labour for non-ricardian household j, $X_{R,t}$ is aggregate value of consumption and labour for Ricardian households, $X_{N,t}$ is aggregate value of consumption and labour for non-ricardian households

Therefore, aggregate consumption is:

$$C_t = \omega_R C_{R,t} + (1-\omega_R)C_{N,t} \qquad (8)$$

And aggregate labour is:

$$L_t = \omega_R L_{R,t} + (1-\omega_R)L_{N,t} \qquad (9)$$

In line with Dixit and Stiglitz (1977), the aggregation technology is:

$$Y_t = \left(\int_0^1 Y_{j,t}^{\frac{\psi-1}{\psi}}\right)^{\frac{\psi}{\psi-1}} \qquad (10)$$

...ector, $Y_{j,t}$ *is* intermediate sector good j, ψ *is* elasticity of substitution between wholesale goods.

Firms decide the quantity of factors used and the prices based on a production function:

$$Y_{j,t} = A_t K_{j,t}^{\alpha_1} L_{j,t}^{\alpha_2} K_{j,t}^{G^{\alpha_3}} \qquad (11)$$

Where A_t *is* productivity, $K_{j,t}^{\alpha_1}$ *is* capital employed, $L_{j,t}^{\alpha_2}$ *is* labor employed, $K_{j,t}^{G^{\alpha_3}}$ *is* public capital stock, α_1 *is* share of capital in total production, α_2 *is* share of labour in total production.

Total production cost is:

$$\min_{L_{j,t}K_{j,t}} W_t L_{j,t} + R_t K_{j,t} \tag{12}$$

The law of motion of productivity is:

$$\log A_t = (1-\rho_A)\log A_{ss} + \rho_A \log A_{t-1} + \varepsilon_t \tag{13}$$

Where A_{ss} *is* productivity at the steady state, ρ_A *is* autoregressive parameter of productivity, ε_t *is* white noise shock.

The wholesale firm that is capable of readjusting the price of its good maximizes the function:

$$\max_{P_{j,t}^*} E_t \sum_{i=0}^{\infty} (\beta\theta)^i \left(P_{j,t}^* Y_{j,t+i} - CT_{j,t}^*\right) \tag{14}$$

Where θ *is* Probability of keeping price fixed

The aggregate price level is:

$$P_t = \left[\theta P_{t-1}^{1-\psi} + (1-\theta)P_t^{*1-\psi}\right]^{\frac{1}{1-\psi}} \tag{15}$$

The monetary authority controls price stability and economic growth through the Taylor rule:

$$\frac{R_t}{R_{ss}} = \left(\frac{R_{t-1}}{R_{ss}}\right)^{\gamma_R} \left[\left(\frac{\pi_t}{\pi_{ss}}\right)^{\gamma_\pi} \left(\frac{Y_t}{Y_{ss}}\right)^{\gamma_Y}\right]^{(1-\gamma_R)} S_t^m \tag{16}$$

t rate, π_{ss} *is* steady state inflation, Y_{ss} *is* steady state GDP, γ_Y *is* response of policy interest rate to GDP, γ_π *is* response of policy interest rate to inflation, γ_R *is* smoothing parameter, S_t^m is monetary shock

The monetary shock is defined by:

$$\log S_t^m = (1-\rho_m)\log S_{ss}^m + \rho_m \log S_{t-1}^m + \varepsilon_{m,t} \tag{17}$$

Where ρ_m *is* Autoregressive parameter, S_{ss}^m *is* Steady state money supply, $\varepsilon_{m,t}$ *is* White noise shocks.

The government's budget constraint is:

$$\frac{B_{t+1}}{R_t} - B_t + Tax_t + P_t^{oil} Oil_t = P_t G_t + P_t I_t^G + P_t T_t \tag{18}$$

Where G_t *is* government expenditure, Tax_t *is* tax revenue, Oil_t *is* oil revenue, I_t^G *is* public investment, P_t^{oil} *is* price of oil.

Its total tax revenue equals collected taxes on consumption, capital, labor income and investment:

$$Tax_t = r_t^c P_t (C_t + I_t^P) + r_t^l W_t L_t + r_t^k (R_t - \delta) K_t^P \tag{19}$$

The government has six fiscal policy instrumentsis three on the expenditure side T_t, G_t and I_t^G; and three on the revenue side τ_t^c, τ_t^l, and τ_t^k. All the instruments follow an exogenous and autoregressive process:

$$\frac{Z_t}{Z_{ss}} = \left(\frac{Z_{t-1}}{Z_{ss}}\right)^{\gamma z} S_t^Z \tag{20}$$

Where $z = \{G_{t,} I_t^G, T_{t,} r_t^c, r_t^l, r_t^k\}$, Z_{ss} *is* steady state of z, γ_z is smoothing parameter, S_t^Z isfiscal shock.

The fiscal shock is represented by:

$$\log S_t^Z = (1-\rho_Z)\log S_{ss}^Z + \rho_Z \log S_{t-1}^Z + \varepsilon_{Z,t} \tag{21}$$

represented by:

$$K_{t+1}^G = (1-\delta_G)K_t^G + I_t^G \tag{22}$$

The model's equilibrium condition is described by:

$$Y_t = C_t + I_t^P + I_t^G + G_t + Ex_t \tag{23}$$

2.2 Estimation Technique and Data

In the literature, the standard approach to estimate a DSGE model is the Bayesian approach (De Jong et al., 2000; An and Schorfheide, 2007). The two features of the Bayesian inference approach are the prior densities and the likelihood function. The prior densities describe the beliefs about economic theory while the likelihood function summarizes the information in the data. This study therefore follows the existing DSGE literature by using the Bayesian approach and in choosing the calibrated values for the parameters of the model. The data is sourced from the World Bank (2017) and cover the period 1981-2016.

3. Empirical Results

The DSGE model presented in the preceding section is taken to the data, using calibration and the Bayesian approach. The method of calibration involves a range of procedures including evidence from previous studies, matching of moments and use of intuitions (Fukac, Pagan, and Pavlov, 2006). In this study, calibration provides preliminary estimates of the parameters of the DSGE model. The Bayesian approach, as applied in this study, combines some features of the calibration with rigorous estimation techniques (See Kremer et al., 2006). Calibrated parameters are adopted from similar studies in the Nigerian context. This approach is common to many DSGE studies (Argentiero, Bollino, Micheli and Zopounidis, 2018; Niu, Yao, Shao, Li and Wang, 2018). The priors are used in the simulation of the DSGE model.

Table 1 provides the starting parameters of the model. Priors for depreciation rate, elasticity of level of production in relation to labor, elasticity of substitution between differentiated labor, sensitivity of investments in relation to adjustment cost, participation of Ricardians in consumption and labour in the economy, and interest rate persistence are consistent with Iklaga et al (2017). Priors for discount factor, elasticity of level of production in relation to private capital, price stickiness parameter, habit persistence, sensitivity of interest rate in relation to inflation and sensitivity of interest rate in relation to GDP are in line with Rasaki (2017). Priors for rate of tax on consumption in steady state, rate of tax on income from capital in steady state, rate of tax on income from labour in steady state, elasticity of level of production in relation to public capital, rate of depreciation of public capital, sensitivity of cost of under-utilization maximum capacity 1, and sensitivity of cost of under-utilization maximum capacity 2 are in line with Ncube and Balma (2017). Marginal disutility with regard to supply of labor is in line with Chetty (2005). The wage stickiness parameter is in line with Barattieri, Basu and Gottschalk (2014). The price elasticity of exports is consistent with Sulaimon, Omotunde and Haorayah (2017). Following Smets and Wouters (2003), the persistence of the AR(1) processes is assumed to be beta distributed with mean 0.5 and standard deviation 0.2. Also, the standard errors of the shocks are assumed to be inverse-gamma distributed with a mean of 0.1 and two degrees of freedom.

Table 1. Parameters

Parameters	Calibrated value		Parameters	Calibrated value
Relative risk aversion coefficient	1.5		Rate of depreciation of public capital	0.07
Marginal disutility with regard to supply of labor	1.5		Interest rate persistence	0.7
Elasticity of level of production in relation to private capital	0.33		Sensitivity of interest rate in relation to GDP	0.12
Elasticity of level of production in relation to labor	0.60		Sensitivity of interest rate in relation to inflation	1.5
Elasticity of level of production in relation to public capital	0.20		Proportion of transfers in relation to GDP	0.01
Discount factor	0.99		Proportion of public debt in relation to GDP	0.2
Depreciation rate	0.023		Proportion of public investment in relation to GDP	0.18
Price stickiness parameter	0.5		Public spending persistence	0

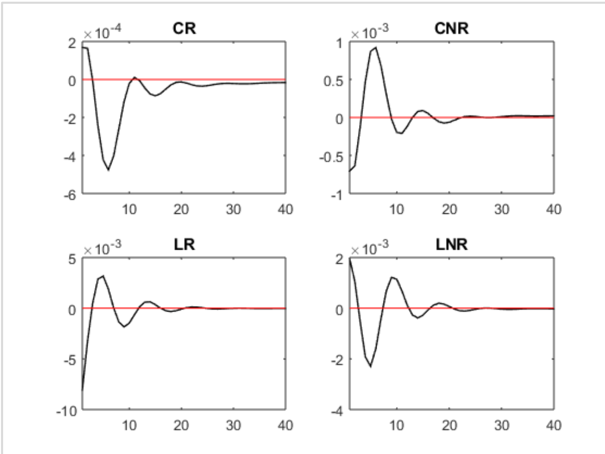
Elasticity of substitution among intermediate goods	8		Persistence of public investment	0.1
Wage stickiness parameter	0.178		Persistence of income transfer	0.1
Elasticity of substitution between differentiated labor	7.0		Persistence of tax on consumption	0
Rate of tax on consumption in steady state	0.18		Persistence of tax on labor income	0
Rate of tax on income from labour in steady state	0.05		Persistence of tax on capital income	0
Rate of tax on income from capital in steady state	0.35		Public spending over debt	0
Participation of Ricardians in consumption and labour in the economy	0.4		Public investment over debt	-0.1
Habit persistence	0.7		Income transfer over debt	-0.1
Sensitivity of investments in relation to adjustment cost	4.0		Tax on consumption over debt	0
Sensitivity of cost of under-utilization maximum capacity 1	0.6		Tax on labor income over debt	0
Sensitivity of cost of under-utilization maximum capacity 2	0.6		Price elasticity of exports	0.681

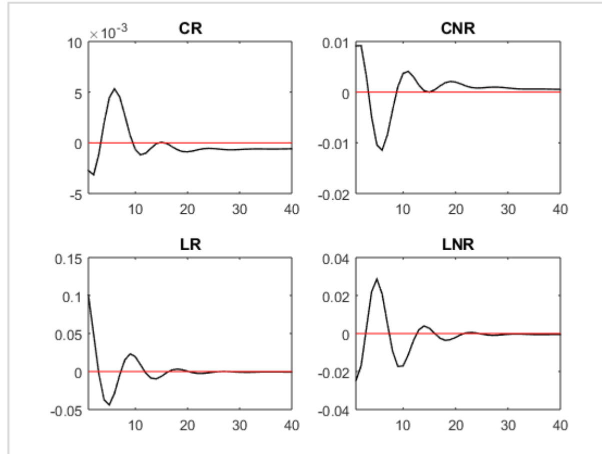
Source: Author's computation

The study analyzes the effects of shocks to three types of public spending (general government spending, government transfers, and public investment) and three types of taxes (consumption tax, capital tax and labor tax). The impulse-response analysis provides a dynamic description of the effects of fiscal policy shocks to the economy. It depicts estimated responses to a one standard deviation shock hitting the fiscal policy variables. Figure 2 depicts the effects of these shocks on Ricardian consumption (CR), non-Ricardian consumption (CNR), Ricardian employment (LR), and non-Ricardian employment (CLR).

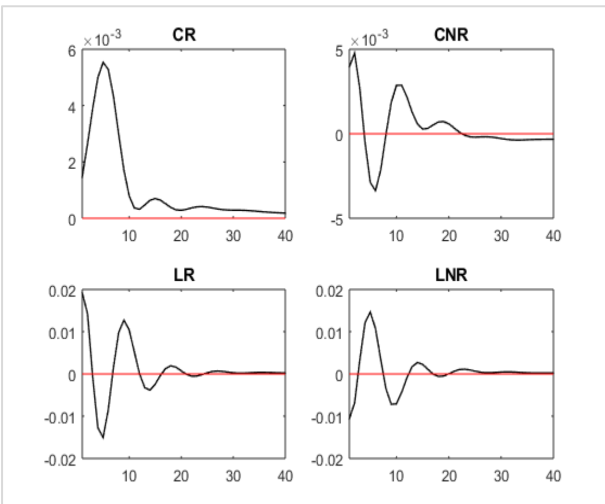
Figure 2. Orthogonalized Shocks

a. Shock to Government Spending	b. Shock to Public Investment

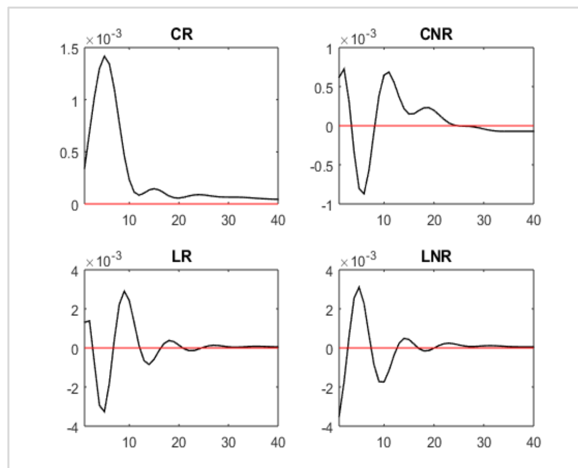




c. Shock to Consumption Tax

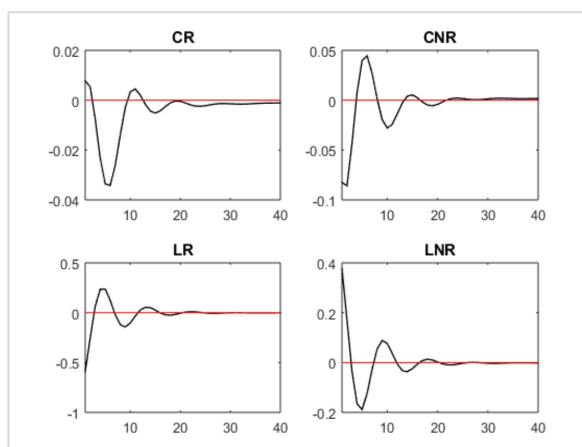


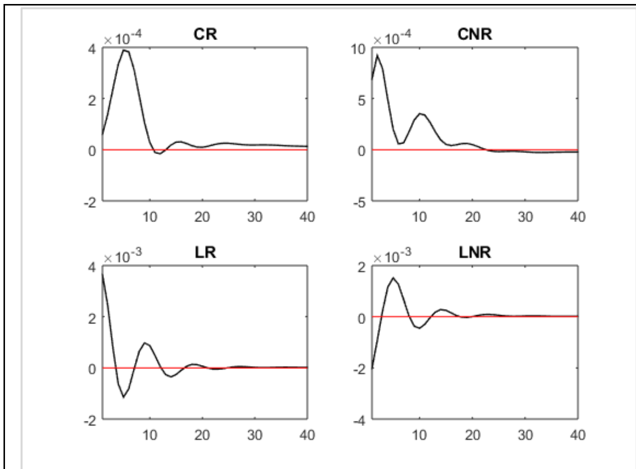
d. Orthogonalized Shock to Capital Tax



e. Shock to Labor Tax

f. Shock to Government Transfers





Source: Author's computation. The y-axis gives the percentage deviation from steady state and the x-axis gives the time horizon in quarters.

Shocks to government spending has higher positive impacts on non-Ricardian consumption and employment than Ricardian consumption and employment. Shocks to public investment have higher effects on non-Ricardian employment than Ricardian employment, meaning that public investment has higher positive effects on non-Ricardian employment than Ricardian employment. The study also shows that the shocks to public investment have higher positive effects on Ricardian consumption than non-Ricardian consumption. Shocks to government transfers have higher positive impacts on non-Ricardian consumption than Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment.

Shocks to consumption tax have stronger and more persistent positive effects on Ricardian consumption than non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. Shocks to capital tax have stronger and more persistent positive effects on Ricardian consumption than non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. Shocks to labor tax have strong and persistent positive effects on both Ricardian consumption and non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment.

4. Discussion of Results

The study has shown the distributional effects of fiscal policy on the consumption and employment of both poor and rich households. Shocks to government spending has higher positive impacts on non-Ricardian consumption and employment than Ricardian consumption and employment. In other words, government spending has higher positive effects on the employment and consequently the consumption of poor households. The consumption of the poor is more strongly affected by public spending relative to the rich. Thus, the difference in impact of spending between the poor and the non-poor could be substantial. This finding is in line with Amaghionyeodiwe

(2009). Also, shocks to government transfers have higher positive impacts on non-Ricardian consumption than Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. In other words, government transfers have higher positive effects on the consumption of poor households. This contrasts with Higgins and Pereira (2014) who showed that a large portion of direct transfer beneficiaries are non-poor.

The study has also shown that shocks to public investment have higher effects on non-Ricardian employment than Ricardian employment. This suggests that public investment has higher positive effects on the employment of poor households. This is consistent with Fan, Gulati and Thorat (2008), who showed that public investments (in agricultural research, education, and rural roads) are effective public spending items in reducing poverty. However, shocks to public investment have higher positive effects on Ricardian consumption than non-Ricardian consumption. This may be as a result of the fact that Ricardian households can smoothen consumption. Moreover, this finding is in line with Castro-Leal, Dayton, Demery and Mehra (1999) who found that these public social spending programs do not favor the poor, but those who are better-off. The constraints that prevent the poor from taking advantage of public investment must be addressed if public investment is to be effective.

Shocks to consumption tax have stronger and more persistent positive effects on Ricardian consumption than non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. In other words, consumption tax has higher positive effects on the consumption of the rich than of the poor households, but almost equal effects on the employment of both households. Shocks to capital tax have stronger and more persistent positive effects on Ricardian consumption than non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. In other words, capital tax has higher positive effects on the consumption of the rich than of the poor households, but almost equal effects on the employment of both households. Shocks to labor tax have strong and persistent positive effects on both Ricardian consumption and non-Ricardian consumption, but roughly the same effects on Ricardian and non-Ricardian employment. In other words, labor tax has high positive effects on the consumption of the rich and the poor households, but almost equal effects on their employment. In other words, the tax system is progressive. Jenkins, Jenkins and Kuo (2006) showed that the burden of VAT in the Dominican Republic is progressive over all the quintiles of household expenditure. Higgins and Lustig (2016) showed that, in fifteen developing countries, the fiscal system is poverty-reducing and progressive.

5. Policy Implications and Future Direction

Several aspects of the findings of the study can be useful to the government and policymakers. The higher positive effects of government spending, public investment and government transfers on the employment and consequently the consumption of poor households suggest that the government can promote their employment and consequently their consumption by increasing public spending and investment. The first necessary step is a decision by policymakers and the government to make it a priority to increase employment opportunities for those on the bottom rungs of the economic ladder. Public investments in critical infrastructure such as roads and electricity, and in human capital will be important. As well, government should provide welfare benefits to the poorest in society; for example, food stamps, unemployment benefit, income support and housing benefit. Also, important is direct provision of goods/services such as free education, subsidised housing, and healthcare.

The stronger and more persistent effects of consumption tax, capital tax and labor tax on the consumption of the rich than of the poor suggest that the fiscal system is progressive. Increased progressive taxes, cuts in regressive taxes (e.g., VAT/Sales tax) and increased welfare benefits will help increase the income of the poor. Policies that can affect the level of poverty and economic inequality include redistribution between the rich and the poor, making it easier for people to climb the ladder of economic opportunity. However, it is important for the government to design economic policies that develop the economy and benefit the poor, without penalizing the rich while doing so.

The study has its limitations. First, it is limited to Nigeria. Therefore, firm conclusions about the relationships implied in the model cannot be drawn for other countries. Thus, relationships among variables must be interpreted with caution for other countries. This is especially important for a subject like distributional effects of fiscal policy which are not static but are developmental processes that may change over time. It is therefore suggested that future studies re-evaluate distributional effects of fiscal policy for other contexts.

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