

## Doing Business in Nigeria: Does Offensive and Defensive Interest Matters

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### Abstract

The study focused on the ease of doing business as it affects private investment in Nigeria, using a time series data sourced from the Central Bank of Nigeria statistical Bulletin. The Autoregressive Distributed Lag (ARDL) model bound testing approach was employed for the study and the overall results confirmed that there exist a long run and short relationship among the variable considered. The study warned that there is need to relax monetary toolkit to allow private investment contributes to economic growth by giving access to loanable funds and providing regulatory framework and tax incentive to better enhance their performance.

### Key words

ARDL bound testing approach, Investment climate, and Private capital

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### 1. Introduction and Literature review

For over three decades, economists spent their entire career working on the theories and drivers of private investment. These economists' present varied reasons why ease of doing business is necessary for speeding up the growth of investment in any economy (Gustav, 1924; Keynes, 1936; Harrod, 1939; Rosenstein-Rodan, 1943; Domar, 1946; Solow and Swam, 1956; Rostow, 1960; Shobande and Olunkwa, 2018). The technicalities in the theories presented vary with attacks from Classical to Neoclassical, Keynesian to Baumol and Rational Expectation to New Economics School of thought. A common pointer among all these theories shows that they all agreed that higher level of economic growth cannot be attained without higher level of investment. On the contrary, there is incongruity on appropriate policy antidote that complement business environment that can possibly translate to meaningful growth. Additionally, there are two policy disagreement in literature as regard the study, the first is that the possibility that fiscal policy might crowd out or crowd in private investment is an impetus while the second is the possibility that interest rate channel of monetary transmission mechanism might make it difficult for business to survive, since access to loanable funds can be constrained with the policy initiatives. Burnside and Dollar (2000) in their study provide persuasive evidence that good policy environment is crucial for driving investment and growth, while, some studies have argued that there is no reason to belief that good policy is a necessary condition for growth and investment (Collier and Dehan, 2001; Collier and Dollar, 2001; White, 2004).

Furthermore, studies have attempted to verify various theoretical argument presented to explain reasons for current business environment seems challenging to drive investment in both developed and developing countries. In Tunisia for instance, Casero and Varaudaski (2004) examines the precondition for accelerated growth and potentials of private investment to create job in the face of challenging cost of doing business. Their results affirmed that the quality of the regulatory framework is not conducive for doing business, as the country experience asymmetric credit information sharing and business exit during the period reviewed. Likewise in Lesotho *et al.* (2015) examines the determinants of private investment between 1982 and 2013 using the Granger Causality test to show that macroeconomic instability negatively impacts on private investment during the period reviewed. In the case of Nigeria, the ease of doing business has not been impressive since the business environment coupled with policy inconsistencies by government have not cushion the heat of doing business in the country. Often times, it might not palatable as most investor are double taxed or sometimes the cost of borrowing from the bank might be unpleasant, thus making investment less attractive to both foreign and indigenious investors. For instance, in 2008, Nigeria economy was ranked 120 among 190 economies in the ease of doing business. By 2016, Nigeria recorded 169 rating among its pairs reflecting that the cost of doing business have been constraint by several factors such as excessive tax payment, increase in cost of loanable funds, poor regulatory mechanism accompanied by exogenous shocks. By 2017, Nigeria is ranked 145 among 190 economies in the latest World Bank rating on the basis of business confidence, leading economic index, competitive ranking, capacity utilization and cost of doing business.

Several efforts by Central Bank of Nigeria, (CBN) to provide explanation to the puzzle behind the high cost of doing business in the country proved abortive. The attempts to defend its position by stressing that it's unfair to blame the high cost of doing business on the interest channel of monetary transmission mechanism, stressing that interest rate is a combination of components which reflects the cost of capital as well as the cost of doing business (CBN, 2017). This suggests that the inflationary targeting measure have increased the cost of doing business which has impacted negatively on the potentials of private investors to accessed loanable funds. While, the preoccupation of this study is to examine whether the ease of doing business have constrained the potential of private investment in Nigeria. This study specifically interrogate the inter play of various components of monetary and fiscal policies which can possibly influence the performance of private investors in Nigeria. Furthermore, the relevance of this study is to beam searchlight on major obstacles that affects private investment potentials in relation to macroeconomic indicators. However, the outcome of this present study is expected to serves as policy ingredient to numbers of audience ranging from policy makers, investors, and academia alike who may find the study useful as strategies for boosting private investment in Nigeria beyond.

## 2. Methodology of Research

### 2.1. Theoretical Framework

The theoretical underpinning for this study is anchored on accelerator theory. The theory suggests that the level of investment depends on changes in the level of output, which implies that the rate of investment depends on the growth rate of output. Uneze (2012) using accelerator theory affirmed that increasing future production of output requires new investment into plant and machinery.

### 2.2. Model Specification

This study draws inspiration from the work of Jorgenson (1967) who did a study on theory of investment behaviour using model from neoclassical theory of optimal capital accumulation. In addition, this present study also follows the work of Omojolaibi *et al.* (2016) who worked on fiscal policy and private investment in selected West African countries. According to these authors, government fiscal policy may have positive or negative effect on private. The model for the study is specified as:

$$K^* = \frac{P \propto Y}{c} \tag{1}$$

Where  $K^*$  represent optimal stock,  $P$  represent price of output,  $Y$  is the output and  $C$  is the cost of capital.

Transforming equation (1) gives:

$$K_t^* = \varphi P_t Y_t C_t^{-\sigma} \tag{2}$$

Where  $\varphi$  and  $\sigma$  signifies the parameter of distribution. Thus, replacing the optimal stock  $K^*$  to net investment component  $I_t$  since the study is on private investment gives:

$$I_t^* = \Delta(\varphi P_t Y_t C_t^{-\sigma}) \tag{3}$$

The equation (3) gives us an investment model for the study as:

$$I_t = \varnothing_1 \Delta Y_t + \varnothing_2 \Delta P_t - \varnothing_3 \Delta C_t + \mu_t \tag{4}$$

Equation (4) is transformed to suit the present study on cost of doing business and private investment. The transformed equation is specified as:

$$PI = f(COC, BLR, MPR, TAX, RF) \tag{5}$$

Where:  $PI$  represents private investment which is proxied with gross fixed capital formation, while  $COC$  which is cost of capital,  $TAX$  which is taxation,  $MPR$  which is monetary policy rate and  $BLR$  which is bank lending rate are also indicators used in measuring cost of doing business.  $RF$  is regulatory framework that is represented by dummy variables.

$$PI_t = \alpha_0 + \alpha_1 COC_t + \alpha_2 TAX_t + \alpha_3 BLR_t + \alpha_4 MPR_t + \alpha_5 RF_t + \varepsilon_t \tag{6}$$

Equation (5) can be specified using autoregressive distributive lag (ARDL) model which is specified as:

$$\Delta PI_t = \alpha_0 + \sum_{i=1}^p \alpha_1 \Delta PI_{t-1} + \sum_{i=0}^p \alpha_2 \Delta COC_{t-1} + \sum_{i=0}^p \alpha_3 \Delta TAX_{t-1} + \sum_{i=0}^p \alpha_4 \Delta BLR_{t-1} + \sum_{i=0}^p \alpha_5 \Delta MPR_{t-1} + \sum_{i=0}^p \alpha_6 \Delta RF_{t-1} + \alpha_7 \ln PI_{t-1} + \alpha_8 \ln COC_{t-1} + \alpha_9 \ln TAX_{t-1} + \alpha_{10} \ln BLR_{t-1} + \alpha_{11} \ln MPR_{t-1} + \alpha_{12} \ln RF_{t-1} + \varepsilon_t \tag{7}$$

### 2.3. Description and Source of Data

The data for this study is sourced from World development index (WDI) and the scope of the study is from 1981 to 2017, based on the availability of data.

## 3. Empirical Results and Discussions

### 3.1. Descriptive Statistic

The result in table 1 presents the descriptive analysis of the time series properties of the models variables. The table affirmed that the average growth values of BLR which is bank lending rate, COC which is cost of capital, PI represents private investment which is proxied with gross fixed capital formation, MPR which is monetary policy rate, RF is regulatory framework and TAX which is taxation over the reference period stood at 17%, 44.5%, 22.5%, 18%, 0.5%, 21% respectively.

Table 1. Pre-test A: Descriptive Statistics

	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.	Obs.
LBLR	17.57	17.50	29.80	7.75	4.69	0.20	3.57	0.75	0.68	37
LCOC	44.54	300.00	19.077	5.00	6.524	1.12	2.62	7.96	0.01	37
LPI	22.88	22.20	25.17	21.42	1.29	0.67	1.92	4.58	0.10	37
LMPR	18.03	12.00	36.24	6.00	2.49	-0.76	2.68	3.80	0.14	37
LRF	0.59	1.00	1.00	0.00	0.49	-0.38	1.14	6.20	0.04	37
LTAX	21.93	22.63	100.61	9.68	14.74	4.14	23.23	737.46	0.00	37

Source: Author's Computation

The standard deviation of these variables are BLR stood at 4% along with others variables which is recorded as 6.5%, 1.30%, 2.50%, 0.5% and 15% respectively. The probability of the Jarque-Bera statistic for all the variables shows their distribution level at mean zero and constant variance.

### 3.2. Unit Root Test

For the purpose of this study, the Augmented Dickey Fuller (ADF) was employed to test for stationarity among variables considered in the study. The table 2 below shows the unit root test results which confirmed that all series are largely stationary at first difference, except tax rate which was stationary for both at level and at first difference.

Table 2. Pre-test: Unit Root Test Results

Variables	Levels			First Difference			Order of Integration
	ADF Test Stat.	1%	5%	ADF Test Stat.	1%	5%	
LPI	-0.02	-3.62	-2.94	-4.19	-3.63*	-2.95*	I(1)
COC	-0.07	-3.62	-2.94	-5.87	-3.63*	-2.94*	I(1)
MPR	-1.18	-3.63	-2.94	-11.84	-3.63*	-2.94*	I(1)
BLR	-2.39	-3.63	-2.95	-5.90	-3.63*	-2.95*	I(1)
TAX	-4.54	-3.62*	-2.95	-6.85	-3.63*	-2.95*	I(1)
RF	-2.42	-3.62	-2.95	-17.23	-3.63*	-2.95*	I(1)

Note: \* significant at 1%

Since the test above satisfy the ARDL conditionality of I(0) and I(1), it further imply that the best methodology for this study is autoregressive distributive lag model.

### 3.3. Autoregressive Distributed Lag (ARDL) Co-integration Results

Econometric literature argued that regressing a stationary series on non-stationary series has severe implications in drawing policy inference. The data series provide evidence for the use of Autoregressive Distributed Lag (ARDL) techniques of analysis. As posited by Pasaran *et al.* (2001), ARDL is more suitable for variables at different order of integration.

Table 3. Summary of ARDL Bound Test Result

Lag Length	F-Statistics	Significance Level	Critical Value Bounds	
			I(0)	I(1)
1	4.10023	10%	2.26	3.35
		5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Author's Computation

The F-statistics estimate for testing the existence of long run relationship among the variables considered for the model presented in table 3. The estimated F-statistics confirmed that there exist a no long-run equilibrium relationship exist among variables that are considered in the model, since critical F-test statistics is higher than the upper critical bound.

### 3.4. Long Run Coefficient Estimates and Short Run Error Correction Model Using ARDL Approach

The long run and short run dynamics relationship between ease of doing business and private investment fundamentals in Nigeria presented in table 4. The results of the long run estimates show that fiscal policy (TAX), Cost of Capital (COC) and Regulatory framework (RF) all have negatively impacts on Private Investment (PI) excepts monetary policy (MPR), and Bank Lending Rate (BLR) that indicate a marginal positive relation. Meanwhile, the long run estimates show that all variables considered in the model have significant relationship with private investment except monetary policy variables (MPR).

Table 4. Estimated Autoregressive Distributive Lag (ARDL) Results (Long and Short Run)

Dependent Variable: LPI (Private Investment)

	Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>Estimated long-run equation</b>	LPI(-1)	0.001407	0.027820	0.050578	0.9601
	BLR(-1)	0.037655	0.011859	3.175142	0.0044
	COC(-1)	-2.510105	1.723405	-1.460071	0.1584
	MPR(-1)	0.041524	0.037873	1.096410	0.2848
	TAX(-1)	-0.035449	0.015943	-2.223451	0.0368
	RF(-1)	-0.499981	0.168581	-2.965824	0.0071
<b>Estimated short-run equation</b>	D(LPI(-1))	0.033735	0.183676	0.183663	0.8560
	D(BLR(-1))	-0.008181	0.012133	-0.674290	0.5072
	D(COC(-1))	-4.286305	2.384325	-1.800928	0.0854
	D(MPR(-1))	-0.044997	0.026675	-1.686875	0.1058
	D(TAX(-1))	0.015620	0.016107	0.969768	0.3427
	D(RF(-1))	0.161532	0.108305	1.491462	0.1500
	ECM(-1)	-0.253866	0.105424	-2.408035	0.0249

Source: Author's Computation

Making references to the earlier studies conducted by Shobande and Olunkwa (2018), Odhiambo (2009), Narayan and Smith (2008), we further estimate the short run parameters using the ARDL error correction model. The results of the estimates are reported in table 4 above. More so, the results of the short run dynamics affirms that error correction sign is negative and significant which conforms to the apriori expectation for the study. This further reveal that the rapid speed of adjustment from the disequilibrium to long run equilibrium. As it is seen from the results, in table 4 about 25 percent of deviation from equilibrium was corrected with the lag of a year. Further analysis of the results show that change in the previous (one lagged) period of Monetary Policy (MPR), Bank Lending Rates (BLR) and Cost of Capital impacted negatively on the Private Investment (PI), while, change in the previous (one lagged) period of Fiscal Policy(Tax) and Regulatory Framework impacted positively on Private Investment (PI) in the short run. In terms of forecasting power, all

variables are statistically significant except Regulatory Framework, Fiscal Policy, Monetary Policy, Bank Lending Rates that were not significant at 5% and 10% respectively.

#### 4. Conclusions

The aim of this paper is to analysis the ease of doing business and private investment fundamentals in Nigeria between 1981 and 2017 using the time series data and Autoregressive Distributed Lags Bound Testing Approach. The study established that there is long run relationship among the variables considered. While the results of our long run estimates confirmed that Cost of Capital (COC), Fiscal Policy and Regulatory Framework are main binding constraint affecting the prospect of private investment in Nigeria. The short run estimates show that Monterey Policy Rate (MPR), Cost of Capital (COC) and Bank Lending Rates (BLR) has potential of crowding out private investment (PI) during the period reviewed.

Interestingly, the results provide some policy implications that need urgent attentions. First, the increase in cost of capital observes in the long run and short run estimates shows the urgent need to review the existing monetary policy. In particular, the observed negative relationship between bank lending and private investment indicates that access to loanable funds is another major constraint to the ease of doing business in Nigeria. Also, the ash effect of the regulatory framework reflect in the results also show concern on the need for government incentive such as tax holiday and reduction in legal restriction that can hamper the investment climate as perceived by the results during the periods.

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