

## MONETARY POLICY AND ENTREPRENEURIAL GROWTH IN NIGERIA

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### Abstract

*The paper evaluated the effect of monetary policy and entrepreneurial growth in Nigeria. Data were collected from CBN statistical bulletin for twenty eight (28) years. Ex post facto design was employed for the study. Auto-regressive and distributive lag model was adopted for the analysis after the data were stabilized through Augmented Dicky Fuller (ADF) unit root test. The findings showed that monetary policy rate, treasury bill rate, liquidity ratio and loan to deposit ratio had no significant effect on entrepreneurial growth in Nigeria but the combination of these variables had positive and significant effect on entrepreneurial growth in Nigeria during the period of the study. The coefficients of these variables were positive which suggested a positive drive on entrepreneurial growth in Nigeria. The researchers therefore recommend that: monetary authorities should reduce the monetary policy rate to encourage bank to lend more money and thereby enhance the growth of entrepreneurs in Nigeria, monetary authorities should buy the treasury bills more rather than selling to push out money through deposit money bank for entrepreneurs to borrow, liquidity ratio should be reduced for banks to have more loanable funds to lend to entrepreneurs and loan to deposit ratio should increase to ensure that entrepreneurs have more access to funds*

**Key words:** Monetary Policy, Entrepreneurial Growth, Treasury Bill Rate, Liquidity Ratio, Monetary Policy Rate, Loan to Deposit Ratio etc.

## 1. INTRODUCTION

Monetary policy is a conscious action undertaken by the monetary authorities to change or regulate the availability, quantity, cost or direction of credit in any economy in order to achieve a stated economic goal (Nzotta 2004; Ihenetu 2021). It is the combination of discretionary measures designed to regulate and control the money supply in an economy by the monetary authorities with the view of achieving a desired macro-economic goals. The goals of monetary policy are to reduce inflation, reduce unemployment, stabilize the exchange rate, stabilize price level, accelerate of economic growth and development, balance of payment equilibrium etc (CBN 2020).

The main aim of monetary policy could be either to decrease the amount of the money in circulation in the economy (contractionary policy) or to increase the supply of money in the economy by reducing the interest rate, reserve requirements etc. This is called expansionary monetary policy. The expansionary monetary policy aimed at lowering unemployment rate and stimulating economic growth through entrepreneurial activities.

Entrepreneurial activities are fundamentally born out of innovative development of goods and services (Okafor and Onebunne 2012; Ifionu & Akinpelumi 2017). Progressively, the activities grow with ideas and innovations with conscious calculated risks and development of new business prospects (Ofili 2014). This process is known as entrepreneurship.

Entrepreneurship is the process of designing, launching and running a new business which is more often than not, initially a small business. The business, though started a little but with time began to grow along side with the entrepreneurs (initiator of the business). The growth of the entrepreneur precipitates more experience to him, creates employment, increases investments, raises standard of living, promotes effective and efficient functioning of the business, alleviates poverty etc. (John & Ibenta 2017).

Entrepreneurial growth is the widening and expansion of the scope of business financially to provide goods and services to the people and increase the value of the shareholders. It is a necessary ingredient for a country's economic growth and development. The effective functioning of micro, small, medium and large scale businesses contributes a lot to gross domestic product, creates employment, increases investment and raises the standard of living of the people in the economy (John and Ibenta, 2017). In order to ensure that entrepreneurs grow in our country, it must be adequately funded by government and financial institutions. The funding of entrepreneurs depends on the type of monetary policy adopted in the country.

Ideally, the monetary policy adopted by the monetary authorities determine the growth rate of the entrepreneurs in that country, if the policy is contractionary, the entrepreneurs will be starved of funds to run the business. What this presupposes is that, the entrepreneurs will not have enough money to run the business and the growth rate will be minimal. But if the policy is expansionary, then the entrepreneurs will have enough funds to run and grow their business. Expansionary policy of monetary authorities means that the monetary authorities will reduce their minimum rediscount rate (MRR) now called monetary policy rate (MPR), monetary authorities will also push out money into the economy through the purchase of treasury bill, open market operation (OMO) also reduce their liquidity ratio and increase loan to deposit ratio.

Treasury bill is the sales of securities between monetary authorities (CBN especially) and deposit money banks. The selling of the treasury bill by the CBN means that it want to achieve contractionary policy and buying means expansionary policy. Liquidity ratio shows the ratio of banks reserve to loan disburse to the public. If the ratio is high in the bank, then

amount of money to disburse to the public will be low but if the ratio is low, then amount to disburse will be high. Loan to deposit ratio indicates the percentage of loan to be given to the customers out of the deposits mobilized. This is also one of the monetary policy measures. Monetary policy rate is the minimum rate that monetary authorities lend to the deposit money bank. The deposit money banks now add their own percentage to the one given to them by the monetary authorities. This means that it is the bench mark that deposit money banks can lend to customers in order to breakeven (Ihenetu 2021).

Researches conducted on the subject area concentrated on interest rate, exchange rate and inflation rate as a measure for monetary policy. None has used monetary policy rate, loan to deposit rate, liquidity ratio and treasury bill rate as a measure for monetary policy, this therefore constitutes a gap fill by the study.

The purpose of the study is to determine the effect of monetary policy on entrepreneur growth in Nigeria, the hypothesis is stated in a null form: monetary policy does not have significant effect on entrepreneurial growth in Nigeria. The rest of the paper shall be categorized into four: literature review, methodology, presentation and analysis and conclusion and recommendation.

## **2. LITERATURE REVIEW**

We shall consider conceptual and theoretical framework.

### **a) Conceptual Framework**

The concepts used in this work are:

#### **i) Entrepreneurial Growth**

Entrepreneurial growth is the widening and expanding the scope the business financially to provide goods and services to the people and increase the value of the shareholders. It is a necessary ingredient for a country's economic growth and development. The effective functioning of micro, small, medium and large scale businesses contributes a lot to gross domestic product, creates employment, increases investment and raises the standard of living of the people in the economy (John and Ibenta, 2017). In order to ensure that entrepreneurs grow in our country, it must be adequately funded by government and financial institutions.

#### **ii) Monetary Policy**

Monetary policy is a conscious action undertaken by the monetary authorities to change or regulate the availability, quantity, cost or direction of credit in any economy in order to achieve a stated economic goal (Nzotta 2004; Ihenetu 2021). It is the combination of discretionary measures designed to regulate and control the money supply in an economy by the monetary authorities with the view of achieving a desired macro-economic goals. The goals of monetary policy are to reduce inflation, reduce unemployment, stabilize the exchange rate, stabilize price level, accelerate of economic growth and development, balance of payment equilibrium etc (CBN 2020).

The main aim of monetary policy could be either to decrease the amount of the money in circulation in the economy (contractionary policy) or to increase the supply of money in the economy by reducing the interest rate, reserve requirements etc. This is called expansionary monetary policy. The expansionary monetary policy aimed at lowering unemployment rate and stimulating economic growth through entrepreneurial activities.

### **iii) Monetary Policy Rate**

Monetary policy rate is the minimum rate that monetary authorities lend to the deposit money bank. The deposit money banks now add their own percentage to the one given to them by the monetary authorities. This means that it is the bench mark that deposit money banks can lend to customers in order to breakeven (Ihenetu 2021).

### **iv) Treasury Bill Rate**

Treasury bill is the sales of securities between monetary authorities (CBN especially) and deposit money banks. The selling of the treasury bill by the CBN means that it want to achieve contractionary policy and buying means expansionary policy. The buying or selling depends on the goals it set to achieve.

### **v) Liquidity Ratio**

Liquidity ratio shows the ratio of banks reserve to loan disburse to the public. Banks are mandated to keep some percentage of the money mobilized to meet the customers' demand. If the ratio is high in the bank, then amount of money to disburse to the public will be low but if the ratio is low, then amount to disburse will be high.

### **vi) Loan to Deposit Ratio**

Loan to deposit ratio indicates the percentage of loan to be given to the customers out of the deposits mobilized. This is also one of the monetary policy measures. If the ratio is high, more money will be pushed out to the economy but if the ratio is low, the amount of money that is released to the economy will be low.

## **b) Theoretical Framework**

The theories relevant to the work are:

### **i) Monetary Theory**

This is propounded by Friedman in 1956. The theory is based on the fact that money supply influences the economic activities. He advocated that when there is money supply in the economy, such as currency and other high instrument (financial market instruments), they will exert much power on the economy leading to entrepreneurial growth and ultimately economic growth. He further argue that the economy may not always be in full equilibrium and cannot be operating in full employment level of real GDP in the short run, but in the long run, there will be a link between money supply, price level and real GDP. According to him, in the short run, the money supply only affect the price level which led to inflation, but in the long run, the real variables such as nominal national income, interest rate and prices are controlled through monetary policy of the government (Liberto & Estevez 2021). The essence of the theory is that money supplied by central bank, can affect the growth of the entrepreneurs in the economy.

### **ii) Quantity Theory of Money**

Quantity theory of money was propounded by Irvin Fisher who existed between 1867-1947. The theory was encapsulated in his book the purchasing power of money. The theory emphasized the transactions demand for money in terms of the velocity of money in circulation. This is because money acts as a medium of exchange and facilitates the exchange of goods and services (Jhingan 2011). In Fisher's Equation of Exchange,  $MV = PT$  (cause and effect relationship), M is the total quantity of money, V is its velocity of circulation, P is the price level, and T is the total amount of goods and services exchanged for money. The right hand side of this equation PT represents the demand for money which 'depends upon

the value of the transactions to be undertaken in the economy, and is equal to a constant fraction of those transactions.’ MV represents the supply of money which is given and in equilibrium equals the demand for money. The whole essence of the theory is that the demand for money is equal to money supply by the monetary authorities. If more money is supplied to the entrepreneurs, the production of goods and services will also increase though the price level may as well increase.

### iii) Resource Based Theory of Entrepreneurial Finance

The resource based theory of entrepreneurial finance according to Barney (1991) was reformulated by Subramanian (2010). The main focus of the theory is that resources available for entrepreneurs are very scarce and hence the need to develop a strategy to gain a competitive advantage and enhance organizational performance. The theory assumes that firms’ competitive advantage and subsequent performance originates in the resources and capabilities the firm controls. One of the scarce resources that hamper the growth of entrepreneur is funds. The entrepreneurs are hungry for financial resources to stimulate their growth. Scarcity of funds stifled the growth of entrepreneurs. Expansionary monetary policy provides the opportunity for entrepreneurs to source for funds to grow their business. The policy will make funds available to the entrepreneurs in every sectors of the economy to boost their businesses and grow.

### 3. METHODOLOGY

According to Ihenetu (2008), research design is a blue print, framework for collecting and analyzing data. The researchers employed ex post facto design. The fact that the data were original from CBN statistical bulletin and adopted for the study necessitated the choice of the design. Furthermore, the researchers want to evaluate the effect of monetary policy on entrepreneurial growth in Nigeria.

The data were purely from secondary sources. CBN statistical bulletin 2019 provided the data for the analysis. Purposive sampling method was employed for the work. The sample size is 28 years (1992-2019). The researcher employed auto-regressive distributed lag for the analysis.

The model specification is given as:

ENTG = f(MPR, TBR, LDR, LTDR). This functional model was trans- modified into the mathematical form by the introduction of the constant  $\alpha$ ,  $\beta$  and error term  $\mu$  as:

This can be transmodified as:

$$\begin{aligned} ENTG_t = & \alpha_0 + \sum_{i=1}^n \beta_{1i} ENTG_{t-1} + \sum_{i=0}^n \beta_{2i} MPR_t + \beta_2 MPR_{t-1} + \sum_{i=0}^n \beta_{3i} TBR_t \\ & + \beta_3 TBR_{t-1} + \sum_{i=0}^n \beta_{4i} LDR_t + LDR_{t-1} + \sum_{i=0}^n \beta_{5i} LTDR_t + \beta_5 LTDR_{t-1} + \mu \end{aligned}$$

Where ENTG = Entrepreneurial Growth

MPR = Monetary Policy Rate

TBR = Treasury Bills Rate

LDR = Liquidity Ratio

LTDR = Loan to Deposit Ratio

$\alpha$  = constant variable

$\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficient of independent variables (slope)

$\mu$  = error term.

#### 4. DATA PRESENTATION AND ANALYSIS

The data used for the work are presented below:

**Table 1 Entrepreneurial Growth (ENTG), Monetary Policy Rate (MPR), Treasury Bill Rate (TBR) and Loan to Deposit Ratio (LTDR) in percentages**

Period	ENTG	MPR	TBR	LDR	LTDR
1992	103.9745	17.50	21.00	29.1	55.20
1993	77.59386	26.00	26.90	42.2	42.90
1994	102.8699	13.50	12.50	48.5	60.90
1995	159.0634	13.50	12.50	33.1	73.30
1996	199.7462	13.50	12.25	43.1	72.90
1997	187.4529	13.50	12.00	40.2	76.60
1998	189.231	13.50	12.95	46.8	74.40
1999	208.5756	18.00	17.00	61.0	54.60
2000	188.0352	14.00	12.00	64.1	51.00
2001	207.4931	20.50	12.95	52.9	65.63
2002	284.4438	16.50	18.88	52.5	62.78
2003	284.3837	15.00	15.02	50.9	61.85
2004	156.997	15.00	14.21	50.5	68.63
2005	135.2173	13.00	7.00	50.2	70.80
2006	64.29148	10.00	8.80	55.7	63.60
2007	95.75511	9.50	6.91	48.8	70.78
2008	29.36637	9.75	4.50	44.3	80.93
2009	32.82745	6.00	6.13	30.7	85.66
2010	22.98074	6.25	10.25	30.4	74.20
2011	27.14557	12.00	16.75	42.0	44.77
2012	23.1328	12.00	17.20	49.7	42.31
2013	24.28559	12.00	13.34	63.2	37.97
2014	23.92941	13.00	15.99	38.3	64.24
2015	18.76086	11.00	16.28	42.3	69.58
2016	15.82172	14.00	18.50	46.0	79.95
2017	15.69241	14.00	18.98	49.1	78.20
2018	64.21616	14.00	14.45	65.0	60.16
2019	173.604	13.50	13.20	103.9	60.10

Source: CBN statistical bulletin 2019

Key

ENTG = Trade credit/Real Gross Domestic Product x100

**Table 2: Stationarity (Unit Root) Test Results**

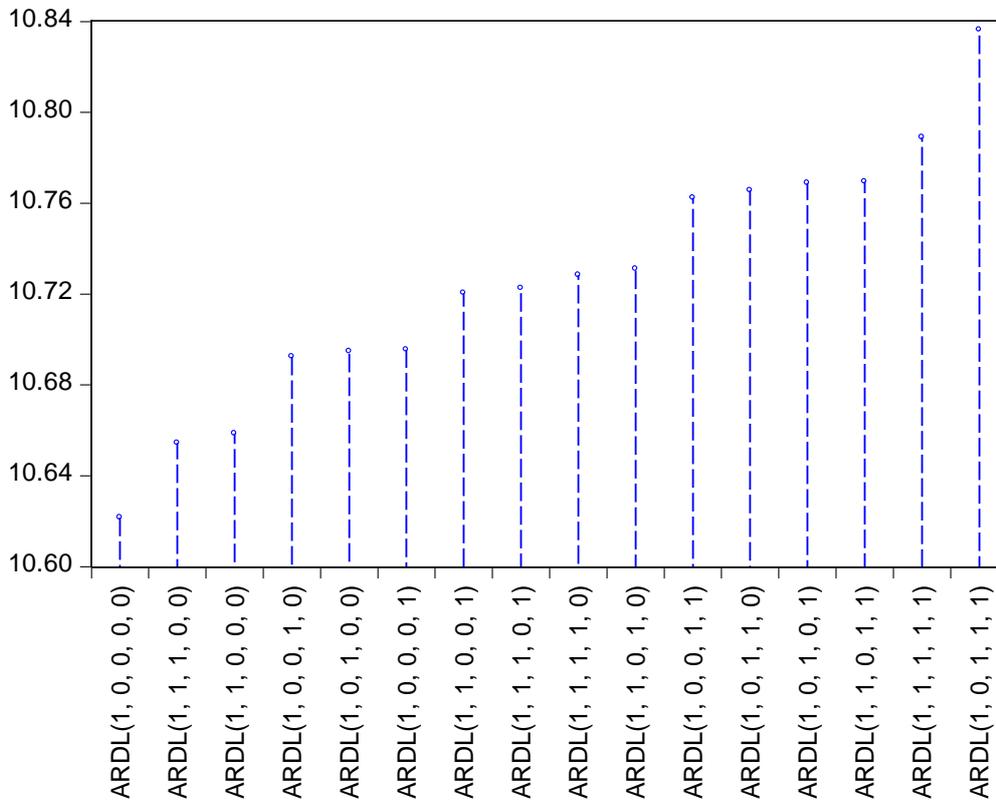
Variables	Level	1 <sup>st</sup> difference	Order of Integration	Remark
ENTG	-1.277644	-3.573758	I(1)	Stationary
MPR	-2.939718	-8.931213	I(1)	Stationary
TBR	-2.849193	-6.274064	I(1)	Stationary
LDR	-0.910857	-3.505438	I(1)	Stationary
LTDR	-4.027416	-	I(0)	Stationary

**Significant at 5% level, ADF test > Critical Value, then the variable is stationary**

Source: Extracts from E-Views 9 Output

Table 2 presented the unit root stationarity test results for the employed data. Generally, the absolute values of the ADF test statistic for all the employed study variables were greater compared to all their corresponding Mackinnon’s critical values at 5%. In all, the ENTG, MPR, TBR and LDR variables were integrated at order I(1), whereas LTDR variable is integrated at order I(0). Since these variables are stationary at 5% level of significant, they are therefore deemed fit for utilization and subsequent estimations and suggests the use of Auto-regressive and distributed lag for the analysis.

**Figure 1 Auto-Regressive Distributed Lag (ARDL) Model selection test result**  
 Akaike Information Criteria



Source: Extracts from E-Views 9 Output

The use of this approach is guided by the short data span. The researchers chose a maximum lag order of 1 for the conditional ARDL vector error correction model by using the Akaike information criteria (AIC). Number of models evaluated was 486 and the result shows that

the best model is ARDL(1, 0, 0, 0, 0) which was summarised in figure 1 above. The equation produced by the result is also given above.

**Table 3 Auto-Regressive Distributed Lag (ADRL) shortrun result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ENTG(-1)	0.812478	0.128943	6.301081	0.0000
MPR	1.808166	4.089038	0.442198	0.6629
TBR	0.838673	3.214540	0.260900	0.7967
LDR	1.357817	0.689885	1.968178	0.0624
LTDR	0.738678	0.866376	0.852607	0.4035
C	-128.1713	93.51286	-1.370627	0.1850
R-squared	0.788438	Mean dependent var	111.5894	
Adjusted R-squared	0.738067	S.D. dependent var	86.93164	
S.E. of regression	44.49111	Akaike info criterion	10.62159	
Sum squared resid	41568.64	Schwarz criterion	10.90955	
Log likelihood	-137.3914	Hannan-Quinn criter.	10.70721	
F-statistic	15.65238	Durbin-Watson stat	1.723718	
Prob(F-statistic)	0.000002			

\*Note: p-values and any subsequent tests do not account for model selection.

Source: Extracts from E-Views 9 Output

Table 3 showed that monetary policy rate (MPR) had no significant effect on the entrepreneurial growth in Nigeria under the period of the study.

Secondly, the analysis further revealed that treasury bill rate (TBR) had no significant effect on entrepreneur growth in Nigeria.

Thirdly, the analysis also confirmed that liquidity ratio (LDR) had no significant effect on entrepreneurial growth in Nigeria.

Finally, the analysis also showed that loan to deposit ratio (LTDR) had no significant effect on entrepreneurial growth in Nigeria. Their coefficients are all positive ie 1.808166, 0.838673, 1.357817 and 0.738678. This means that 1% increase in MPR, TBR, LDR and LTDR increased the growth of entrepreneurs by 1.81%, 0.84%, 1.36% and 0.74% respectively. The coefficients showed that MPR, TBR, LDR and LTDR are likely drivers of entrepreneurial growth in Nigeria.

The result of the ARDL short run model also showed that the model had a good fit on the data. This is demonstrated by the value of coefficient of determination ( $R^2$ ) of 0.79% and the adjusted  $R^2$  of 0.74%. This implied that variations in all the explanatory variables account for 74% of the variations in entrepreneurial growth, while the rest 26% of the variations was attributable to other variables not captured in the study.

The F-statistic measures the overall significance of the model. The F-statistic was 15.65238 and the probability of F-statistic 0.000002 which was less than 0.05 power of test. This meant that monetary policy had significant effect on the growth of entrepreneurs in Nigeria. The meaning is that the individual variable had no significant effect at 5% level of significant but

the combine effect of these variables had positive and significant effect on entrepreneurial growth in Nigeria. Durbin Watson 1.723718 suggested the absence of autocorrelation

**Table 4: ARDL Bound cointegration test**

Test Statistic	Value	k
F-statistic	1.304678	4

**Critical Value Bounds**

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

*Source: Extracts from E-Views 9 Output*

The result of the cointegration test, based on the ARDL bound testing approach, was presented in table 4 above. Cointegration was tested on model using ENTG as the dependent variable. The results showed that the F-statistic 1.304678 was lower than the lower bound critical value 3.79 at 5% level significance using restricted intercept and no trend in specification for the model. The null hypothesis will be rejected when the value of F-statistic is more than the upper bound and accepted when the value of F-statistic is lower than the lower bound. Since the value of F-statistic was lower than the lower bound, the null hypothesis is accepted. It indeed implied that there is no co-integration which means that the variables included in the model have no long-run relationships and the error at the short run cannot be corrected in the long run.

**5. CONCLUSION AND RECOMMENDATIONS**

From the findings, monetary policy rate, treasury bill rate, liquidity ratio and loan to deposit ratio had no significant effect on entrepreneurial growth in Nigeria but the combination of these variables had positive and significant effect on entrepreneurial growth in Nigeria during the period of the study. The coefficients of these variables were positive which suggested a positive drive on entrepreneurial growth in Nigeria. The researchers therefore recommend that:

1. Monetary authorities should reduce the monetary policy rate to encourage bank to lend more money and thereby enhance the growth of entrepreneurs in Nigeria.
2. Monetary authorities should buy the treasury bills more rather than selling to push out money through deposit money bank for entrepreneurs to borrow.
3. Liquidity ratio should be reduced for banks to have more loanable funds to lend to entrepreneurs.
4. Loan to deposit ratio should increase to ensure that entrepreneurs have more access to funds.

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