

## Financial Sector and Entrepreneurial Development: Evidence from Banking and Non-Banking Institutions in Nigeria

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### Abstract

*The paper investigated the effect of the financial sector on entrepreneurial development in Nigeria for the period spanning from 1981 to 2022. The main objective of the study is to ascertain if it is the banking sector and or the non-banking financial sector that drives entrepreneurship in Nigeria. The secondary source of data is from the Central Bank of Nigeria (CBN) on various issues. Descriptive and econometric statistics were employed for analysis. Results indicate that in the short run, the banking sector has a significant negative impact on entrepreneurship, while the non-banking sector has a partly positive and negative impact on entrepreneurship; the banking sector has a significant positive effect in the long run. However, the non-banking sector exhibits partly negative and positive significance in the long run. The variables are co-integrated. This implies the existence of a long-run relationship between the variables. Findings imply that development in entrepreneurship is partly driven by both the banking and the non-banking sectors of the economy. Recommendations include that monetary authorities should strengthen the operations of the banking and non-banking financial institutions to enable them to shoulder with the statutory roles of financing the economy at large and entrepreneurial development in particular. The government should complement the financing role of entrepreneurship by financial institutions by strengthening the various financing schemes and initiating new ones.*

**Keywords:** Financial sector, banking financial institutions, non-banking financial institutions, Entrepreneurial development, Entrepreneurship.

### Introduction

The importance of entrepreneurship development can mostly be appreciated from the point of view of the strategic role it plays in stimulating the growth of the economy, innovation, and

prosperity. Entrepreneurship augments government efforts in the overall attainment of socio-political, economic, and technological attainments.

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Okpala (2012) asserts that the astronomical concern about the role of entrepreneurship as a critical and strategic factor for national development has led to a search through a wide range of schemes, programs and initiatives targeted at speedily encouraging the establishment of new businesses, reorganising and strengthening existing ones in organised and informal private sector.

Fatoki (2014), therefore, observed that in order to build and maintain formidable small and medium-scale enterprises (SMEs), the entrepreneur ought to access a wide range of funds and resources, including financial capital, human capital, and physical capital with each fulfilling specific and complementary role in the course of the life cycle of the business. Amonoo et al. (2003) opine that over the years, accessing enough capital for entrepreneurs to commence and grow their businesses has remained a serious task for both new and existing entrepreneurs. Beck and Demirgüç-Kunt (2006) stressed the dangers of providing subsidies in order to minimise the problems of small and medium-scale enterprises having access to finance, as it may be counterproductive or ineffective, especially in developing economies. Pandy (2005) opines that initial capital for new businesses and working capital for existing ventures have imposed serious limitations on entrepreneurial development since they cannot penetrate the capital market nor the stringent

conditions of the Deposit Money Banks (DMBs) for lending credit.

Be it as it may, the financial sector has been on the front burner in financing entrepreneurship in Nigeria over the years. The role of the financial sector in growth cannot be overemphasised. Levine (2004) asserts that the financial sector is adjudged to produce information ex-ante about likely investments and apportion capital appropriately; monitor investments so identified so as to make available corporate governance after providing such finance; provide a platform for the trading, diversification, and management of risk; attract and pool savings; and ease the exchange of goods and services.

Levine (2013) observed that financial systems tend to be more non-banking based and more active in countries with common law tradition, strong share-holders protection, good accounting standards, and low levels of corruption, while banks play more roles in countries where civil law, tradition, poor accounting standards, heavily restricted accounting systems, and high rate of inflation, corruption and insecurity, are predominant. This implies that non-banking financial institutions will stimulate entrepreneurship in “decent and corrupt-free” economies while the banking sector will be more responsive to the needs of entrepreneurs in “less decent and corrupt” economies.

From the foregoing, the objective of the study is to explore and ascertain the contributions of the

two major components of the financial system (banking financial institutions and non-banking financial systems) in the financing of entrepreneurial development and entrepreneurship in Nigeria. The unresolved debate is whether the bank or non-banking financial institutions are more effective at providing financial services and contributing largely towards entrepreneurship and entrepreneurial development in Nigeria within the period under review.

The study becomes more relevant and needful in view of concerns in research and policy. With regards to research, it forms a formidable bedrock for potential and foremost researchers and policy initiatives and implementation for economic managers. Also, the research interest is founded on the concern that very few studies, if any, have been done on Nigeria on this topic. Therefore, further study on this subject is pertinent. The policy concern emanates from the belief that the findings of the study will no doubt be presented to the monetary authorities in Nigeria and beyond to further enhance the policy tool for the purpose of improving financial sector financing to entrepreneurial development and entrepreneurship.

The rest of the paper is organised as follows: the literature review in Section 2, Section 3 deals with the methodology, Section 4 focuses on the results and analysis, and finally, Section 5 focuses on the recommendations and conclusion.

## **Literature Review**

### **Conceptual Review**

#### ***Banking Financial Institutions***

With regards to the banking financial institutions, statutorily, they mobilise deposits and create credit. These two roles increase the availability and accessibility of funds to the private sector, entrepreneurship in particular, and the economy at large. Therefore, banks are in a position to stimulate entrepreneurial development. However, Levin (2013) is of the view that this is obtainable in less developed economies. Aliyu and Bello (2013) studied the effect of commercial banks on the growth of entrepreneurship in Nigeria from 1980 to 2009. By adopting ratio analysis and trend analysis, results indicated that commercial banks contribute to financing small and medium-scale enterprises. However, their contribution has been reduced as the government, through Central Bank of Nigeria directives, abolished the mandatory banks' credit allocations.

The role of the financial system in the provision of financial services to the economy at large and entrepreneurial development, in particular, is replete in literature. The financial institutions comprise of banking financial institutions (including commercial banks, development banks, investment, and others) and non-banking financial institutions (including the stock exchange, insurance companies, issuing houses, and discount houses, among others). Kanayo and Michael (2011) assert that the banking system in

any economy plays a unique role by supporting the nation's economic activities. Also, Basil (2013) opines that the passive financial sector is synonymous with a lack of economic growth in an economy. Ekundayo (2011) stresses that the banking sector plays a catalyst role in the economic growth process. It is then arguable that banks should be catalysts in entrepreneurial development.

### *Non-Banking Financial Institutions*

Non-banking financial institutions are engaged in reducing hoarding by bringing the ultimate lenders and ultimate borrowers together. Other functions include promoting savings and investment habits among the people by making profitable use of its surplus funds and also providing consumer credit loans and mortgage loans; helping the non-financial business sector by funding investments involving huge capital outlay such as financing plant, equipment and inventories; also they help government short term finances by buying government securities and bonds. From the foregoing, non-banking financial institutions help finance entrepreneurship and the private sector. This is in conformity with the view of Levine (2013) in advanced and disciplined economies.

### *Entrepreneurial Development*

This involves the process streamlined to improve entrepreneurial knowledge, skills and know-how. This can be in the form of training, re-training, programs and initiatives to enhance the

entrepreneurs. It takes the form of studying the entrepreneur's attitudes, behaviours, changes in the business, and its development and expansion. Mishra and Zachary (2015) emphasised that the entrepreneur is an innovator concerned with introducing and bringing out new commodities, new markets, new primary product supply and the establishment of new firms.

Simpeh (2011) opines that an entrepreneur creates new things through organising factors of production, which are land, labour and capital. He may not be the owner of a particular enterprise, and as such, he is assumed not to bear the business risks. Mamman and Aminu (2013) investigated the effect of 2004 banking reforms on loan financing of small and medium-scale enterprises in Nigeria using a sample size of 500 randomly chosen enterprises. The chi-square test was employed for the analysis of the survey data. Findings indicated that there is no significant effect of the 2004 banking reform on loan financing of SMEs in Nigeria. The study, therefore, was of the opinion that there are some constraints that restrict access to loans from banks in Nigeria.

Therefore, this involves financing from the financial system in a country. While the financial system is comprised of banking and non-banking institutions, it is scarce in the literature whether it is the banking institutions or the non-banking institutions that are the purveyors of such financing.

### ***Banking versus non-banking Institutions***

Furthermore, some notable differences exist between the two institutions. Banks – (Commercial banks) create credit and money. NBFIs create liquidity by attracting deposits from the surplus units and siphoning such deposits to the deficit units in the form of loans. Banks create and manufacture money and, once created, become part of the money supply. Jhingan (1997) asserts that non-bank financial institutions (NBFIs) do not have the legal backing to create credit; rather, they turn a number of secondary securities – (the commercial bank time and demand deposits, deposits in some thrift institutions) into cash quickly, easily, conveniently and without cost. These are close substitutes for money – hence creating liquidity. These differences notwithstanding, both institutions provide funds for entrepreneurship. There are similarities subsisting between the two institutions. Both acquire the primary securities of borrowers' loans and deposits and provide their own indirect securities and demand deposits to the lenders. Both create secondary securities in their role as borrowers; when they borrow from central banks, banks create demand deposits, while when they borrow from commercial banks, NBFIs create various forms of indirect debt; also, both act as intermediaries between the borrowers and lenders, hence, facilitates the transfer of currency balances from non-financial lenders to non-financial borrowers with a view to making profit. Nwosa & Oseni (2013) examined the impact of bank loans to small and medium-scale

enterprises on manufacturing output in Nigeria for the period spanning 1992 to 2010. The error correction modelling technique was employed for analysis. The findings indicated that bank loans to small and medium-scale enterprises had a significant impact on manufacturing output both in the long and short run.

From the foregoing, both the BFIs and NBFIs finance entrepreneurship and entrepreneurial development in Nigeria towards economic growth and development. It is yet to be ascertained whether it is the banking sector or the non-banking sector that performs this critical role in the economy.

### ***Banking and Non-banking Institutions and Entrepreneurial Development Nexus***

Banks play a significant role in economic growth in general and entrepreneurial development in particular; so also does the non-banking sector. Studies and literature remain unsettled if it is the banking sector that drives entrepreneurship or the non-banking sector that drives it. Omah et al. (2012), in a study of Lagos state, examined the impact of post-bank consolidation on the performance of entrepreneurship in Nigeria. A sample size of 50 entrepreneurs was drawn from the supra-population within the state of Ikeja Local Government. Descriptive statistics (mean, standard deviation, and coefficient of variation) were employed for data analysis. Findings suggest that entrepreneurs do not have better access to finance through banks due to re-organisation in banks as a result of post-bank

consolidation. Ahiawodzi and Adade (2012) investigate the effect of access to credit on the growth of small and medium-scale enterprises in the Ho Municipality of Volta region of Ghana. The study adopted both survey and econometric methods. Both the survey and econometric results showed that access to credit exerts a significant positive effect on the growth of entrepreneurship in the Ho Municipality of that country.

Obamuyi (2011), in a comparative study in Ondo State, investigated the performance of loans granted to entrepreneurship by banks with that of micro-credit institutions in Nigeria. The results, through descriptive statistics, indicated that the average repayment rate for banks was 92.93% and 34.06% for micro-credit schemes. The study suggested that banks performed at much higher levels than micro-credit schemes.

Chiou, Wu and Huang (2011) studied how diversified operations of banks impact their loans to entrepreneurs by using panel data on 28 banks. Results indicated that as aggressive derivatives traders, the impact of its total assets on loans to entrepreneurship is positive at a 1% significance level, and credit guarantees had a positive impact on entrepreneurship loans at a 1% significance level. The findings implied that large banks are encouraged to make loans towards entrepreneurial development through the assistance of the credit guarantees scheme.

Amonoo et al. (2003), in a study for Ghana, argued that there is a relationship between interest rates and the demand for credit as well as interest rates and loan repayment by

entrepreneurs. Results indicated a negative relationship between interest rates and demand for credits, as well as interest rates and loan repayment. Suggestions include that lowering interest rates would increase entrepreneurship demand for credit and loan repayment at banks and non-bank institutions, which can be achieved through the amendment of the government's fiscal policy.

While available literature is trite on the enormous role of financial institutions in financing entrepreneurial development and entrepreneurship, little or none is presently available on whether it is the banking institutions or the non-banking institutions that play more of such roles. This study bridges the literature gap for Nigeria.

### **Theoretical Review**

Levine (2004) discussed the finance–growth relationship as supply-leading”. By implication, it implies that the financial sector leads to economic growth by identifying and financing profit-oriented projects. This includes entrepreneurial development. That is to say that a well-functional financial system encourages technological innovations by selecting and funding businesses that are notably profitable. Therefore, the financial system is expected to finance entrepreneurship and foster economic growth.

The *a priori* expectation of the study is that both the banking and non-banking institutions should drive entrepreneurial development.

## Methods and Procedure

### Methods

We used the Nigerian data spanning from 1981 to 2022 to ascertain whether it is the banking sector, the non-banking sector, or both that has driven the development of entrepreneurship in magnitude and size. Data on various issues is collected from the CBN's statistical bulletin.

Bjuggren et al. (2004), while agreeing that in quantitative studies, entrepreneurship is usually represented by proxy variables such as self-employment rate, number of new firms, the growth rate of new firms, and share of small and medium-sized enterprises, they argued that since there are various ways of defining self-employment, making it “somewhat dubious proxy”. This may inherently flaw the analysis, especially where data available for such is either insufficient or unavailable. In light of this, we use a proxy that measures the contributions of such enterprises to the economy as a whole. This informs the choice of the proxy for the dependent variable.

The dependent variable is the total private sector savings as a ratio to the gross domestic product (GDP) depicted as TPSCSv/GDP%) or simply (TPSCSv). This is the aggregate of private sector

savings as a percentage of the gross domestic product.

The independent variable is the financial sector indicators comprising both banking and non-banking financial institutions. The banking institutions indicators are PSCr/GDP% represents Commercial banks credit to the private sector percentage to GDP, represented as (PSCr); DoSCr/GDP% depicts commercial bank credit to the economy (domestic sector credit percentage to GDP, (DoSCr); while that of the non-banking institutions are CapMS/GDP% is proxy for the Stock exchange market capitalisation) percentage to GDP (CaPMS); M<sub>2</sub>/GDP% shows Broad money, broader money (M2). Money supply is a ratio of the gross domestic product, M2 is Money supply (M2) is C+D+ T+S where C is the currency in circulation, D is the demand deposits, T is the time deposits, and S is the savings deposits.

The following augmented model is formulated:

$$L\Delta LTPSCSv = \beta_0 + \beta_1LPSCr + \beta_2LCaPMS + \beta_3M_2 + \beta_4DoScR + t \dots \dots \dots (1)$$

where,

TPSCSv/GDP% depicts the total private sector savings as a ratio to the gross domestic product (TPSCSv)

PSCr/GDP% represents Commercial banks credit to the private sector percentage to GDP, (PSCr) DoSCr/GDP% depicts Commercial bank credit to the economy (domestic sector credit percentage to GDP, (DoSCr), CapMS/GDP%

is proxy for the Stock exchange market capitalisation) percentage to GDP (CaPMS),  $M_2/GDP\%$  shows Broad money, broader money (M2),  $L = \log$ ,  $\beta_0 = \text{constant}$ ,  $\beta_1, \beta_2 = \text{explanatory power of the variables}$ ,  $\epsilon_t = \text{stochastic error term}$ .

**Procedure**

Both descriptive and econometric statistics were employed for data analysis. Descriptive statistics include the mean, median, standard deviation, kurtosis and others. The results from these are further subjected to confirmation through econometric tests.

Next is the econometric statistic. The Augmented Dickey-Fuller (ADF) unit root test is employed to test for stationary of the variables. In the first place, we perform the Augmented Dickey-Fuller ADF unit root test URT. This is to enable us to identify if there is a unit root among the variables. Further, this test also provides the basis to avoid the simultaneity bias associated with the time series data. This is so since the Ordinary Least Square (OLS) time series is usually associated with spurious data or simultaneity bias. Also, the ADF will depict if the series are of the same order or different order of integration. If some of the variables have different integrating orders, we now test for co-integration (for long-run relationships) using the auto-regressive distributive lag.

This is depicted as

$$\Delta X_t = \alpha_0 + \alpha_1 t + \beta X_{t-1} + \sum_{j=1}^l \gamma_j \Delta X_{t-j} + \mu_t \dots \dots (2)$$

Where,

$X_t$  is integrating series (independent variable),  $\beta$  is coefficient,  $\gamma_j$  is integrating series (dependent variable), *the*  $\Delta$  is the the first difference operator;  $t$  is the time trend;  $\alpha_0$  is a drift;  $\alpha_1$  represents the linear time trend;  $m$  is the lag length;  $\mu_t$  is a white noise process.

**Autoregressive distributed lag ARDL**

When econometric analysis is based on long-run behaviour and short-run dynamics, whether for time series or panel data, the ARDL is most appropriate. It encapsulates their parameterisation conditional co-integration for the full co-integration. The following model ARDL with an exogenous variable is given as

$$Y_t = C_0 + \sum_{k=1}^p \beta_k Y_{t-k} + \sum_{j=0}^l \alpha_{j+1} X_{1t-j} + \mu_t \dots \dots (3)$$

where,

$Y$  is the dependent variable,  $p$  is the autoregressive order of the ARDL where it is directly associated with  $Y$ ,  $X$  is an exogenous explanatory variable which has  $l$  lags (equally, a contemporaneous  $X$  value may be included),  $\mu_t$  is the residual term.

As applicable to the study, Equation 3 is transformed thus-

$$LTPSCS_v = C_0 + \sum_{k=1}^p \beta LPSCr_{t-k} + \sum_{j=0}^l \alpha_j LCaPMS_{t-j} + \sum_{j=0}^l \alpha_j LM_2 + \sum \alpha_j DoSCr + \mu_t \dots \dots \dots (4)$$

where,

LTPSCS<sub>v</sub> is the dependent variable - log of Total private sector savings as a ratio to the gross domestic product, C<sub>0</sub> is the constant, LPSCr is log of Credit to the Private sector as a ratio to the gross domestic product, LCaPMS is log of Stock market capitalisation, LM<sub>2</sub> is the log of money supply β, α are the coefficients, μ<sub>t</sub> is the residual term.

Actually, the above equation is not a long-run form. Rather, it is more of a short-run model. It implies that actual impact of X through α is to be dealt with regards to size and orders adjusted with Y through β. This culminates into a process of weighing the aggregate impact of proportional to, and this is usually done by using a long-run multiplier. Blackburne et al. (2007) assert that approximating this long-run multiplier would involve a nonlinear transformation in order to arrive at a long-run co-efficient. This transformation is given generally as:

$$\Theta = \frac{\sum_{i=1}^1 \alpha_j}{1 - \sum_{k=1}^p \alpha_j \beta_k} \dots \dots (5)$$

Equation 3 is the long-run multiplier of the explanatory variable. The formula works by way of using the proportional coefficients associated with the independent variable, including its lags. Then, this is divided by one minus the sums of the autoregressive β coefficients. The numerator of the equation is the long-run propensity of the explanatory variable towards the dependent variable. Its interpretation is that a permanent change of one unit in explanatory variables implies that the sums would be the long-run propensity as the impact on the dependent variable. The denominator or the down part of the equation is the weight associated with the response of the autoregressive structure. It shows the model of the number of lags of Y and the corresponding number of lags associated with the independent variables. It is interpreted as: if X (explanatory variables) in levels change by a unit, the average and or expected change in the dependent variable would be the value of the long run coefficient.

**Granger Causality test- Pair-wise Granger Causality Test**

If it is discovered that series are co-integrated, the standard Granger causality test is constructed. The test for Granger causality was performed by estimating equations in the form:

$$\Delta LTPSCS_{vt} = \sum_{i=1}^{m-1} \beta \Delta LPSCr_{t-1} + \sum_{i=1}^{m-1} \delta_j \Delta CapMS_{t-j} + \epsilon_t \dots \dots \dots (6)$$

$$\Delta LTPSCSV_t = \sum_{i=1}^{m-1} \beta \Delta LFS_{t-i} + \sum_{j=1}^{m-1} \lambda_j \Delta LFS_{t-j} + \mu_1 + \varepsilon_t \quad (7)$$

where,

$L_t TPSCSV$  is the log of entrepreneurial development,  $LLPSCr$  is the log of banking sector indicators,  $LLFS$  is the log of financial sector indicators,  $\mu_1$  is the white noise disturbance term,  $\varepsilon$  is also the white noise disturbance term.

The decision rule is thus- if the probability value (the probability) is equal to, or greater than 0.05, we accept the null hypothesis that there is no

causality (or that one variable does not Granger cause the other) between the variables. Hence, we reject the alternative hypothesis. However, if the p-value (the probability) is lesser than 0.05, we reject the null hypothesis that there is no causality (or that one variable does not Granger cause the other) between the variables; hence, we accept the alternative hypothesis that one variable, Granger causes the other. Thus, if probability = or >0.05, accept (do not reject) the null hypothesis; if probability < 0.05, reject (do not accept) the null hypothesis.

**Results and Discussion**

**Table 1: Descriptive Statistic Result**

	TPSCSV	CAPMS	DOSCR	M2	PSCR
Mean	7.949756	10.79439	12.40951	15.64488	6325.808
Median	6.630000	7.560000	11.74000	13.05000	764.9600
Maximum	14.57000	39.95000	24.94000	25.16000	25663.43
Minimum	3.290000	2.560000	3.950000	9.150000	8.570000
Std. Dev.	3.423822	8.013167	5.520923	5.495714	8951.902
Skewness	0.571107	1.258369	0.505065	0.569080	1.101084
Kurtosis	1.862513	5.194574	2.289359	1.643001	2.611285
Jarque-Bera	4.439151	19.04813	2.605848	5.358792	8.542761
Probability	0.108655	0.000073	0.271736	0.068605	0.013962
Sum	325.9400	442.5700	508.7900	641.4400	259358.1
Sum Sq. Dev.	468.9023	2568.434	1219.224	1208.115	3.21E+09
Observations	41	41	41	41	41

Source: Researcher’s Computation

We employ the descriptive results to draw a comparison of the statistical averages and standard deviations of the dependent and independent variables. This will enable the theoretical relationship that exists between the variables to be explained. Table 4 depicts the mean values and standard deviation of the parameters. The average (mean) is 7.9497 for the dependent variable- (the total private sector savings as a ratio to the gross domestic product (TPSCSV); 10.79, 12.4, 15.64, 6325.8, for the explanatory variables -the Stock exchange market capitalisation percentage to GDP (CAPMS), Commercial bank credit to the economy (domestic sector credit percentage to GDP, (DOSCr), Broad money, broader money (M2), Commercial banks credit to the private sector percentage to GDP/PCr/GDP%, (PCr), respectively. The variables dispersal from the mean (standard deviation) is between 3.423 for the dependent variable- (TPSCSV), 8.01, 5.52, 5.49 and 8951 also for the explanatory variables – (CAPMS, DOSCR, M2 and PCr) respectively.

The variables also exhibit an asymmetrical distribution with a long tail to the right, depicting a high positive skew as above zero, having values of 0.57 for the dependent variable and 1.25, 0.505, 0.568, and 1.101 for the explanatory variables, respectively. The values of the kurtosis, which quantifies whether the shape of the data of the distribution matches, are 1.86 for the dependent variable. For the explanatory variables, the values are 5.19, 2.28, 1.64, 2.61, respectively.

The above results depict interesting results since most of the variables showed reasonable signs of a relationship. While not being unmindful of the fluctuating nature that the trends might have affected the normalcy of the variable distribution, there is a further need for further confirmatory tests. Therefore, we make the theoretical case that such trends are likely to lead to the causal relationship between the dependent and explanatory variables. Be it as it may, the claim is further subjected to further econometric tests for further confirmation or otherwise, as depicted below.

**Table 2: Unit Root Test Result**

Variable	Intercept Only	Decision	Trend and Intersect	Decision
<i>LTPSCSV</i>	-2.9369 (-0.3007) *	I (0)	-3.5266 (-1.4195)*	I (1)
<i>LCAPMS</i>	-2.9411 (-1.3028)	I (1)	-3.1946 (-3.3458)*	I (1)
<i>LDosCr</i>	-3.5266 (-2.0114)	I (1)	-1.5817 (-3.1964)*	I (1)

<i>LM2</i>	-2.9369 (-0.4768)	I (1)	-3.5236 (-2.2107)	I (1)
<i>LPSR</i>	-2.9134 (-0.2152)	I (1)	-3.5063 (-0.6255)*	I (1)

**Source:** Researcher's Computation \* (\*\*) \*\*\* Significant at 1% (5%) 10% level of significance

The ADF results depict that the series is not of the same order but rather of a different order of integration. Some of the variables have different

integrating orders; hence, while some are of I (1), some are of I (0). Therefore, the ARDL co-integration test becomes more appropriate.

**Table 3: ARDL Long-run Results**

Long Run Results	Coefficients	Standard Error	t-statistic
Constant	2.514	1.2732	1.9751
Trend	-0.089	1.2732	-2.026
<i>LCAPMS</i>	-0.0190	0.1990	-0.5679
<i>LDOSCR</i>	0.1816	0.0804	2.2588
<i>LM2</i>	0.2599	0.1306	1.9899
<i>LPSCR</i>	0.0002	0.0002	1.0562
R <sup>2</sup>	0.97		
Adjusted R <sup>2</sup>	0.9668		
F-Statistic	74.83		
X <sup>2</sup> N	2.87		
X <sup>2</sup> SC	2.43		
X <sup>2</sup> ARCH	1.93		

**Source:** Researcher's Computation

Table 3 above depicts the long-run results. In the long run, the significant effect of the financial sector variables on entrepreneurial development is clearly showcased. The coefficients of the banking sector variables PSCR and DOSCR are 0.0002 and 0.18, respectively. Meanwhile, for the non-banking financial institutions, CAPMS and M2 are -0.019 and 0.25, respectively. This concludes that the banking sector has a

significant positive effect in the long run. However, the non-banking sector exhibits partly negative and positive significance in the long run.

The F-test results are tested to ascertain the presence of a long-run relationship among the variables. It depicts a long-run relationship among variables. The calculated F – statistic of 74.83 falls above the lower-bound critical value, and then we reject the null hypothesis. The F-

statistic is used for testing the existence of a long-run relationship among the variables. We test the null hypothesis that there is no co-integration among the variables. We compare the F-statistic with the critical value given by Narayan (2005), which is more suitable for smaller sample data. Since the computed F-statistic is greater than the upper bound critical value, then the null hypothesis is not accepted. This implies that a long relationship exists between the explanatory and dependent variables.

The Pesaran critical value (2005) upper and lower bands at 1% are 5.250 and 4.068; those of 5% are 3.910 and 2.962; while at 10%, the bands are 3.346 and 2.406, respectively. The calculated value is 1346.109, which is higher than the bands. Therefore, we cannot accept the null hypothesis and conclude that the variables are co-integrated. This implies the existence of a long-run relationship between the variables.

**Table 4: ARDL Short-run Results**

	Coefficients	Standard Error	t-statistic
<b>Short Run Results</b>			
Constant	0.537	0.417	2.49
$\Delta$ CAPMS	0.80	0.078	1.95
$\Delta$ DOSCR	-0.119	0.181	-0.066
$\Delta$ M2	-0.114	0.224	-2.072
$\Delta$ PSR	-0.0007	0.002	1.36
ECM	-0.089		
R <sup>2</sup>	0.9799		
Adjusted R <sup>2</sup>	0.9668		
F-Statistic	74.83		

**Source:** Researcher's Computation

From Table 4, the explanatory variables for the banking sector significance are -0.0007 and -0.11 for a negative significant short-term impact on entrepreneurship. For the non-banking sector, the coefficients are 0.8 and -0.11 for CAPMS and M2

respectively. Therefore, we conclude that the banking sector has a significant negative impact on entrepreneurship, while the non-banking sector has partly positive and negative impacts on entrepreneurship in the short run.

**Table 5: Pairwise Granger Causality Result**

Null Hypothesis	F- statistic	Probability	Decision	Type of causality
$LCAPMS \neq > LTPS$	7.9987	0.0014	Rejected	Causality
$LTPS \neq > LCAPMS$	0.7014	0.5079	Not Rejected	No Causality
$LDOSCR \neq > LTPS$	1.8126	0.1787	Not Rejected	Not Causality
$LTPS \neq > LDOSCR$	0.2141	0.8083	Not Rejected	Not Causality
$LM2 \neq > LTPS$	1.2771	0.2919	Not Rejected	Not Causality
$LTPS \neq > LM2$	2.7660	0.0771	Not Rejected	Not Causality
$LPSCR \neq > LTPS$	4.7744	0.0149	Rejected	Causality
$LTPS \neq > LPSCR$	0.3057	0.7357	Not Rejected	No Causality

**Source:** Researcher's Computation

The next to be performed is the Pair-wise Granger Causality test. It is a group and descriptive statistics. This is depicted in Table 5.

The probability of the causality from CAPMS to entrepreneurship is 0.0014. This is less than 0.05 and depicts causality. However, the probability from entrepreneurship to CAPMS is 0.507, greater than 0.05 and depicts no causality. The probability of the causality from DOSCR to entrepreneurship is depicted as 0.178. This is greater than 0.05 and depicts no causality, and likewise, the probability from entrepreneurship to DOSCR is 0.808, which is greater than 0.05 and depicts no causality. It is interesting to note that the probability of the causality from M2 to entrepreneurship is depicted as 0.29. This is greater than 0.05 and depicts no causality, and likewise, the probability from entrepreneurship to M2 is 0.07, which is greater than 0.05 and depicts no causality. Going further, the probability of the

causality from PSCR to entrepreneurship is depicted as 0.0142. This is lesser than 0.05 and depicts causality, and likewise, the probability from entrepreneurship to PSCR is 0.73, which is greater than 0.05 and depicts no causality. We conclude that there is causality between the CAPMS and entrepreneurship running from CAPMS to entrepreneurship. Also, there is causality between PSCR and entrepreneurship running from PSCR to entrepreneurship. The findings, therefore, imply that development in entrepreneurship is partly driven by the banking and the non-banking sectors of the economy. These findings are in conformity with Aliyu and Bello (2013). However, it negates that of Levine (2004), Nwosa and Oseni (2013), and Ahiawodzi and Adade (2012) for Ghana. It also corroborates the *a priori* expectation of the study that both the banking and non-banking institutions should drive entrepreneurial development.

## **Discussion**

In the short run, the banking sector has a significant negative impact on entrepreneurship, while the non-banking sector has partly positive and negative impacts on entrepreneurship. There is unidirectional causality between the stock market and entrepreneurship, running from the stock market to entrepreneurship. There is no causality between money supply and entrepreneurship. Also, there is causality between private sector credit and entrepreneurship, running from private sector credit to entrepreneurship. There is no causality between loans to the domestic sector and entrepreneurship. The findings, therefore, imply that development in entrepreneurship is partly driven by the banking and the non-banking sectors of the economy. Therefore, we conclude that the banking sector will have a significant positive effect in the long run. However, the non-banking sector exhibits partly negative and positive significance in the long run. We cannot accept the null hypothesis and conclude that the variables are co-integrated. This implies the existence of a long-run relationship between the variables. The banking sector has a negative significant impact on entrepreneurship, while the non-banking sector has partly positive and negative impacts on entrepreneurship in the short run. We conclude that there is causality between the CAPMS and entrepreneurship running from CAPMS to entrepreneurship. Also, there is causality between PSCR and entrepreneurship running from PSCR to entrepreneurship.

The findings, therefore, imply that development in entrepreneurship is partly driven by the banking and the non-bank sectors of the economy.

## **Conclusion**

Using Nigeria data spanning from 1981 to 2022, the study investigated if it is the banking financial institutions, the non-banking financial institutions, or both that have propelled the development of entrepreneurship. Both descriptive and econometrical statistics were used for analysis. The mean, median and mode, among others, were employed for the descriptive statistics; the unit root test, the autoregressive distributed lag test and the Granger causality test were adopted for econometric analysis. Results depict that the banking and the non-banking sectors of the economy partly drive development in entrepreneurship.

## **Recommendation**

Monetary authorities are advised to strengthen the operations of the banking and non-banking financial institutions to enable them to shudder with the statutory roles of financing the economy at large and entrepreneurial development in particular. This will not only promote entrepreneurs' access to bank credit but also enhance their profit and savings.

The government should complement the financing role of entrepreneurship by financial

institutions by strengthening the various financing schemes and initiating new ones, as the financial institutions cannot do it alone.

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