



Research Paper

Economic analysis of sectoral financial intermediation and capital formation prospect in Nigeria

Suoye Igoni¹, Kingsley M. Akpeghuhu², Ebi R. Odi³

¹Department of Banking and Finance, University of Nigeria, Nigeria

²Department of Banking and Finance, Rivers State University, Nigeria

³Department of Finance and Banking, University of Port Harcourt, Nigeria

Abstract

The accumulation of funds for production in the Nigerian economy had been affected by unavailability of new technological inputs. Despite the disbursement of the loanable funds to support the production sector over these years, the Nigerian capital formation prospect has not been improved. This study analyzed the relationship between sectoral financial intermediation and the Nigeria's capital formation prospect from 1995-2020. The study sourced data from the Central Bank of Nigeria Statistical Bulletin (various issues). The data employed and analyzed in the study were; gross fixed capital formation (GFCF) for capital formation as the dependent variable against agricultural forestry and fishery (AFF), manufacturing (MAN), mining and quarrying (MAQ) that represented the explanatory variables. The Vector Autoregressive estimation (VAR) model and the Augmented Dickey-Fuller (ADF) were adopted for the analysis. The results from the ADF unit root showed that all variables were stationary at first order differenced levels. The long run test results indicated no co-integrating equation. Further, the short run VAR lag results revealed that agricultural forestry and fishery had a positive but insignificant relationship with the capital formation in Nigeria. While, mining and quarrying had a negative and insignificant relationship with the Nigerian capital formation. However, manufacturing had a positive and significant relationship with capital formation in Nigeria. The study concluded that, manufacturing constituted a significant subsector of study that support the Nigerian capital formation. The study recommended for additional loanable funds for manufacturing, and more advocacy for the extraction of solid minerals deposits in the northern part of Nigeria.

Received 20 September, 2021; Revised: 03 October, 2021; Accepted 05 October, 2021 © The author(s) 2021. Published with open access at www.questjournals.org

I. Introduction

Capital formation refers to the net addition of capital stock of any nation after depreciation. It is described as an addition to stock of capital asset that is set aside for future productive endeavors in real sector which will lead to more growth in physical capital assets of a country. Capital formation captures all the real-value-added to the economy in real-asset-terms. And it is derived from savings and investments. Capital formation has impact on savings accumulation in the sense that increase in capital formation can lead to more savings and wealth accumulation. Jhingan (2011) stated that capital formation is the process whereby people save out their money incomes, deposit them with banks and other financial institutions which in turn lend them to agriculturist, industrialist, etc. for investable asset. Going further, when savings accumulate, it can lead to increase in gross domestic investment (GDI), and the income generated from the investment projects can also accelerate gross domestic product (GDP) growth rate.

Normally, an effective management of the financial system provides a platform in form of financial intermediation for GDP to strive. Financial intermediation refers to the process of transferring funds from surplus economic agents to deficit economic agents. The surplus agents imply that having excess funds to invest as its expenditure is less than available income. On the other side, deficit agents are economic units that borrow funds as the expenditure is greater than available income and reward the owner of the funds an interest. The interest rate is a percentage of an amount agreed between the supplier of the funds and the borrower for a future date. The loanable sum borrowed by the individuals, corporate bodies or government is expected to accumulate more funds in form of capital formation. For instance, surplus funds allocated to agricultural fishery and forestry, manufacturing, and mining and quarrying etc. in form of financial intermediation process are expected

to grow capital formation of any nation like Nigeria. Knowing that the roles of financial intermediation include; provision of liquidity and payments channels, maturity and risk transformation, and reduction of transactional and information cost. This goes on to say that, economic activities cannot be smooth sailing without the continuing flow of money and credit. The economics of all market-oriented nations depend on the efficient operation of the complex and skillful balance system of money and credit. Financial intermediation is an indispensable element for capital growth. It provides the bulk of money supply that facilitates production.

Consequently, it can be arguable, that the economic well-being of any nation is a function of advancement and development of her financial sector, viz the banking industry. It is a known fact that the banks played vital roles in an economy by offering and facilitating credits/funds. In Nigeria, to maintain these roles, the Central Bank of Nigeria often regulate and supervise the financial institutions to ensure a sound financial system and economic stability. It is incontrovertible that the financial system remained the engine room of growth for economic prosperity given its function of financial intermediation. Through this function, the banks and other finance houses facilitate capital formation to lubricate the production turbines that promotes economic growth. Though, Oke (1989) identified inadequate capital base, imprudent lending practice has led to the increase of bad and doubtful debts in the financial system. Yao (2011) postulated that financial intermediation development significantly promotes total factor productivity when controlling for other variables such as government intervention.

Although, banks and other financial institutions are responsible to create money and make credit available to the economy. In essence the need for a strong, reliable and viable financial system is underscored by the fact that the industry is one of the few sectors in which the shareholders fund is only a small proportion of the liabilities of the enterprise, otherwise it is customers deposit. It is therefore, not surprising that the financial system is one of the most regulated sectors in any economy, yet it has been argued in the public domain that the financial sector had not been performing the desired roles in improving capital formation.

One of the performance measurements of any modern society is the status of the financial system and the production advancement. Here, the financial system is primarily to move funds from surplus spending economic units to deficit spending units in order to produce valuable goods and services. In addition, to make investments in new equipment and facilities so as to stimulate the growth of an economy and further improve the standard of living of citizens. The work of Shittu (2012) revealed a significant impact of financial intermediation on economic growth in Nigeria. The financial system of any nation has a functional relationship with the size of her economy. So, a growing economy has to place more responsibilities on the financial environment in order to mobilize the needed capital to facilitate production at the optimal level, and to generate more disposable income and full employment. On the contrary, any economy that has a passive financial system cannot experience and sustain growth, as there seem to be no incentives in place of investment. The study of Onodugo, Kalu and Anowor (2013) found out that investment progress in Nigeria is low and suggested a conducive environment for growth and expansion of domestic capacity. Ngerebo-A and Torbira (2014) stated that the slow pace of market activities development in Nigeria were responsible for lack of causality flow to gross capital formation. Li and Martin (2019) argued that entrepreneurs try and yet fail to raise fund, and that the positive and negative reputation acquisition significantly change measures of capital raising success. Further, Samatas, Makrominas and Moro (2019) identified excessive household leverage through mortgage lending exerted a crowding out effect on availability of credit to support productive investment between 1995 and 2008 in Europe.

In light of the above discussion, there seems a relationship between financial intermediation and capital formation, and there is urgent need to analyze the economic view point. Although, there is limited or no recent work of this kind from scholars in this study area. Thus, the study will close this gap to assess the sectoral financial intermediation and capital formation prospect in Nigeria. It is imperative to ask, to what extent did sectoral financial intermediation in agricultural forestry and fishery, manufacturing, mining and quarrying significantly related with capital formation prospect in Nigeria? Hypothetically, sectoral financial intermediation in agricultural forestry and fishery, manufacturing, mining and quarrying had no significant relationship with capital formation prospect in Nigeria.

Findings from this study will enrich the reference materials for scholars/academics, and, policymakers will be guided in enacting and regulating financial policies. Also, industrial practitioners such as banks, investors, market players and other financial institutions would find this study significant as it will expose the relationship between sectoral financial intermediation management and capital formation. Again, findings from this study will further create awareness and deep understanding about the role of financial intermediation management on capital formation.

The variables of this study were extracted from the Central Bank of Nigeria (CBN) statistical bulletin. Among the variables were gross capital formation as proxy for capital formation prospect being the dependable variable, whereas agricultural forestry and fishery, manufacturing, and mining and quarrying stand in for sectoral financial intermediation being the independent variables. The above-mentioned variables covered a period of 1995 to 2020, (25 years). The study intended to make the work as current as possible by adopting up-

to-date information and to capture a longer period. However, the obvious limitation was the fact that it was in 1995 the Central Bank of Nigeria statistical bulletin made available of credits loans and advance to the production sectoral.

II. Review of related literature

Scholars have developed few theories in financial intermediation. The theory of financial intermediation was formally introduced in the works of Goldsmith (1969), and Shaw (1973) that identified the subject matter as a financial environment of both money and capital markets playing vital role in economic development services. Among the economic development services provided by the financial institution that promote financial intermediation is the loanable funds to deficit units' agents. One of the theories that have supported the services of financial intermediation is loanable fund theory. Loanable fund theory is one of the improved theories of interest rate. According to this loanable fund theory, interest rate is a function of the demand for and supply of loanable funds. This theory suggested that the higher the demand for loanable funds, the higher the rates of interest based on the relative supply of monies. Although, both the surplus unit and deficit unit agents bargain to arrive at equilibrium rates of interest. So, loanable funds play the role of financial intermediation that grows capital formation in any country like Nigeria. Ugwuegbe and Uruakpa (2013) assessed the impact of capital formation on the growth of Nigerian economy within the period of 2011. The study adopted stock capitalization, inflation rate, interest rate, and economic growth index. The analysis was conducted using the Ordinary Least Squares (OLS) technique. The findings indicated that capital formation has a positive and significant impact economic growth in Nigeria.

Ezirim, Torbira, and Amuzie (2016) investigated financial intermediation of insurance companies and capital formation in Nigeria. The study employed indicators of financial intermediation of insurance companies and gross fixed capital formation within the periods. The multivariate regression and dynamic linear model were applied for the analysis. The results indicated an existence of short and long run between intermediation index and capital formation in Nigeria.

Forgha, Sama, and Aquilas (2016) investigated financial intermediation, domestic investment and economic growth in Cameroon from 1975 to 2014. The study employed Vector Autoregressive model on domestic investment, broad money, credit to private sector, ratio of narrow money to broad money, financial intermediation development index, and GDP ratio. The results revealed no causality flow from financial intermediation to GDP.

Adeniyi, Adeyinka, and Babayaro (2019) examined insurance companies and the efficiency of financial intermediation in Nigeria. The study used total insurance claims and total income, and total insurance expenditure on a correlation analysis. The results showed a positive correlation among the used variables in Nigeria.

Yakubu, Abokor, and Balay (2021) re-examined the impact of financial intermediation on economic growth in Turkey. The investigation was between 1970 and 2017. The study employed Autoregressive Distributed Lag (ARDL) and the results thereof indicated a positive short-run, and long-run impact of financial intermediation on economic growth in Turkey.

The above literatures reviewed are related to this study, however, the scope, and the variables used in this work were different. Based on this, the results from this study may differ, and such will enrich to body of knowledge.

III. Methodology

The *Ex-post facto* design was adopted for this study. The work is country-specific, and it was based on already accomplished events. The *ex post facto* research design is best fit for the establishment of relationships. Thus, in an attempt to analyze the relationship between sectoral financial intermediation and capital formation prospect in Nigeria, this study added in its design, the econometric/analytical design to demonstrate the *ex-post facto* design.

The data was sourced from the Statistical Bulletins of the Central Bank of Nigeria (various issues). The data sets were time series that followed regular time-frequency of annualized for both the dependent and independent variables. The dependent variable was the gross fixed capital formation, and the explanatory variables were agricultural forestry and fishery, manufacturing, and mining and quarrying stand in for sectoral financial intermediation. The study did not adopt any procedure for selecting samples and population given that the study used pre-existing data. The coverage period was 1995 to 2020 representing 25 years.

Model specification

The theoretical leaning of this study is the Loanable Funds Theory (LFT). The theory stated that the higher the demand for loanable funds, the higher the rates of interest based on the relative supply of funds. Although, both the surplus unit and deficit unit agents bargain to arrive at equilibrium rate of interest. The

study variables were conducted. The traditional unit root test for stationary of the data experimented by Dickey-Fuller test was initiated to show the unit root properties of the series following equation specified (eq. 6).

$$\Delta y_t = \beta_1 + \beta_2 t + \delta y_{t-1} + \alpha_i \sum_{i=1}^m \Delta y_{t-i} + \varepsilon_t \text{ ----- eq. 6}$$

Where the test is for $H_0 = \delta = 0$ and $H_1 = \delta < 0$.

The lag selection was based on the Bayesian Criterion generated automatically by the estimation software following the form of equation 7 below:

$$BIC = \ln(n)K - 2\ln(\hat{L}) \text{ ----- eq. 7}$$

where:

n represents either the sample size, the number of observations, or the number of data points in x.

k represents free parameters to be estimated.

\hat{L} represents the maximized value of the likelihood function for the estimated model M given as $\hat{L} = p\left(\frac{x}{\hat{\theta}}, M\right)$.

Long Run and Co-integration Test (Bound Test)

This study also carried out the long run test following the VAR framework.

VAR Model short run representation

After the establishment of the possible long-run relationship through the bound test, the VAR model was used to test the lag of gross fixed capital formation to the shocks emanating from the sectoral financial intermediation.

This follows the form specified in eq. 8 below.

For the Model with LOGGFCFR as the dependent variable:

$$\begin{aligned} \Delta LOGGFCFR_t = & \pi_p + \sum_{i=1}^{\beta} \delta_{ip} \Delta LOGGGCFR_{t-i} + \sum_{i=1}^{\beta_1} \sigma_{ip} \Delta LOGAFFR_{t-i} + \sum_{i=1}^{\beta_2} \tau_{ip} \Delta LOGMANR_{t-i} \\ & + \sum_{i=1}^{\beta_3} \theta_{ip} \Delta LOGMAQR_{t-i} + \varpi_p LOGGGCFR_{t-1} + \varpi_{1p} LOGAFFR_{t-1} + \varpi_{2p} LOGAFFR_{t-1} \\ & + \varpi_{3p} LOGAFFR_{t-1} + \xi_{1t} \text{ ----- eq. 8} \end{aligned}$$

All the variables were discussed above with combined modeling of the short-run and long-run coefficients using the VAR framework.

The *a priori* expectations from the models' tests of the hypotheses were given as follows; $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0$

To ensure that estimates were valid, efficient, and unbiased inferences in this study, the diagnostic test and the procedure as prescribed two critical values namely lower and the upper bound, and the decision rule guides were contained in table 1 below:

Table 1: Summary of Adopted Diagnostic Tests and Decision Rules for the Bound Tests Process

S/No	Test Name/ State	Test Function/ Remark	Decision Rule/ Inference
1.	Coefficient of Correlation (R ²)	To measure the goodness of fit of the model	The higher the R ² the better the fit
2.	F-Statistics	To Test the significance of the overall regression	A Probability value of F-stat less than 0.05 suggests that the model is good enough for analyses/inferences.
3.	t- Statistics	To confirm the significance level	t- Statistics higher than 1.96 shows evidence of significance.
4.	F stat is more than upper bound/t-statistics greater than 1.96	A cointegrating relationship exists	Reject the null hypothesis
5.	F stat less than the lower and upper bound/t-statistics less than 1.96	No cointegrating relationship exists	Refuse to reject the null hypothesis
6.	F stat at the chosen level of significance falls within the lower and upper bound/ t-statistics equals to 1.96	Results are indecisive	Inconclusive Finding

Source: Authors' Compilation.

Inferences in this study were based on the outcome of the estimation approaches as well as conclusions drawn based on the tested hypothesis. The choice level of significance for all tests was the 0.05 or 5% level and in confirmation with the 1.96 t-Statistics critical value. All estimations were done using version 10 of the E-views estimation software.

IV. Results and Discussion

This section presented data of the study and discussed the findings of the results.

Presentation of data

The data were presented in table 2 below:

Table 2: Models variable data of Gross Fixed Capital Formation (GFCF), and loanable funds to Agricultural Forestry and Fishery (AFF), Manufacturing (MAN), and Mining and Quarrying (MAQ), 1995 – 2020 in Billions of Naira.

Year	AFF	MAN	MAQ	GFCF
1995	25.28	58.09	12.07	1153.47
1996	33.26	72.24	15.05	1494.75
1997	27.94	82.82	20.61	1697.77
1998	27.18	96.73	22.85	1948.65
1999	31.05	115.76	24.68	2098.54
2000	41.03	141.29	32.29	2404.82
2001	55.85	206.89	70.48	2473.47
2002	59.85	233.47	70.17	3078.78
2003	60.1	294.31	95.98	3846.23
2004	67.74	332.11	131.06	4723.72
2005	48.56	352.04	172.53	5772.64
2006	49.39	445.79	251.48	7948.12
2007	149.58	487.58	490.71	6997.62
2008	106.35	932.8	846.94	7535.27
2009	135.7	993.46	1190.73	9177.08
2010	128.41	987.64	1178.1	9183.06
2011	255.41	1053.21	1295.3	9897.2
2012	316.36	1068.34	1771.5	10281.95
2013	343.7	1179.69	2155.86	11478.08
2014	478.91	18.22	1647.45	13593.78
2015	449.31	11.71	1736.19	14112.17
2016	525.95	21.28	2215.75	15104.18
2017	528.24	25.25	2171.37	16908.13
2018	610.15	20.69	2230.15	24550.24
2019	772.38	11.31	2622.54	35863.98
2020	1049.68	11.88	3191.37	44187.03

Source: Extracted from the Central Bank of Nigeria Statistical Bulletin (various issues).

The table 2 showed the time series data of the gross fixed capital formation (LOGGFCF), and loanable funds to agricultural forestry and fishery, (LOGAFF), manufacturing (LOGMAN), and mining and quarrying (LOGMAQ) from 1995 to 2020.

Data analysis

The results of the unit root test are presented in table 3 below:

Table 3: Summary of Augmented Dickey-Fuller Unit Root Test Results

Variables	ADF Test Statistic	Test of Critical Level			Order of Integration	Probability Value
		1%	5%	10%		
D(LOGGFCF)	-3.912129	-4.394309	-3.612199	-3.243079	1(1)	0.0275
D(LOGAFF)	-6.540158	-4.39409	-3.612199	-3.243079	1(1)	0.0001
D(LOGMAN)	-4.528224	-4.394309	-3.612199	-3.243079	1(1)	0.0075
D(LOGMAQ)	-4.002967	-4.394309	-3.612199	-3.243079	1(1)	0.0228

Source: Extracted from E-view 10.0 and compiled by Author

The ADF unit root test results in table 3 indicated that the variables were integrated at first levels differenced. All probability values were less than 0.05 significance level. This however, permits the application of long run bound test since all variables were stationary at first levels which VAR is permitted. The results of the long run Cointegration Bound Test were presented in table 4 below:

Table 4: The results of long run Cointegration Bound test

Cointegration Test Results

Date: 09/06/21 Time: 13:45
 Sample (adjusted): 1997 2020
 Included observations: 24 after adjustments
 Trend assumption: Linear deterministic trend (restricted)
 Series: LOGGFCF LOGAFF LOGMAN LOGMAQ
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.603544	52.51949	63.87610	0.3090
At most 1	0.476218	30.31489	42.91525	0.4837
At most 2	0.278524	14.79458	25.87211	0.5917
At most 3	0.251725	6.959628	12.51798	0.3488

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Extracted from E-view 10.0 computation

The long run cointegration bound test presented in table 4 showed no cointegration equations from the results. This revealed that none of the variables employed had a significant long run relationship with gross fixed capital formation in Nigeria. This is because the associated trace statistics were less than the corresponding eigen-value. Again, the probability values were greater than 0.05 significance level. Hence, it can be concluded from the findings that there was no significant long run relationship among the study variables. However, the short-term results for lag adjustment were followed as shown in table 5. Thus, the results of VAR lag test were presented in table 5 below:

Table 5: The results of short-term test

VAR MODEL

LOGGFCF LOGAFF LOGMAN LOGMAQ

Vector Autoregression Estimates
 Date: 09/06/21 Time: 13:49
 Sample (adjusted): 1997 2020
 Included observations: 24 after adjustments
 Standard errors in () & t-statistics in []

	LOGGFCF	LOGAFF	LOGMAN	LOGMAQ
LOGGFCF(-1)	0.994767 (0.22109) [4.49936]	0.351655 (0.60230) [0.58385]	-1.234369 (1.77231) [-0.69648]	0.158313 (0.42420) [0.37321]
LOGGFCF(-2)	0.201935 (0.33140) [0.60935]	0.152505 (0.90280) [0.16892]	1.668079 (2.65654) [0.62792]	0.553058 (0.63584) [0.86981]
LOGAFF(-1)	0.029352 (0.09688) [0.30298]	0.531074 (0.26392) [2.01222]	-0.709973 (0.77661) [-0.91419]	0.019186 (0.18588) [0.10322]

LOGAFF(-2)	0.285906 (0.11469) [2.49283]	0.079100 (0.31245) [0.25316]	-1.288779 (0.91939) [-1.40178]	-0.233264 (0.22005) [-1.06003]
LOGMAN(-1)	0.067509 (0.03973) [1.69911]	0.072659 (0.10824) [0.67128]	0.565191 (0.31850) [1.77455]	0.022723 (0.07623) [0.29808]
LOGMAN(-2)	-0.011402 (0.03386) [-0.33672]	-0.064991 (0.09225) [-0.70449]	-0.155442 (0.27146) [-0.57262]	0.001437 (0.06497) [0.02211]
LOGMAQ(-1)	-0.156340 (0.17389) [-0.89905]	-0.403782 (0.47373) [-0.85235]	0.706997 (1.39397) [0.50718]	0.740646 (0.33364) [2.21987]
LOGMAQ(-2)	-0.098223 (0.13400) [-0.73301]	0.418022 (0.36505) [1.14511]	0.038858 (1.07417) [0.03617]	0.002086 (0.25710) [0.00811]
C	-1.868086 (1.32928) [-1.40534]	-2.391497 (3.62127) [-0.66040]	4.517837 (10.6557) [0.42398]	-3.572892 (2.55043) [-1.40090]
R-squared	0.991021	0.959712	0.824618	0.991189
Adj. R-squared	0.986232	0.938225	0.731080	0.986489
Sum sq. resids	0.170989	1.268990	10.98762	0.629452
S.E. equation	0.106767	0.290860	0.855867	0.204850
F-statistic	206.9397	44.66482	8.815927	210.9197
Log likelihood	25.27600	1.223461	-24.67911	9.636986
Akaike AIC	-1.356333	0.648045	2.806593	-0.053082
Schwarz SC	-0.914563	1.089815	3.248363	0.388688
Mean dependent	8.924493	4.975181	5.014176	6.032324
S.D. dependent	0.909913	1.170246	1.650422	1.762370
Determinant resid covariance (dof adj.)		1.29E-05		
Determinant resid covariance		1.97E-06		
Log likelihood		21.45838		
Akaike information criterion		1.211801		
Schwarz criterion		2.978882		
Number of coefficients		36		

Source: Extracted from E-view 10.0

The VAR lag estimation is the model with the Akaike Information Criterion (AIC) of 1.21 and the highest log-likelihood ratio of 21.45. Hence, the model as shown in table 5 is the optimal model for the test of hypothesis. From the table 5 results, R^2 is 0.9910 represented 99% approximately. This value implied that the model is fit for the study, and also indicated that 99% of the total variation in gross fixed capital formation being the dependent variable which were explained by the changes in the independent variables of agricultural forestry and fishery, manufacturing, and mining and quarrying been captured in the study, while approximate of 0.009 or 0.01% can be attributed to noise or other associated variables not captured in the work.

Test of Hypotheses

The hypotheses were rewritten in null and alternative forms to enable the study conduct the test; thus:

H_0_1 : sectoral financial intermediation in agricultural forestry and fishery, manufacturing, mining and quarrying had no positive and significant relationship with capital formation prospect in Nigeria within the period, 1995-2020.

H_{a_1} : sectoral financial intermediation in agricultural forestry and fishery, manufacturing, mining and quarrying had a positive and significant relationship with capital formation prospect in Nigeria within the period, 1995-2020.

V. Discussion of findings

The reported coefficients, from the VAR lag 1 estimations, were 0.029352, 0.67509, -0.156340 and probability values of 0.09688, 0.03973, 0.17389 respectively for LOGAFF, LOGMAN, and LOGMAQ. Judging from these results, LOGAFF had a positive and insignificant relationship with gross fixed capital formation in Nigeria while LOGMAN had a positive and significant causal relationship with the gross fixed capital formation in Nigeria. Further, LOGMAQ had a negative but insignificant relationship with gross fixed capital formation in Nigeria. The decision rule justified was based on the fact that the probability values of LOGAFF and LOGMAQ were greater than 0.05 significance level, while that of LOGMAN was less than 0.05 significance level and as such H_0 was rejected.

The economic analyses to these results showed that a unit change in agricultural forestry and fishery, and manufacturing had caused 0.029 and 0.675 unit increases respectively, though with non-significant effect on Nigeria's capital formation for agricultural forestry and fishery. Whereas, a unit change in mining and quarrying had caused 0.156 insignificant decrease in the Nigerian capital formation. Following from these results, manufacturing was the only significant subsector from the study that was found to have influenced capital formation in Nigeria between 1995 and 2020. The agricultural forestry and fishery subsector in itself was insignificant which could be for the fact of high neglect and diversion/misappropriation of loanable funds been allocated. Again, mining and quarrying was found also found to be negative which could be for the fact of poor awareness in this subsector in Nigeria. The implication of these findings indicated only the loanable-funds to manufacturing subsector constituted significant influence on the Nigerian capital formation.

VI. Conclusion

The study concluded that, financial intermediation has received great attention from scholars, but only few have assessed alongside with capital formation in Nigeria. Consequently, no study has analyzed the economic relationship between sectoral financial intermediation and capital formation in Nigeria. This however, motivated for the study. The findings of the study indicated that the manufacturing subsector had supported capital formation over the years in Nigeria. Although, mining and quarrying results established a contrary view, while agricultural forestry and fishery played a passive role to the Nigerian capital formation prospect.

Recommendation

Based on the above findings, the study recommended the following;

1. The federal ministry of Agriculture and Rural Development should increase the allocation of the federal departments of forestry and fisheries, and create more awareness to the general public to take advantage to boost the capital formation of Nigeria. The participation and the availability of loanable funds to the target agricultural industrialist will aid and make more Nigerians to be interested in agricultural activities.
2. The Federal Inland Revenue Services through the federal ministry of finance should initiate areas of tax waivers to blue-chips companies to inspire entering and large-scale production. Further, more agricultural and blue-chips companies should also be encouraged and be listed in the Nigerian Stock Exchange by the securities and exchange commission.
3. The federal ministry of mines and steel should create more advocacy on the solid mineral deposits in the northern part of Nigeria. The monies accrued from the mining activities should be properly accounted, channel for further reproduction in order to expand the coast of the Nigeria's economies. The activities within this subsector will create more employment, invigorate the economy, and increase the capital formation of Nigeria.

References

- [1]. Adeniyi, J. D., Adeniyika, J. A., and Babayaro, I. (2019). Insurance companies and the efficiency of financial intermediation in Nigeria. *American International Journal of Economics and Finance Research*, 1(1):21-33.
- [2]. Ezirim, C. B., Torbira, L. L., and Amuzie, A. E. (2016). Financial intermediation by insurance companies and capital formation: theory and empirical evidence from Nigeria. *International Journal of Business, Accounting, & Finance*, 10(2):37-55.
- [3]. Goldsmith, R. W., (1969). *Financial structure and development*. New Haven: Yale University Press.
- [4]. Forgha, G. N., Sama, C. M., and Aquilas, A. N. (2016). An econometric investigation in to financial international, domestic investment and economic growth in Cameroon. *Journal of Finance and Economics*, 4(1): 1-9.
- [5]. Jhingan, L.M., (2011). *Monetary economics*. Vrinda Publications (P) Ltd. 7th ed.
- [6]. Li, E., and Martin, S. J., (2019). Capital formation and financial intermediation: the role of entrepreneur reputation formation. *Journal of Corporate Finance*, 59:185-201.
- [7]. Ngerebo-A, T. A., and Torbira, L. L., (2014). The role of capital market operations in capital formation. *Journal of Finance and Investment Analysis*, 3(1):21-33.
- [8]. Oke, A. B. (1989). The evolution of the Nigerian financial system: problems, challenges and prospects. *Economic and Financial Review*, 27(2): 35-45.

- [9]. Onodugo, V. A., and Anowor, O. F. (2013). Financial intermediation and private sector investment in Nigeria. *Research Journal of Finance and Accounting*, 4(12):47-54.
- [10]. Samatas, A., Makrominas, M., and Moro, A. (2019). Financial intermediation, capital composition and income stagnation: the case of Europe. *Journal of Economic Behavior & Organization*, 162:273-289.
- [11]. Shaw, E. S., (1973). Financial deepening in economic development. New York: Oxford University.
- [12]. Shittu, A. I., (2012). Financial intermediation and economic growth in Nigeria. *British Journal of Arts and Social Science*, 4(2):164-179.
- [13]. Ugwuebe, S. U., and Uruakpa, P. C., (2013). The impact of capital formation on the growth of Nigerian economy. *Research Journal of Finance and Accounting*, 4(9):16-42.
- [14]. Yakubu, N. I., Abokor, H. A., and Balay, G. I., (2021). Re-examine the impact of financial intermediation on economic growth: evidence from Turkey. *Journal of Economics and Development*, 23(2): 116-127.
- [15]. Yao, Y. (2011). Financial intermediation development and total factor productivity growth: evidence from Chinese mainland provincial panel data. *Modern Economy*, 2:868-873.