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FINANCIAL INTERMEDIATION AND ECONOMIC DEVELOPMENT IN NIGERIA:1987 – 2020

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ABSTRACT

This study aims to investigate the effect of financial intermediation on economic development in Nigeria, spanning 1987 to 2020. Specifically, the study seeks to examine the effect of Financial Intermediation on human capital development in Nigeria. The study employed the ex-post facto research design while the data (secondary) were selected from CBN Statistical bulletin and World Bank development index. Financial intermediation was captured with money supply, credit to private sector, total credit, total savings, interest rate, and inflation rate as the independent variables. The economic development indicator selected and investigated is the Human capital development (HDI) used as dependent variables. The preliminary tests included the descriptive statistics and unit root test with ADF. The model was subjected to regression analyses based on Johansson cointegration and error correction mechanism. The post estimation being the diagnostics showed that the models were reliable. The regression results showed that: financial intermediation has long and short run effect on human capital development. The study thus conclude that financial intermediation is a veritable process for boosting economic development in Nigeria as it has significantly impacted the economic development indicator both at long and short run periods. This shows that effective intermediation is key to sustainable development in Nigeria. The study among others recommends strict supervision of financial service providers in Nigeria to sharpen the role of the financial institutions in driving the economy.

Key Words: Financial Intermediation, Economic Development, Human capital Development, Manufacturing Capacity Utilization, GDP.

INTRODUCTION

Financial intermediation is the method whereby financial service suppliers like banks drag funds from the public as deposits and change them into loanable funds (Agbada & Osuji, 2013). This suggests that the intermediation process offer assistance turn deposit liabilities from surplus financial units to bank's major interest earner, advances and progresses to the shortfall units of the economy. Financial intermediation includes the change of mobilized deposits liabilities by financial

intermediaries such as banks into bank resources or credits such as advance and overdraft. Deposit money banks constitute the most important intermediaries in the financial system by virtue of their control of the largest proportion of the assets of the financial system and their dominant position in the intermediation of short-term funds.

The financial sector of any economy plays a vital role in the development and growth of the economy. The advancement of this sector decides how it will be able to viably and effectively release its major part of mobilizing finance from the surplus sector to the deficit sector of the economy (Adekunle, Salami & Adedipe 2013). Banks play effective parts within the financial development and advancement of a nation. This part they perform astoundingly by making a difference to mobilize idle savings of the Surplus Unit (SUs) for onward loaning to the Deficit Units (DUs), in this way making a difference within the capital formation of a country (Ujah & Amaechi, 2005). Financial intermediation is necessary for Nigeria economy since it can promote investment, without which economic growth and development is impossible. For financial intermediation to aid development, there must be an efficient financial system.

The impact of financial intermediation on the development of an economy has generated a heated debate. Previous attempts to understand the effect of financial intermediation on economic development in Nigeria have resulted in conflicting opinions. Studies of Ekong and Okon (2016), Dumani, Ekokemi, Johnny and Krokeme (2017), Adediran, Ekejiuba, Oluwatoyin and Adegboye (2017), Alimi and Adeoye (2020), Onwe and Adeleye (2018), and Usman, Alimi and Onayemi (2018) found significant positive relationship between indicators of financial intermediation and some indicators of economic development. Despite agreeing that economic development responds to financial intermediation, the findings of these studies are at variance as to the direction of the effects. On the contrary, studies of Chukwuebuka (2019), Sulaiman and Aluko (2015), Imo (2014) and Emmanuel and Odum (2019) found no significant relationship between indicators of financial intermediation and some indicators of economic growth. These conflicting findings indicate a knowledge gap in the literature and this requires further empirical investigation to resolve. This study also seeks to improve on the past studies by using longer data set from 1987 to 2020 to determine long and short run effects of financial intermediation variables on economic development in Nigeria.

Empirical evidence showed mixed empirical findings on the relationship between financial intermediation and economic development. For instance, the studies by Imo (2014), Sanjay, Krishna, Prashant and Sushanta (2012), Usman, Alimi and Onayemi (2018) and Emmanuel and Odum (2019) found that financial intermediation had significant impact on economic development. On the contrary, Chukwuebuka (2019) study found credit to private sector and bank's intermediation efficiency has insignificant relationship with economic development. Sulaiman and Aluko (2015) study indicated that financial intermediation is not a determinant of economic development in Nigeria. Also, most of the studies (Onwe & Adeleye, 2018; Alimi & Adeoye, 2020; Nwaeze, Onyedikachi & Nwabekee, 2014; Adediran, Ekejiuba, Oluwatoyin & Adegboye, 2017) on financial intermediation concentrated on its effect on economic growth without considering its effect on economic development. Also, studies that covers effect on economic development are narrow in scope and did not take cognizance of the economic development variables covered in this study.

This study improves on the previous studies by considering the effect of financial intermediation on Gross Domestic Product, manufacturing capacity utilization, and human capital development. The present study will disaggregate financial intermediation variables to include credit to the private sector, total savings, total credit, money supply, interest rate and inflation rate. Based on the foregoing, the study will examine the effect of financial intermediation on economic development in Nigeria from 1981 to 2020.

Hypotheses

The hypothesis is stated in null form to guide the study.

H_0 Financial intermediation does not have significant effect on human capital development in Nigeria.

LITERATURE REVIEW

Financial Intermediation

Financial intermediation is the method whereby financial service suppliers like banks drag funds from the public as deposits and change them into loanable funds (Agbada & Osuji, 2013). This suggests that the intermediation process offer assistance turn deposit liabilities from surplus financial units to bank's major interest earner, advances and progresses to the shortfall units of the economy. Ekong and Okon (2016) see financial

intermediation as the art of mobilizing savings from the surplus units and channeling them into deficit units of the economy for productive investment. As a matter of fact, the global financial system and the business of banking in particular flourishes on financial intermediaries' abilities to receive deposit at low interest rate and lend them at a pretty higher rate of interest to businesses.

Financial intermediaries can be classified into institutional investors, pure intermediaries like investment banks and deposit money banks. Deposit money banks constitute the most important intermediaries in the financial system by virtue of their control of the largest proportion of the assets of the financial system and their dominant position in the intermediation of short-term funds. In financial intermediation, there is direct and indirect finance. Direct financing is a form of financial intermediation that does not require the activities of middlemen i.e. it does not require financial intermediaries; the lender makes credit available to the borrower directly. Indirect financing is a form of financial intermediation that requires the activities of middlemen i.e. this method makes use of financial intermediaries when mobilizing fund from the surplus economic unit to the deficit economic unit.

The role of financial intermediaries varies depending on the institution involved. Fund providers cannot credit cash specifically to fund raisers, nor can finance raisers borrow cash specifically from fund providers. These exchanges had to be done helpfully through financial intermediaries. They encourage the trade of reserves between finance excess units and finance shortfall units. According to There are various types of financial intermediaries. These consist of depository intermediaries, contractual intermediaries, and Investment intermediaries. Depository intermediaries consist of commercial banks, thrifts, mutual savings banks, savings and loan associations, and credit union. Investment intermediaries are made up of investment companies and finance companies. They specialize in both money and capital market funds, which incorporate treasury bills, commercial bank certificates of deposit, long term credits (debentures), and common stocks. Contractual intermediaries comprise of insurance companies and pension funds. They make instruments that form a legally binding relationship with the buyer. These instruments comprise of insurance arrange, savings, annuity, pension, and loan benefits (Hao, 2006).

Economic Development

Economic development is the increment within the standard of living in a nation's

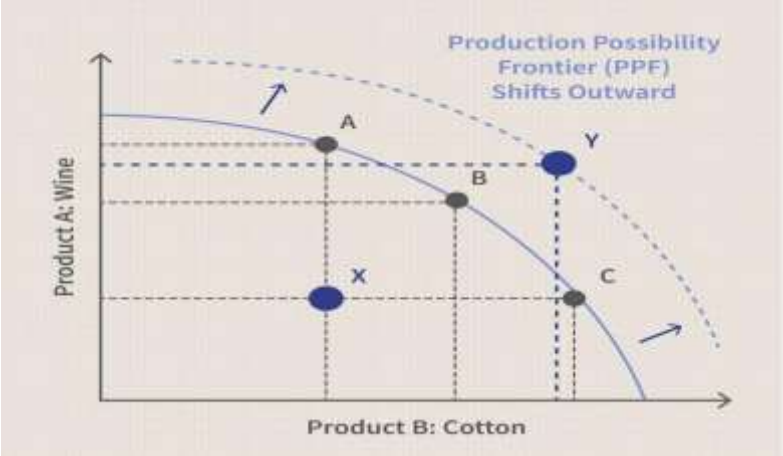
populace with maintained development from a basic, low-income economy to a cutting edge, high-income economy. Economic development is therefore expressed in a longer period of time. Kindleberger and Herrick cited in Lewis (2003) point out that financial improvement is for the most part characterized to incorporate enhancements in material welfare particularly for people with the least earnings, the destruction of mass destitution with its connects of absence of education, malady and early passing, changes within the composition of inputs and yield that generally incorporate shifts within the basic structure of generation absent from rural towards mechanical exercises. Financial advancement envelops advance in giving job on a feasible premise, get to to instruction and fundamental healthcare for the lion's share of the populace (Belshaw & Livingstone, 2002).

Economic Growth

By economic growth, economists by and large cruel the increment over time in a country's real output per capita. In spite of the fact that other measures can be utilized, output is most helpfully measured by the gross national product (GNP). This suggests that financial development is measured by the increment in a country's per capita GNP. Financial development is hence maintained development of generation conceivable outcomes measured as an increment within the genuine GDP over a given period. It has also been described as a positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is measured by the increase in the amount of goods and services produced in a country.

Economic growth happens when a nation's production possibility frontier (PPF) moves outward. Production plausibility frontier is the chart which demonstrates the different production possibilities of two commodities when assets are settled. The generation of one product can as it were be expanded by relinquishing the generation of the other product. It is additionally called the production possibility curve or product transformation curve. When it shifts inwards, it shows that the economy is contracting due to a disappointment in its assignment of assets and ideal production capability. A contracting economy can be a result of a diminish in supplies or a insufficiency in innovation. This can be represented in the graph below where the country produces two commodities namely wine and cotton.

Graph 1: Production Possibility Frontier (PPF)



The graph indicates that for the economy to produce more wine, it must give up some of the resources it is currently using to produce cotton (point A). In the event that the economy begins producing more cotton (spoken to by focuses B and C), it would have to be divert resources from making wine and, subsequently, it will deliver less wine than it is producing at point A. Additionally, by moving production from point A to B, the economy must diminish wine generation by a small amount in comparison to the increment in cotton yield. But in the event that the economy moves from point B to C, wine yield will be altogether decreased whereas the increment in cotton will be very little. When the PPF shifts outwards, it suggests development in an economy. When it shifts inwards, it shows that the economy is contracting due to a disappointment in its allotment of assets and ideal generation capability. A contracting economy may be a result of a diminish in supplies or a insufficiency in innovation.

Furthermore, economic growth, being the growth in output per capita, is an important objective of government since it is associated with rising average real incomes and living standard.

Economic growth is normally measured with gross domestic product. Gross Domestic Product is defined as the total monetary value of all the final goods and services produced within an economy during a given period of time usually one year. The 'real' in gross domestic product implies that inflation has been taken care of. The real GDP is commonly used to proxy economic growth in economic research. Economic growth is a sustained increase in the output of an economy during a certain

period of time. Thus, when there is a sustained increase in the real GDP of a country, the country's economy is said to be growing (Jhinghan, 2012). The real GDP is to be measured in units of the Nigerian currency.

Human Capital Development

The concept of human capital alludes to the capacities and abilities of human assets of a nation, whereas human capital development alludes to the method of securing and expanding the number of people who have the abilities, education and experience that are basic for economic growth and advancement of a country's economy (Okojie, 2014). Of all factors of production, only human beings are capable of learning, adapting or changing, innovative and creative (Boztosun, Aksoylu & Ulucak, 2016). Any effort to increase human knowledge, enhance skills, productivity and stimulate resourcefulness of employees is perceived as human capital development effort (Tende, 2011).

Theoretical Framework

This study is anchored on the following theories, namely supply leading theory, theory of capital formation, and endogenous growth theory.

Supply Leading Theory

Supply leading theory was postulated by Schumpeter (1911). The central contention basic supply leading hypothesis is that financial deepening may be a deciding cause of economic growth. It sets that ideal allotment of resources is a result of financial sector development. The supply-leading hypothesis suggests that causality flows from finance to economic growth with no feedback response from economic growth. This theory is relevant to the study in that it postulates that a well-functioning financial sector is necessary to facilitate growth in the real sector which resultantly leads to economic development. In other words, economic development is reliant on how well the financial sector is deepened or developed.

Theory of Capital Formation

Capital formation theory is attributed and associated with classical economists like Adam Smith (1776) and David Richardo (1817). According to the theory, capital formation could be achieved if the society does not apply the whole of its current productive activity to the needs and desires of immediate consumption but direct a part of it to the making of capital goods that can so greatly increase the efficiency of productive efforts.

Classical economics view economic growth as being largely influenced by the ability of the people to save more and invest more in

an economy. The link between saving and investment, via financial intermediation, is important because it holds the positive correlation between savings and growth. If capital accumulation is therefore, indeed the engine of growth, understanding the interaction between savings and investment is crucial for assessing the validity of the traditional belief that increasing savings is the surest way to promote growth. The best medium for understanding this interrelationship is financial intermediation.

Empirical Review

Empirical evidence abounds on the relationship between financial intermediation and economic development in many developed and developing countries. Imo (2014) investigated the impact of financial intermediation on economic development of Sub Saharan African countries from 1980 to 2012. Ratio of broad money supply (M2) to nominal gross domestic product (NGDP), the ratio of domestic credit to the private sector (CPS) to the nominal gross domestic product (NDGP), trade stock and capital stock were employed as the independent variables while Gross Domestic product, Per capita income, Human Development Index, Physical Quality of Life and Unemployment index were employed as the dependent variables. Descriptive statistics, unit root and Ordinary Least Square (OLS) regression technique was employed in analyzing the data. The study found that financial intermediation has an insignificant positive impact on physical quality of life index and per capita income; significant negative impact on human development index and gross domestic product; and an insignificant negative effect on employment.

Ibe (2017) using empirical evidence from Sub-Saharan African countries investigated the relationship between financial intermediation and human capital development for sustainable development using time series data from 1980 to 2012. Human development index was employed as the dependent variable while financial intermediation, trade stock and capital stock were employed as the independent variables. Panel data set were sourced from the World Bank while Ordinary Least Square (OLS) regression was employed in analyzing the data. Results reveal that financial intermediation did not have positive and significant impact on human development in sub Saharan Africa within the period of this study.

METHODOLOGY

Research Design

Ex-post-facto research design was adopted for the study. It is a quasi-experimental study examining how an independent variable, present prior to the study, affects a dependent variable. *Ex-post-facto* research makes use of already existing data. This design was adopted because it effectively captures the relationship between the dependent and independent variables.

Model Specification

Model examined the effect of financial intermediation on human capital development in Nigeria. The model of Imo (2014) was adopted and modified. Their model is stated in functional form as:

HDI = f(FIM, TS, CS)

Where;

HDI = Human Capital Index.

FIM = Financial Intermediation

TS = Trade Stock

CS = Capital Stock

The model was modified. The functional form of the model used in this study is specified as follows:

HDI = $f(M_2, CPS, TC, TS, INT, INF)$ (Eqn. 2)

Where

HDI = Human Development Index

M_2 = Money Supply

CPS = Credit to Private Sector

TC = Total Credit

TS = Total Savings

INT = Interest Rate

INF = Inflation Rate

The econometric form is stated thus:

$HDI = \beta o + \beta_1 M_2 + \beta_2 CPS + \beta_3 TC + \beta_4 TS + \beta_5 INT + \beta_6 INF + \mu$ (Eqn.3)

Where

βo = Autonomous or intercept

$\beta_1 - \beta_6$ = Coefficient of Parameter of the independent variables

μ = Stochastic disturbance or error term

To linearize equation 3, we apply logarithm to equation 4 which gives:

$LHDI = \beta o + \beta_1 LM_2 + \beta_2 LCPS + \beta_3 LTC + \beta_4 LTS + \beta_5 LINT + \beta_6 LINF + \mu$ (Eqn.4)

Where

LHDI = Log of Human Development Index

LM_2 = Log of Money Supply

LCPS = Log of Credit to Private Sector

LLTC= Log of Total Credit

LTS = Log of Total Savings

LINT = Log of Interest Rate

LINF = Log of Inflation Rate

RESULTS AND DISCUSSION

Table 1.0 Summary of Unit Root Test for Stationarity

Variables	At Level 1(0)	At First Difference 1(1)	At Second Difference 1(2)	Order of Integration	Alpha Value
Money Supply (M2)		-3.816457		1(1)	0.0021
Credit to Private Sector (CPS)		-4.482048		1(1)	0.0010
Total Credit (TC)		-5.429310		1(I)	0.0001
Total Savings (TS)		-4.124414		1(I)	0.0026
Interest Rate |(INT)		-11.26527		1(I)	0.0000
Inflation Rate (INF)		-3.715130		1(I)	0.0076
Human Development Index (HDI)		-6.725548		1(I)	0.0000

Source: Researcher's Compilation E-views 9.0

The unit root results show that money supply, credit to private sector, total credit, total savings, interest rate, inflation rate, human development index are stationary at first difference. Since the decision rule is to reject stationarity if ADF statistics is less than 5% critical value, and accept stationarity when ADF statistics is greater than 5% criteria value, the ADF absolute value of each of these variables is greater than the 5% critical value at their first difference and second difference but less than 5% critical value in their level form (*see*, appendixes). Therefore, all the variables are all stationary.

The implication is that the most suitable tool of analyses for model two, three, four and five is Error Correction Mechanism since all the variables used in these models were stationary at first difference. While the first model was analyzed using Vector Autoregression Estimate because one of the variables in the model is stationary at second difference.

Johansen Cointegration Test for Financial Intermediation and Human Development Index

Table 2.0 Johansen Multivariate Cointegration Test for Model Two

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.819318	166.6323	125.6154	0.0000
At most 1 *	0.642116	101.6138	95.75366	0.0186
At most 2	0.522369	62.56702	69.81889	0.1652
At most 3	0.338435	34.48816	47.85613	0.4753
At most 4	0.255604	18.78860	29.79707	0.5082
At most 5	0.135341	7.571658	15.49471	0.5123
At most 6	0.052411	2.045690	3.841466	0.1526

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.819318	65.01856	46.23142	0.0002
At most 1	0.642116	39.04676	40.07757	0.0650
At most 2	0.522369	28.07886	33.87687	0.2099
At most 3	0.338435	15.69956	27.58434	0.6911
At most 4	0.255604	11.21694	21.13162	0.6257
At most 5	0.135341	5.525967	14.26460	0.6745
At most 6	0.052411	2.045690	3.841466	0.1526

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Computation from E-view 9.

Table 2.0 indicates that trace have only 2 cointegrating variables in the model while Maximum Eigenvalue indicated 1 cointegrating equation. Hence, the trace statistics and Eigenvalue statistics reveal that there is a long run relationship between the variables in model two. That is, the linear combination of these variables cancels out the stochastic trend in the series. This prevents the generation of spurious regression results. Hence, the implication of this result is a long run relationship between dependent variable (Human Development Index) and the explanatory variables (money supply, credit to private sector, total credit, total savings, interest rate and inflation rate) used in the models.

Test of Hypothesis

Ho: Financial intermediation has no significant effect on human capital development in Nigeria.

Hi: Financial intermediation has significant effect on human capital development in Nigeria.

Based on the F-Statistics value of 55.12774 and its probability value of 0.0000000 in Table 4.10 which is statistically significant, we reject the null hypothesis and accept the alternative hypothesis. This implies that financial intermediation has significant effect on human capital development in Nigeria. The adjusted coefficient of determination indicates 56.2% explanatory power.

Discussion of Finding

The findings indicate that financial intermediation has significant effect on

human capital development in Nigeria. This indicates that money supply, credit to private sector, total credit, total savings, interest rate and inflation rate has joint significant effect on human capital development in Nigeria. This also agrees with the position of monetarism as emphasized by Milton Friedman which concentrates on managing the money supply, through monetary policy. The theory generally stresses the importance of controlling money supply to keep inflation low. They believe that with effective management of money supply, there will be automatic adjustment of the market forces which will enhance purchasing power. This sends signal to increase manufacturing capacity through employment of more factors (including labour). For labour to be employable, it trains and develops itself. So, this policy effect will rob-off on employment, increase manufacturing capacity, increase actual output, lead to human capacity development and enhance the nations standard of living through enhanced income.

This agrees with the findings of Imo (2014) that financial intermediation has significant impact on human development index. This also agrees with the findings of Mehmet (2020) that financial development causes the accumulation of human capital. This also agrees with the findings of Arif and Khan (2019) that a strong financial institution enhances human capital development. Also, Cuneyt and Burcu (2018) study indicates that financial development affects the human capital level of emerging market economies. On the contrary, the findings of Ibe (2017) indicates that financial intermediation did not have significant impact on human development in sub Saharan Africa.

CONCLUSION

The study investigated the effect of financial intermediation on human capital development in Nigeria using time series data from 1981 to 2020. The result reveals that financial intermediation has significant effect on human capital development in Nigeria. Based on the findings, the study concludes that financial intermediation has significant effect on economic development in Nigeria, and made the following recommendations:

1. That both the microfinance bankers and the microfinance regulatory bodies should in the course of microfinance intermediation formulate better policies, appropriate strategic and excellent business forms that will favour both low income class and cottage entrepreneurs, both in theory and practice as this is the easiest way to facilitate growth and development of

developing nations, particularly the development of human capital.

2. That policy makers should pay more attention to the quality of growth so as to support all round human development. Government should consider establishing banks of development or infrastructure whose activities will have direct impact on their human development index. Such banks may be supported by international financial and non-financial institutions.

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