

FINANCIAL DEEPENING AND HUMAN CAPITAL DEVELOPMENT IN NIGERIA (1985 – 2023)

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ARTICLE INFORMATION	ABSTRACT
<p>Received: 31st March, 2026 Accepted: 30th April, 2026 Published: 29th May, 2026</p> <p>KEYWORDS: Financial Deepening, Human Capital, Development, Nigeria.</p> <p>D.O.I.: 10.5281/zenodo.20644778</p> <p>© Copyright 2026 Charles Distributed under Creative Commons CC-BY 4.0</p> <p>How to cite this article: Charles, M. C. (2026). Financial Deepening and Human Capital Development in Nigeria (1985-2023). International Journal of Research and Reviews in Social and Applied Sciences, 4(1), 59-76.</p>	<p><i>Financial deepening and human capital development have attracted attention from the economist and financial experts. Some propositions suggest that financial deepening spur growth while others did not. The main objective of the study was to ascertain the extent to which financial deepening has affected human capital development. The study was an ex-post facto design and were obtained from central bank of Nigeria statistical bulletin and world performance indicator. The study employed the use of unit root test to determine the stationarity of the variables and ordinary least square. The result revealed that financial deepening variables have a joint effect on human capital development. The work recommend that since the financial sector enhances human capital development monetary authorities should liberalize financial institution policies in order to boast financial activities in Nigeria.</i></p>

INTRODUCTION

A developed financial system promotes the wellbeing and standard of living of people through financial intermediation. It serves as a catalyst to economic development by the mobilization and allocation of financial resources for productive use. Nwanna and Chinwudu (2006) opined that financial deepening vigorously attracts the reservoir of savings and idle funds and allocates same to entrepreneurs, business, households and government for investment projects and other purposes with a view of returns for economic growth. Ayaz and Mubarak (2012) affirmed that financial intermediaries serve to mobilization savings from investors, overcome transaction cost,

information asymmetries and make multiple bilateral contracts between agents who have surplus resources and unto which are productive in raising capital.

Financial deepening and human capital development are closely related. There is a strong relationship between the two. The link between financial deepening and human capital development has generated great deal of interest among academics, policy makers around the globe. Studies found that there is a close direct relationship with each other but the extent of the relationship has remained controversial and far from settled. The work is based on the null hypothesis that financial deepening does not have significant effect on human development index in Nigeria.

Objectives of the Study

The main objective of the study is to investigate the effect of financial deepening on human capital development in Nigeria

Hypotheses

The following hypothesis is formulated for the study

H₀: Financial deepening does not have significant effect on Human development Index in Nigeria.

Conceptual Review

Money market

Money market is a market for short-term (less than one year) loans and borrowings. It deals with short term debt financing. The market exists to facilitate efficient transfer of short term funds between the surplus spender and deficit spender. One of its major functions is to provide a way for central bank intervention for influencing liquidity and general level of interest rates in the Nigeria economy. This function is done through the money market instruments such as treasury bills, treasury certificate, bankers acceptance, commercial papers, etc.

Money market performs such functions as: providing outlets for investing surplus funds for profit thereby ensuring that no fund lies idle in the economy; providing an orderly flow of short term funds in the economy, redistribution of funds in the economy, provision of the necessary means of expanding and contacting credit in the economy, mobilization of surplus funds in the economy for redistribution to deficit unit for productive investment and to ensure efficient allocation and utilization of funds in the economy as well as provision of assistance through various intermediary role of the development of the economy.

Essentially, activities at the money market over the years have been greatly influenced by the swing in the state of the economy, the pattern and swings in government finance and funding needs. The money market in Nigeria witnessed tremendous boost following the reforms introduced into the market from 1986. These reforms led to the evolvement of the market mechanism especially in the system of monetary control and the emergence traded in the market (Nzotta 2014).

According to him, Nigerian money market has had a number of threat to its survival arising from the actions of inactions of the monetary authorities and the actions of market participants. Further more, he stated that the key factors are the penalty of instruments at the market excess liquidity in the system which gave room to various policy induced shocks in the market, wide spread distress and failure of some banks which affected the level of confidence in the system.

Capital Market

Capital market is that segment of the financial system where medium and long-term financial instruments are traded. Ekezie (2002) described the capital market as a market where borrowing and lending of long term funds take place involving both debt and equity like shares, debentures, bonds etc. According to Adewunyi and Olowookere (2011), a Capital Market is a segment of a trade in medium and long term financial instruments and such instrument are generally referred to as a securities because of the level of confidence and assurance guarantee it gives to the investor on the repayment of their principal. They further stated that the rate of economic growth of any nation is linked to capital market efficiency. Capital Market contributes to economic growth through the specific services it performs either directly or indirectly. Notable among these functions are: mobilization of savings, creation of liquidity, risk diversification, improved dissemination and acquisition of information, and enhanced incentive for corporate control (Akuigbongbe, 1996). Anyanwu (1993) opined that capital market is a driver or lubricant that keep turning the wheel of economy to growth and development because of its imperative function of not just mobilizing long term funds and channelling them to productive investment but also efficiently allocating these funds to project of best returns to fund owners. The capital market is categorized into two: primary and secondary market.

Primary market is the market for new issues of securities. The market facilitates commission application of fresh and idle savings into the main economic framework. According to Nzotta (2014), the primary market makes short-term funds available to deficit units at varying rates of interest depending on the sources of the funds, the credit standing of the borrower the maturity of the loans, the degree of risk in the loan and the minimum discount rates prevailing. while secondary market is for trading on existing securities which have previously issued through the primary market. The market provides liquidity to various money market instruments. Lenders and funds providers are induced to lend funds at lower rates than otherwise would have been the case. The financial obligation traded in the secondary market are characterized by a very high degree of safety that are issued to borrowers of very high credit standing.

Financial Deepening

Various scholars and authors have attempted to define and explain the meaning of financial deepening in different ways. Shaw (1973) saw financial deepening as a process involving specialization in financial functions and institution through which organized domestic institution and market relate to foreign markets. According to Nzotta and Okereke (2009), financial deepening is the ability of financial institutions in an economy to effectively mobilize savings for investment purposes. It refers to the increase in the ratio of money supply to GDP/other price index which

ultimately postulate that the more liquid money is available to the economy the more opportunities exist in that economy for continued and sustainable growth (Sindani, 2013).

Generally, it is believed that with access to finance, people find what to do, be creative to earn more money improve standard of living and improve the economy as well. Financial deepening simply can be seen as the increase in the provision of financial services with a wider choice of services geared towards all levels of society. In other words, it is the increase of the financial instruments of both the money market and capital market. Onyemachi (2012) defined financial deepening as an effort aimed at developing the financial system that is evident in increased financial instrument/ assets in the financial market-money and capital market, leading to the expansion of the real sector of the economy. Proponents of finance growth hypothesis argued that financial intermediation mobilize savings and channel domestic savings into productive capital and by so doing they contribute to the economy.

According to Nwanna and Chinwude (2016), empirical analysis confirmed that common funding of a positive relationship between financial deepening and growth is noticeably for poorer developing countries. They state that the level of financial deepening and stock market liquidity exerts an independent and positive influence on economic growth. Deep market allows savers to invest in a broad range of quality investment and risk-sharing and allow borrowers to tap a broad range of financial and risk management.

Private Sector Credit

Credit of private sector refers to financial resources provided to the private sector, such as loans and advanced, purchases of non-equity securities, trade credit and other account receivable which establish a claim for repayment (Olowofeso, Adeleke and Udoji, 2015). It involves the direct provision of loans and overdraft to the private sector by financial institutions, such as deposit money banks, non interest banks, etc. Credit is a prerequisite to economic growth and social progress for economy to function efficiently and for private sector to develop and flourish businesses which need to have access to credit. Ganiyu, Eboime, Adamu and Belonwu (2017) stated that in view of the paucity of credit, coupled with the problems of inadequate infrastructure, huge skill gaps and very large informal sector, the CBN and others embark on significant credit interventions to support the critical sector of the economy. The injection of this funds rationalize the entire economy; it prevents the bankruptcy of various enterprise and the financial institutions by strengthening their balance sheet and restoring their ability to raise a productive deposit credit.

Adelegan (2018) examined the dynamics of linkage between domestic investment, domestic credit to the private sector and gross domestic product (GDP) In Nigeria over the period of 1970 to 2017, vector Auto regression (VAR) model and variance decomposition were applied. The result indicate that the relationship between growth and domestic credit to the private sector is positive and significant.

Market Capitalization

Stock market capitalization is one of the major indices used in measuring the efficiency of a capital market in an economy. It is the aggregate valuation of the company based on its current share price and the total number of outstanding stocks. Market capitalization is calculated by multiplying the current market price of the company's share with the total outstanding shares of the company. It is one of the most important characteristics that helps the investor to determine the returns and the risks in the share as well as allowing them to choose the stock that can meet their risk and diversification criterion. Market capitalization can be referred to the total dollar market value of company's outstanding share of stock commonly referred to as "market cap".

Market capitalization is used by the investment community in ranking the size of company as opposed to sales or total assets figure. It is used in ranking the relative size of stock exchange being a measure of the sum of the market capitalization of all companies listed on each stock exchange. Market capitalization is used to help inform decision about which stock to invest in because it gives investors information about the relative size of one company versus another. Also, it measures what a company is worth on the open market, as well as the market perception of its future prospects, because it reflects what investors are willing to pay for its stock. The general conception is that a higher stock price indicate a larger company. However, this might misrepresent the actual worth of a company

Money Supply

Money supply refers to the total sum of money available to the public in the economy at a point in time. It is the total stock of monetary media of exchange available to a society for use in connection with the economic activities of a country.

Money supply is composed of two elements:

1. Currency with the public
2. Demand deposits with the public

In other words, money supply is all the currency and other liquid instrument in a particular country's economy within a particular time period. It comprises M_1 , a measure of money, functioning as a medium of exchange; M_2 , a broader measure functioning as a store of value; and M_3 which covers items that is regarded as close substitute for money.

According to Chude and Chude (2016), over the years, Nigeria has been controlling her economy through variations in her stock of money. Consequently, upon the effects of the collapse of oil price in 1981, various methods of stabilization, ranging from fiscal to monetary policies were used. Reviewing the interest rate policy and structural adjustment programme (SAP), they opined that stock of money varies with economic activities in Nigerian economy. Increase in money supply will increase prices and can as well increase inflation rate in an economy.

Money supply can be said to be the stock of money or quantity of money in circulation in an economy at any given point in time. It is made up of the total currency with the public and the

demand deposits with commercial banks. Demand deposits are current and saving accounts with banks which are liquid, the depositors can easily withdraw and draw cheques which the banks must pay i.e. M_1 narrow money. Another is called broad money which includes narrow money plus time and savings deposit of private and public sector of the economy with commercial banks (M_2) deposit with non banks financial intermediaries plus investment in government securities such as treasury bill, treasury certificates and development stocks (M_3).

According to Nzotta (2014) controversy arises as a result of the three definitions of the money supply; the narrow definition (M_1), the broad definition (M_2) and the wider definition (M_3). He stated that for the narrow definition (M_1) which is associated with the Keynesian school of thought, money supply is defined as the currency in circulation outside banks (C) plus private sector demand deposit with the commercial banks and the domestic deposit with the Central Bank of Nigeria (D): ie $M_1 = C + D$.

Furthermore, he stated that the narrow definition of money supply takes accounts of the role of money as a medium of exchange, and the broad definition of money supply (M_2) associated with the monetarist view which is the stock of narrow money (M_1) plus savings and time with the commercial banks and the total deposit liabilities of merchant banks. Also, he stated that the wider concepts (M_3) which consists of M_2 plus the deposit of all other non-bank financial institutions like savings banks, building societies, loan association, etc, are not in use in Nigeria but mainly associated with the developed countries. The monetary authorities in the developing countries cannot easily and effectively manipulate these aggregates with their various monetary policy thrust.

There are two theories for the determinant of money supply. The first view is that money supply is determined exogenously by the Central Bank. The second view holds that the money supply is determined endogenously by changes on the economic activity which affects people's desire to hold currency relative to deposit. Thus, the determinants of money supply are both exogenous and endogenous which can be described broadly as; the minimum cash reserve, the level of bank reserves, and the desire of the people to hold currency relative to deposits.

Commercial Bank Deposit

The liabilities of banks are their major sources of funds. Banks offer a wide products line of deposits for sale to customers, businesses and governments and the primary duty of bank is to accept deposit from customer's payable on demand.

The Nigerian deposit insurance corporation defined deposit as only credit balance delivery from normal banking transaction and which a bank must repay at par under the legal and contractual conditions applicable. The banker/ customer relationship starts with the opening of a bank account by bank for a customer who will thereafter make lodgments into the account. The lodgement is the bank deposit which is the money placed in bank or other financial institutions against which depositor can withdraw under prescribed condition (Essien 2020). Each deposit is assigned a unique identification which is known as the account number allocated to every deposit. Deposit is

current liabilities of a bank and it is important to the bank because it is the first and main function of a bank, secondly, it is the life blood of bank.

Bank deposit can be distinguished into different ways, basically according to their term of maturity. They are as follow:

- (a) Savings account deposit: This is a deposit account held at a bank or another financial institution where a saver can deposit sum of money payable on demand. It is an interest bearing account where individuals, group, organization, etc, save their surplus savings for future expenses. Banks usually pay interest on savings account on a specified day of the month based on the available balance on that day as the principal sum with the prevailing interest rate of bank. Also banks often charge a withdrawing tax of 10% on the interest paid to the account customer. In line with the nature of the account a minimum balance has to be maintained in the account as indicated by the bank and the account must not be overdrawn.
- (b) Demand Deposit (Current Account) This is an account customers maintain with a bank from which they may withdraw funds with no advance notice being required, usually by writing out chaques or using an automated teller machine. There is no restriction on the number of transactions or withdrawals like the savings account. Demand deposit account are not interest bearing accounts as the amount deposited in these accounts is payable on demand. The account can be in debit if an overdraft facility is granted to the customer. Also, the account holder pays charges and commission to the bank.
- (c) Term deposit (Fixed deposit): This is a type of account where a customer keeps a specific sum of money for an agreed period of time. It can be for three months, six months, one year and so on. The deposit is repayable after the expiration of a specific period. This account is for customers that have bigger money to place in the bank for a longer time. The account attracts a higher interest depending on the period of duration of the deposit. Depositors can terminate the deposit before the maturity but it will lead to bank payment of reduced interest or penalty. At maturity, the account holder may decide to withdraw their money, rollover the account or close the account.

Capital Accumulation (Total savings)

Economic growth rate depends on two things: level of savings (higher savings enable higher capital accumulation) and capital output ratio (efficiency of accumulated capital). Osundina and Osundina (2014) argued that in developing countries, the level of savings is low if left to the free market hence there is need for government interventions to increase the savings rate of the economy.

Capital accumulation is the process of acquiring additional capital stock which is used in productive process. The foundation of capital accumulation is savings and it result when some portion of present income is saved and invested in order to argument future output and income. Capital accumulation naturally plays an important role in the economic growth and development process. It has always been seen as potential growth enhancing player. Deficiency of capital accumulation is a constraint to sustainable economic growth (Owolabo and Ajayi, 2013). When government want to achieve economic growth, the government need to encourage savings and that

will lead to economic growth because savings leads to investment which generate economic growth. According to Romer (1994) savings increases investment and ultimately enhances economic growth but adverse economic policy, like high rate of inflation discourages growth.

Human Development Index (HDI)

The Human development Index is a statistical and per capita income indicator which are used to rank countries into four tiers of human development. It is a measure of average achievement in key dimensions of human development; a long and healthy life, being knowledgeable and having a decent standard of living. Human development index was developed by Pakistani economist, Mahbub Ui Haq, and was further used to measure a country's development by the United Nations Development Programme (UNDP), (Human Development Report Office, 2017). It is an indicator created by United Nations Development Programme that has the degree of progress made by each country for the last three decades and is used to develop a global human development ranking. With this, countries can understand their growth options and can compare their situation with that of other countries.

Human Development Report (HDR) (1990) defined human development as a process of enlarging peoples' choices by expanding human capabilities and functionalities. It maintained that the most critical are to live a long and healthy life, to be educated and to have access to resources needed for decent standard of living i.e. it measures human capital development.

Schrawat and Giri (2014) pointed out that economic development depends on the well being of the society, whereas economic growth is only one of the aspects of economic development and may hide several economic problems such as poverty, income inequality, health, education etc.

THEORETICAL FRAMEWORK

Finance theory

Finance driven growth hypothesis- The hypothesis postulated that finance plays a prominent role in economic growth. It supports the view that financial deepening improves savings and investment, enhances economic efficiency, expand capital accumulation, mobilize savings and also transfer resources from informal sector to formal sector of the economy. Mackinnon,(1973) and Shaw(1973) opined that the presence of efficient financial market increased the supply of financial services in advance of the demand for them in the real sector of the economy. It means that an efficient financial institution improves liquidity, mobilize savings, enhances capital accumulation and able to transfer resources from the finance sector to the real sector of the economy. Schumpeter (1911) in his work, "The theory of Economic Development", strongly supported the view of finance-led-caused relationship between finance and economic growth. He maintained that attention should be devoted to policy determination of financial development as a mechanism for promoting economic growth and development of an economy. Hick (1969) affirmed support for finance-led growth hypothesis by positing that the development of a financial system is crucial in stimulating economic growth and underdeveloped financial system retard

economic growth. He maintained that policies aimed at expanding the financial system should be formulated in order to foster growth.

According to Onwumere, Ibe, Ozoh and Mounanu (2012), a well functional financial institutions can promote overall economic efficiency, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from traditional sector to growth-inducing sectors such as manufacturing and industrial, agricultural and the services sectors as well as promotes competent entrepreneurship response in those sectors of the economy. This corresponds with the view of Gold-Smith in 1969 who maintained that the financial superstructure of an economy accelerates economic performance to the extent that it facilitates the migration of funds to the best user, that is, to the place in economic system where the funds yields the highest return. Darrat (1999) supported the view in his work the role of financial deepening on economic growth. He studied three middle-east countries of Saudi-Arabia, Turkey and the United Arab Emirates using multivariate granger causality test. The result generally support the view that financial deepening is a necessary causal factor for economic growth although the strength of the evidence varied across countries and across various proxies used to measure financial deepening. According to Ndebbio (2004), efficient financial deepening promotes financial intermediation which is seen as the extent to which financial institutions bring deficit spending unto surplus spending units together. Even financial institution plays a significant role in the channelling of fund from economic agents surplus to economic agent having deficit. The institution generates pool of funds from where they allow such funds to be assessed through a mechanism, which engendered financial deepening.

EMPIRICAL REVIEW

Many studies have been undertaken so far in this area of research. Some of these works are received in this section.

Efanga, Ogochukwu and Ugwuanyi (2020) investigated the impact of financial deepening on the Nigerian economy between 1981 and 2018. The study used co-integration test and fully modified least square for the analysis of data. The result indicated that financial deepening has positive impact on the Nigerian economy within the period under review.

Nwaolisa and Cyril (2019) examined the effects of financial deepening on Nigeria economy. Ordinary least square (OLS) was used to analyze data from sourced National Bureaus of Statistics and Central Bank of Nigeria (CBN) statistical bulletin. All three variables used showed positive effect on Nigeria's financial deepening.

Belgehan (2020) examined the relationship between financial development and human development in the health and welfare dimensions of developing countries. The variables used were M3/GDP, Privates sector loans/GDP and loans to banks from private sector/GDP. Pedroni and Kao Countegration analysis and Dumitrescu & Hurlin panel causality analysis were performed. The result of the study showed that there is a two way causality relationship between human capital and financial development in those developing countries.

Osuka, Ihejinka and Chinweze (2018) investigated the impact of financial deepening on human capital development in Nigeria. Human development index was used as proxy for human capital development while the ratio of credit to the private sector, broad money supply and market capitalization were used to proxy financial deepening. Johansen Cointegration test was used for analysis. It was found that there is a unidirectional causality running from financial deepening to Human capital development.

Osuka, Ihejirika and Chinweze (2019), examined the causal relationship between financial deepening and unemployment in Nigeria. The variables used are ratio of credit to private sector to GDP, ratio of broad money to GDP and ratio of market capitalization to GDP. Error correction model and granger causality test were employed in the analysis and it was found that credit to private sector and broad money supply reduced unemployment while market capitalization was not significant to influence unemployment.

Arifand Khan (2019) studied the effects of financial development on the human capital development of Pakistan. Bank deposit, broad money supply and domestic credit were used as proxy for financial development while human capital development is measured by human development index. Unit root test and co-integration were used for analysis. The result showed that financial sector development positively influence the human capital development in Pakistan.

Nwajiaku, Ananwude and Obi Nwosu (2020) examined the effect of financial deepening on entrepreneurial growth in Nigeria: A time series analysis, Granger causality test and autoregressive distributed lag was used. The result showed that entrepreneurial growth was found to have significantly influenced on financial deepening through banking and insurance sector deepening.

According to Kanu (2015) extension of credit to the economy is the core link that banks have to the real sector, acting like a catalyst and contributed to the growth of the economy. He maintained that by financing production, consumption and commerce, banks lubricate the process of economic growth with multiplier effect across all sectors of the economy. He further stated that aspect of bank's intermediation function is very vital for economic development since private savings of internally generated funds are usually inadequate or unavailable to support major new or expansion projects necessary for corporate growth, rapid industrialization and national economic growth, hence the need to borrow.

Alenoghena, Enakali-Osoba and Mesagen (2014) conducted a research on the impact of financial deepening on the performance of the Nigeria capital market over the period of 1981 to 2012. The study adopted the Calderon –Rossell Model to take account of the role of financial deepening in the analysis of changes in stock market performance. Multiple regression techniques were employed to ascertain the different level of impact on the subject matter. The result revealed that narrow money diversification and savings growth significantly impacted on the performance of the Nigerian stock market during the period of study.

Azu and Blessing (2018) examined the effect of financial deepening on customer deposit of Nigeria commercial banks. Time series data was sourced from Central Bank of Nigeria statistical

bulletin, from 1981-2017. Percentage of total customer deposit total asset was used as dependent variables while percentage of narrow money supply, broad money supply, money market development, money outside the bank and private sector credit to gross domestic product was used as independent variables. Multiple regressions with Ordinary Least Square properties of co-integration, Augmented Dickey Fuller unit root test, Granger causality test and vector error correction model was used to determine the relationship between the dependent and independent variables. The result revealed that private sector credit, broad money supply and money outside the bank have positive effect on customer's deposit of commercial banks in Nigeria. This means that financial deepening has significant impact on total customers' deposit.

Arif and Khan (2019) studied the effects of financial development on the human capital development of Pakistan. An annual time's series data over the period of 1991 to 2016 is used. Financial development is measured through three proxies; Bank deposits, Broad Money Supply and domestic credit to private sector. Human development capital development is measured by the human development index (HDI). The empirical findings indicate that a strong financial investigation enhances human capital development in Pakistan. He maintained that inflow of remittances increases human capital development while unemployment rate and large population reduce the development of human capital.

Osuka, Ihejirika nd Chinweze (2018) investigated the impact of financial deepening on Human Capital Development in Nigeria. Human capital index (HDI) was used as proxy for Human Capital Development due to its multidimensional nature while the ratios of credit to the private sector, broad money supply and market capitalization were used to proxy financial deepening. Data were sourced from Central Bank of Nigeria Statistical Bulletin (2015) and world development indicator from 1981 -2015 were used. Johansen Co-integration was used to determine the existence of long term relationship between financial deepening and economic development while error correction model was used to determine the adjustment factor and causality. It was found that there is unidirection causality running from financial deepening to human capital development. The study concluded that financial deepening is important and beneficial in improving human capital development.

Sulaiman, Oke and Azzez (2012) explained the effect of financial liberalization on the economic growth in developing nations with its assessment, focusing on Nigeria with annual time series data from 1987 -2009. The study employed co-integration and error correlation model (ECM) by making Gross Domestic Product as a function of lending rate, exchange rate, inflation, financial deepening (M2/GDP) and degree of openness as its financial liberalization indices. Co-integration results confirmed the existence of long run equilibrium relationship while the ECM results showed a very high R^2 in both the over- parameterized model (95%) and parsimonious model (95%). The study conclude that financial liberalization has a growth-stimulation effect on Nigeria.

Waiyaki (2013) carried out an assessment on the relationship between financial development economic growth and poverty between 1997-2012. The study attempted to determine the direction of causality between financial development and economic growth as well as the effect of financial development on economic growth with a focus on the banking sector and the stock market in Kenya. The variables used include broad money supply M_3 , credit to private sector, bank deposit,

stock market capitalization, stock market turnover and volume of stock traded. The study used OLS method and the findings show that some financial development variables such as M_3 and credit to private sector did not lead to growth while deposit did during the period of the study.

METHODOLOGY

The study adopted an ex-post facto design. Data was collected through the Central Bank of Nigeria statistical bulletin and world performance indicator (WPI) of-various edition. The study is based on the null hypothesis that financial deepening does not have significant effect on Human Capital development in Nigeria.

Model Specification

The statistical models adopted are predicated on the presumed relationship between the dependent variable and independent variables. The model captured the relationship between financial deepening and Human development index.

The model for the functional relationship are presented as follows

$$\text{HDI} = F(\text{CPS}, \text{MS}, \text{BDS}, \text{TSV}, \text{MCAP})$$

Where:

HDI = Human Development Index

CPS = Credit to private sector

MS = Money Supply

BDS = Bank Deposit

TVS = Total Savings

MCAP= Market Capitalization

The econometric model is presented thus:

$$\text{HDI} = A_0 + A_1 \text{CPB} + A_2 \text{MS} + A_3 \text{BDS} + A_4 \text{TSV} + A_5 \text{MCAP} + U$$

A_0 is the intercept, $A_1 - A_5$ are coefficient of the independent variables and U is the error term representing the unobserved factors that influence the dependent variables. The expectation is that the increase in the explanatory variable will impact positively on human development index.

Method of Data Analysis

The data analysis used in this study were based on modern econometric analytical models considered relatively appropriate to text the long-run relationship between financial deepening and human capital.

The researcher employed the following techniques; unit root test, normality test, Error Correction Mechanism (ECM), ordinary least square.

Analysis of Model I

Unit Root Tests Result for Model I

As procedure demands, unit root test was conducted on all the time series data in the model to check for stationarity of the series. Unit roots are a characteristics of some time series data, and if this is not checked, the analysis will produce spurious results. Data is stationary when it has a constant mean wave and is well behaved. Table 4.1.1 is the summary of the unit root test.

Table 4.3 Summary of Augmented Dickey Fuller Unit Root Test for Model I

Variabl e	TEST CONDUCT ED	Mackinonno n Critical Value at 5% probability level	Level Test Stat	Mackinonno n Critical Value at 5% probability level	1st Differenc e Test Stat	Order of Integratio n
HDI	ADF	-2.943427	- 2.138863	-2.943427	-5.864620	I(1)
CPS	ADF	-2.941145	- 0.923984	-2.943427	-5.012315	I(1)
MS	ADF	-2.941145	- 0.602862	-2.943427	-5.892947	I(1)
BDS	ADF	-2.967767	- 2.153028	-2.960411	-7.225813	I(1)
TSV	ADF	-2.941145	- 2.300893	-2.943427	-6.660942	I(1)
MCAP	ADF	-2.941145	- 1.876685	-2.943427	-6.859741	I(1)

Source: Computation by the researcher

Augmented Dickey Fuller tests indicate that Human development index (HDI), credit to private sector (CPS), Money supply (MS), Bank deposits (BDS), Total savings (TSV), and Market capitalization were stationary at first difference I(1). This implies that the variables are stationary at the order of integration stated above and at 5% level of significance.

Regression Analysis

The fact that all the variables integrated at 1st difference implied that ordinary least squares regression (OLS) as well as Autoregressive distributed lags (ARDL) could be used for analysis. The researcher elected to use OLS in this model for its simplicity. As procedure demands when all the variables are integrated at 1st order difference, OLS was conducted on the level of values of the variables so as to ascertain the actual effect of each of the explanatory variables on the explained variable. Table 4.1.4 showed the details of the regression analysis

Ordinary Least Squares (OLS) Regression Analysis

Dependent Variable: HDI

Method: Least Squares

Date: 10/03/22 Time: 08:09

Sample: 1985 2023

Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPS	0.004179	0.009604	0.435130	0.6663
MS	0.001843	0.009273	0.198714	0.8437
BDS	0.002772	0.019633	0.141219	0.8886
TSV	-0.001463	0.005645	-0.259093	0.7972
MCAP	0.000901	0.001860	0.484485	0.6312
C	0.361386	0.052896	6.832071	0.0000

R-squared	0.327059	Mean dependent var	0.452051
Adjusted R-squared	0.225098	S.D. dependent var	0.074062
S.E. of regression	0.065196	Akaike info criterion	-2.482214
Sum squared resid	0.140265	Schwarz criterion	-2.226281
Log likelihood	54.40317	Hannan-Quinn criter.	-2.390387
F-statistic	3.207696	Durbin-Watson stat	0.573141
Prob(F-statistic)	0.018096		

Source: Computation by the researcher

Interpretation and Discussion of Results of Model I

The Adjusted R-squared value of 0.225 above (Table 4.6) showed that about 23% of the changes in the human development index (HDI) within the period covered by the study resulted from the changes in the explanatory variables in the model. The F-Statistic of 3.2 with a probability (Prob (F-statistic)) of 0.016 showed that credit to private sector, money supply, Bank deposits, Total savings, and market capitalization have a joint effect on Human development index, and the effect is significant. However, the Durbin W-Watson Stat of 0.57 showed that the data may suffer from Autocorrelation. But since, other diagnostic test are good enough for analysis, the result can be used for inference.

From Table 4.6 and following the coefficients of the variables, the regression equation becomes

$$\text{HDI} = 0.004179 * \text{CPS} + 0.001843 * \text{MS} + 0.002772 * \text{BDS} - 0.001463 * \text{TSV} + 0.000901 * \text{MCAP} + 0.361386$$

The equation above showed that credit to private sector, money supply, bank deposits, and market capitalization have positive but no significant effect on economic development represented by the human development index within the period under study. However, total savings rate has a negative and no significant effect on economic development. From the regression analysis, it can be seen that financial deepening has a positive effect on human capital development measured by

the human development index although the effect is not significant. Just a little change of strategy that will enhance access to financial services may overturn the insignificant effect to a significant one. The result is consistent with the study Arif and Khan (2019) in Pakistan and Osuka, Ihejirika and Chinweze (2018) in Nigeria which showed that financial deepening enhances human capital development.

Decision

Since the probability value of 0.016 is less than 0.05 level of significance we reject the null hypotheses and conclude that financial deepening have significant effect on human development index in Nigeria.

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

SUMMARY OF THE FINDINGS

The following were the findings made:

The F-statistics of 3.2 with the probability of 0.016 showed that credit to private sector, money supply, bank deposits, Total saving and market capitalization have a joint effect on human development index and the effect is significant. The adjusted R-square value of 0.225 showed 23% of the changes in human development index (HDI) resulted from the changes in the explanatory variables in the model from the changes in the explanatory variables in the model.

CONCLUSION

The result of the test conducted revealed that all the financial deepening variables have a joint effect with the economic development indicators. The study therefore concludes that financial deepening made positive and significant contribution to economic development in Nigeria.

RECOMMENDATION

1. Since the development of the financial sector enhances human development, monetary authorities should liberalize financial institution policies in order to boost financial activities in Nigeria.
2. Efforts should be geared towards increasing credit to private sector, improve money supply and deposit to banks in other to enhance human capital development

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