



# Financial Deepening and Human Capital Development In Nigeria

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## ABSTRACT

The study examined the relationship between financial deepening (FD) and human capital development (HCD) in Nigeria. This was done in respect of the dependent variable was proxy with Human Development Index (HDI) while the FD as the independent variable was measure with Money supply (M2) to Gross Domestic product (GDP), Credit to Private Sector (CPS) to Gross Domestic product (GDP), Commercial Bank Deposits (CBD) to Gross Domestic product (GDP) and Market Capitalization (MCAP) to Gross Domestic product (GDP). The method of data collection used in this study was the secondary source of data (time series data), from the CBN Statistical Bulletin and United Nation Development Programmes Annual Statistics for the period 1981-2020. The stationary and normality tests, descriptive statistics, correlation and multiple regressions carried out with the aid of E-VIEW 9.0 Statistical Package. The findings revealed that CBD to GDP and MCAP to GDP have positive significant effect on HDI in Nigeria while M2 to GDP and CPS to GDP has negative insignificant effect on HDI in Nigeria. Thus, the study concluded that FD significant effect on HCD in Nigeria. Based on the findings the study recommends that, Government policies should be directed towards manipulating the money supply in such a way that will facilitate economic growth. Regulators like SEC should be diligent in the supervision of the market to ensure that efficiency and discipline is restored. CBN, should encourage banks to be efficient in their financial intermediation function by ensuring that funds from the surplus sector is efficiently channeled to the deficit sector of the economy.

**Key Terms:** Financial Deepening, Human Development Index, Money supply, Credit to Private Sector and Market Capitalization.

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## I. INTRODUCTION

In order to improve residents' human capital development (HCD) and level of living, the Nigerian government has opened the doors to various viewpoints on economic growth and development paradigms. As a result, financial deepening has been highlighted as one of the strategies whose adoption might accelerate the rate of HCD, and the impact of this strategy must be determined and examined on a regular basis, particularly in developing countries like Nigeria. Financial deepening (FD) aims to boost economic performance by increasing financial market competitiveness, which benefits non-financial sectors of the economy indirectly (Chiawa & Abur, 2016).

The axiom of economic development is that all planning, innovations, and fights to better human living conditions inevitably result in the mobilization of financial resources. Financial market institutions may play a critical role in entrepreneurship success. Given market risk, new product or service discoveries may generate demand or build a market. On the other hand, the availability of a developed financial market is a big motivator for entrepreneurs to start a business. The access to finance, as well as sound financial decisions is very critical as individuals seek to exit from poverty (George, Okoye, Efobi, and Modebe, 2017).

The physical and HCD of each country determines its economic development and functioning. No nation can develop without highly trained human capital, and no highly qualified individuals can be developed without investment in education and health (Ehiedu & Toria, 2022). People invest in themselves to boost their production, which is known as human capital. Human capital is a collection of attributes ingrained in persons that contribute to their productivity, such as knowledge, skills, education, abilities, experience, attitude, and behavior (Osuka, Ihejirika & Chinweze, 2018). Countries with low HCD are classed as undeveloped because

there are insufficient skilled workers to drive the economy, hence, low education, inadequate health care, and low income, and such economies have high unemployment and poverty rates. The availability of competent human capital is critical for any economy, including Nigeria's, to drive and sustain growth (Osuka, Ihejirika & Chinweze, 2018).

Obonyo (2014), referenced in Osuka, Ihejirika, and Chinweze (2018), defines FD as "the increasing provision of financial services with a greater variety of services tailored to all levels of society." It usually refers to a higher money supply to GDP or some other price index. Liquid money is what this term alludes to. The more liquid money a country has the more prospects for continuous and sustainable growth it has, it is conceptualized as the buildup of financial assets at a quicker rate than non-financial wealth and total output" (Ehiedu, Onuorah & Okoh, 2021). FD appears to play a vital role in encouraging economic growth, which benefits the poor by creating more jobs, allowing the government to commit more fiscal resources to social spending like education, and boosting monies accessible to the poor for investment (Ehiedu, Odita & Kifordu, 2020). People's incomes will rise as access to finance for the poor and vulnerable groups is expanded, and they will spend more on education and health, enhancing their human capital and standard of living (Claessens and Feijen, 2016).

These benefits are transferred to the economy through the transmission mechanisms of extending credit to the private sector, the poor, and the vulnerable in society, as measured by M2 to GDP, CPS/GDP and MC/GDP (Osuka, Ihejirika & Chinweze, 2018).

Nigeria's financial sector has improved significantly in the recent past. CPS increased from 8.57 billion Naira in 1981 to 18,674 billion Naira in 2015, with Broad Money Supply increasing from 14.47 billion Naira in 1981 to 18,901.30 billion Naira in 2015, and MC rising from five billion Naira in 1981 to 17,003.4 billion Naira in 2015 (CBN Statistical Bulletin, 2016). The construction of an enabling environment for the financial sector led to an expansion of Deposit Money Banks (DMBs) and their network of branches, as well as specialized banks for Agriculture, Industry, and Commerce. Hence, this research examines the nexus between FD and HCD in Nigeria using information from the literature.

## **STATEMENT OF THE PROBLEM**

According to the literature analysis in the preceding section, Nigeria has seen a large increase in FD variables such as CPS to GDP ratio, M2 to GDP, and MC to GDP ratio. However, the Nigerian economy's level of FD remains well below expectations, particularly in terms of HCD.

Previous empirical research on FD variables has primarily focused on economic growth, with only a few studies focusing on HCD. It was also proven in the literature that financing constraints play a significant impact in developing countries' restricted HCD options. HCD may also have an impact on FD since talented and well-educated people (those with a high level of human capital) have better access to knowledge and are less risk averse. Furthermore, education allows people to transition from the informal to the formal economy, making formal financial services more accessible. HCD has the potential to generate financial innovations that are required for FD, facilitating the acquisition of new HCD. Hence, it's possible that there's a causal link in either direction.

FD fosters HCD by engineering economic growth, according to studies on the influence of FD on HCD in various nations throughout the world, such as Uddin and Masih (2016), Hatemi and Shamsuddin (2016) found a unidirectional causation between HCD and FD in a recent study. Finally, Demirci and Ozyakisir (2017) found evidence in Turkey that a unidirectional causality exists between HCD and FD in both the short and long run. The evidence from the literature in the various countries are mixed and inconclusive, their findings cannot be generalized to the Nigeria context.

A few previous studies have explored the nexus of FD and economic growth in Nigeria has identified M2, CPS/GDP, M2/GDP and MC/GDP ratios as the measures of FD in relation to HCD (proxy by human development index). However, the findings from their studies have reported mixed results. For examples studies by Osuka, Ihejirika & Chinweze (2018) found that there is a unidirectional causality running from FD (CPS/GDP, M2/GDP and MC/GDP) ratios) to HCD. On the other hand, study by Nkoro and Uko (2013) as cited in Osuka, Ihejirika & Chinweze (2018) shows that there is a positive effect of financial sector deepening (M2/GDP, CPS/GDP, M2/GDP, MCAP/GDP, Bank Liquidity/GDP and Prime Interest Rate) on HCD.

There are few studies in Nigeria on the relationship between FD and HCD. Researchers' conclusions were not unanimous in the examined literature, although they did agree on various theoretical theories. This study fills a lacuna in knowledge by incorporating MC to GDP as a capital market indicator, providing our model the balance it needs to accurately depict the Nigerian financial system. This is predicated on the belief that effective financial intermediation will necessitate simultaneous contributions from all of the financial sector's many subsectors. To achieve this, this study analyzed the relationship between FD and HCD [proxy with HDI] using CPS/GDP, M2/GDP and MC/GDP ratios as proxies for FD.

## **II. LITERATURE REVIEW**

### **Concept of Financial Deepening (FD)**

The expansion and strengthening of DMBs has resulted in a rise in DMBs facilities, resulting to a significant improvement in financial services for clients in the Nigerian banking system. Deepening of the banking industry is defined by Onyemachi (2012) cited in Osuka, Ihejirika & Chinweze (2018), as a strategic approach to developing the banking industry and other sectors of the Nigerian economy by increasing financial instruments/assets in the money and capital markets, which in turn increases the HCD in the Nigerian economy. Clearly, this technique is being implemented in emerging economies in order to expand the intermediation process in order to accomplish manufacturing sector expansion and speed HCD (Onyemachi, 2012) cited in Osuka, Ihejirika & Chinweze (2018).

FD, according to Hamilton and Godwin (2013) cited Osuka, Ihejirika & Chinweze (2018), is defined as a growth in the supply of financial assets that has resulted in a wide range of financial assets being available in the Nigerian economy. The term "financial sector deepening" simply refers to a deposit money bank's ability to mobilize adequate deposits for manufacturing-related investments. The M2 to GDP ratio illustrates the expansion of local savings and offers the real structure for the establishment of varied financial claims, which is made feasible by the deepening of Nigeria's banking sector. This has aided the development of Nigeria's HCD (Christian, 2013) cited in Osuka, Ihejirika & Chinweze (2018).

FD is the improvement in the provision of financial services with an array of choice of services in all sectors of the economy (Ohwofasa & Aiyedogbon, 2013) cited in Osuka, Ihejirika & Chinweze (2018). It means an increased ratio of M2 to GDP. It refers to liquid money; the more the liquid money in an economy, the more opportunities opened for continued growth (Sackey & Nkrumah, 2012) cited in Osuka, Ihejirika & Chinweze (2018). The term "financial deepening" refers to an improvement in the financial industry that has had a significant impact on the economy at all levels. It also facilitates the expansion of money supply, as measured by the money supply to GDP ratio and other price indexes, implying that the more liquid money available in the economy, the greater the opportunities for continuous growth in the manufacturing sector, resulting in HCD in Nigeria.

### **Broad money supply (M2) and Human Development Index (HDI)**

The apex bank defines M2 in two ways: M1 and M2, there may be excess cash deliver when the quantity of cash in move is higher than the extent of total output of the economy. When cash supply exceeds the level the economic system can correctly absorb, it dislodges the stability of the rate device, main to inflation or higher charges of goods, when the CBN modifications the extent of M2, it does so through the control of the base cash (Omotor, 2018). Base cash is made from currency and cash outside the banking machine plus the deposits of banks with the crucial bank. If the principal bank perceives that there may be too much money in circulate and fees are rising (or there's capability strain for prices to upward push), it could reduce cash supply via lowering the bottom cash (Omotor, 2018). Central financial institution financial coverage consequently, goals the growth in the ones deposit balances with a purpose to manipulate the enlargement in cash deliver that could precipitate price distortions on the way to stabilize the Nigeria economy for HCD (Omotor, 2018).

### **Credit to Private Sector (CPS) and Human Development Index (HDI)**

Lending being the number one function of DMBs can have robust implication for non-public quarter growth and could likely be impeded in instances of disaster with the aid of the riskiness of the enterprise environment that frequently accompany economic contraction. This is due to the fact credit facilitates to create and hold an affordable enterprise size as it's miles used to establish and/or amplify the commercial enterprise to take benefit of economies of scale, improve casual activity and boom its efficiency (Tahir, Shehzadi, Ali and Ullah, 2016).

### **Commercial Bank Deposits (CBD) and Human Development Index (HDI)**

CBD to nominal GDP that shows the liquidity of the banking area, hence, countries ought to create their policies to encourage savings a good way to boom earnings. Similarly, financial savings and boom are definitely correlated, there unidirectional causation that runs from financial savings to boom and HCD (Egungwu, 2018).

### **Market Capitalization (MCAP) and Human Development Index (HDI)**

MCAP is the most critical measure for assessing the scale of a inventory marketplace and the barometer for measuring its increase and development. The cost of MC at each time is likewise a feature of traders' perception of the really worth of securities on provide, their disposable discretionary income and the willingness of fund customers to see the market as a possible supply of raising long-time period capital, this in a long term result to HCD in Nigeria (Egungwu, 2018).

### **Concept of Human Capital Development (HCD)**

HCD may be known as a set of developments inclusive of know-how, abilities, education, competencies, experience, attitude and behaviour embedded in individuals that make a contribution to their productiveness. The concept of HCD has also been described as ‘an amalgam of things which include training, experience, education, intelligence, energy, work behavior, trustworthiness, and initiative that affect the cost of a employee's marginal product’. The shape of the index is constituted to fitness, expertise, and trendy living with many sub-variables including life expectancy at start, grownup literacy price, gross enrollment ratio, and GDP in keeping with HCD. Considering that the HDI consists of exceptional elements, the approach of HDI makes a speciality of individuals’ entire lifestyles pleasant and monetary scenario (Egungwu, 2018).

### **Human Development Index (HDI)**

The HDI may be measured round three precise areas that consist of college enrolment fees (common years of training and expected years of training), Quality of fitness delivery (lifestyles expectancy at delivery) and index of a suitable preferred of residing (GNI consistent with capita) (Egungwu, 2018).

## **III. THEORETICAL REVIEW**

### **Supply Leading and Demand Following Hypothesis**

This idea turned into authored by way of Schumpeter (1911) and later adopted via pupils which include McKinnon (1973); Shaw (1973); Gupta (1984); Fry (1988); Greenwood and Jovanovich (1990) and Bencivenga and Smith (1991) cited in Osuka, Ihejirika & Chinweze (2018). This principle postulates that economic development in any country reasons monetary growth. In an economy with no friction in transaction, statistics and tracking costs, no monetary intermediaries are needed. According to the principle, if transaction, information and monitoring prices are sufficiently excessive, then, no exchange amongst monetary retailers is vital. These dreams brought about the emergence of economic institutions and markets that make up the economic region.

The “supply leading speculation” and “demand following hypothesis” postulates a remarks courting among HCD and monetary development. While, the ‘deliver-main’ hypothesis posits a unidirectional causation that runs from FD to HCD implying that new useful economic markets and institutions will increase the supply of monetary offerings. This will really cause excessive but sustainable HCD. This hypothesis performs roles namely to transfer sources from low growth sectors to high boom sectors and to sell entrepreneurial response inside the later area and the ‘demand-following’ hypothesis posits a unidirectional causation from monetary boom to monetary development.

This implies economic machine passive reaction to HCD which means that the increasing demand for economic services would possibly result in the competitive enlargement of the monetary gadget because the actual zone of the economic system grows. This theory suits this observe since it gives one of the possible explanations of ways improvement in the monetary region influences HCD. Thus, this look at posit in line with the deliver main hypothesis that a well developed monetary sector may have a advantageous effect on HCD.

### **Human Capital Theory (HCT)**

According to Almendarez (2011) cited in Osuka, Ihejirika & Chinweze (2018), “HCT rests on the assumption that formal training is quite instrumental and necessary to improve the efficient capacity of a populace. In quick, HCTs argue that knowledgeable populace is a effective population. HCD principle emphasizes how training will increase the productiveness and efficiency of people by way of increasing the level of cognitive stock of economically effective human capability, which is a made from innate abilities and funding in people. The provision of formal schooling is seen as an investment in HCD, which proponents of the concept have taken into consideration as equally or maybe greater worthwhile than that of bodily capital (Almendarez, 2011) cited in Osuka, Ihejirika & Chinweze (2018).

This theory is ideologically and politically supported because it aims to reap social equity through the supply of services to the bad, including education and health care, and presenting job opportunities that ends in a boom inside the GDP and additionally to reap prosperity and increase HCD. The HCT implies that an development in training to the populace with cause HCT thru formal and casual education. With a well knowledgeable population and proper FD in the financial system by using prolonged financial institution credit to the populace with introduced about the essential and wished monetary development in the Nigeria economic system

## **EMPERICAL REVIEW**

Osuka, Ihejirika & Chinweze (2018) analyzed the effect of FD on HCT in Nigeria. HDI became used as proxy for HCD because of its multidimensional nature at the same time as the ratios of CPS, M2 and MC have been used to proxy economic deepening. Data sourced from CBN Statistical Bulletin (2015) and World Development Indicators from 1981 to 2015 have been used. Johansen Cointegration Test turned into hired to



decide the lifestyles of long-run dating between FD and HCD even as ECM was used to decide the adjustment factor and causality. It turned into discovered that there is a unidirectional causality strolling from FD to HDI. Moshabesha (2017) undertook a study to explored the nexus that exist between FD and growth in Southern African Customs Union (SACU) countries of Botswana, Lesotho, South Africa and Swaziland among 1976 and 2015. The impartial variable protected the ratio of credit to the private zone furnished with the aid of industrial banks and the ratio of liquid liabilities of commercial banks to GDP. The dependent variable, economic boom became measured by increase in production.

Olowofeso, Adeleke and Udoji (2016) ascertained the impacts of PSC on monetary growth in Nigeria the usage of the Gregory and Hansen (1996) co-integration take a look at. The approach become implemented to quarterly statistics spanning 2000:Q1 to 2014:Q4, even as the fully changed normal least squares procedure become hired to estimate the model coefficients. Amongst others, findings from the error correction version showed a advantageous and statistically substantial impact of personal area credit score on output, even as multiplied prime lending price turned into inhibiting increase.

Nwanna and Chinwudu (2016) tested FD and financial increase in Nigeria from 1985 to 2014. It targeted at the impact of inventory marketplace and bank deepening variables which includes; cash deliver, MC, personal quarter credit score and monetary deposit have on financial growth of Nigeria. Used annual time data for 1985 to 2014 received from the CBN statistical bulletin. The OLS econometric strategies have been hired in which variations in the dependent variable, financial increase, measured by using gross home product growth price were regressed on M2 to GDP, PSC to GDP, MC to GDP and CBD to GDP .The result of the analysis famous that both financial institution based and inventory market economic deepening proxies has giant and tremendous effect on economic boom and that the banking sector and stock market in Nigeria has an crucial role within the technique of monetary boom.

Marlyse (2016) investigated the results of FD on financial boom inside the Kenyan banking zone. The examined achieves this goal using quarterly time series records from 2000 to 2013. FD, the unbiased variable became captured by four alternative signs: LL to GDP; CPS to GDP; CCBA; and CBD) to GDP. All the variables were included at degree I(1) and the Johansen Jeluisus cointegration check showed proof of cointegrating equations between GDP and financial deepening signs. Four models were estimated to decide the long run and brief run results. The study determined that banking zone in Kenya has an vital role in the manner of financial increase. Specifically, the empirical results monitor that liquid liabilities, credit score to the personal area, industrial-vital bank belongings and industrial financial institution deposits have fantastic and statistically big results on GDP.

Studies on the relationship between FD and HCD in Nigeria are scanty. Even in the reviewed literature, researchers' findings were not unanimous but agreeing to various theoretical hypotheses. In other words, some findings supported the Supply-leading hypothesis and some the Demand-following hypothesis while others are consistence with the Feedback hypothesis. Some studies reviewed used only the money market indicators, while neglecting the Capital Market in their modeling. This study considered the capital market as an integral part of the financial sector as it represents actual savings that has been invested for production which has to generate income that will improve the welfare of the workers or create new jobs for their empowerment for HCD. This research paper filled this gap identified in the literature by including MC to GDP as an indicator for the capital market thereby giving our model the required balance to represent the Nigerian financial system.

#### **IV. RESEARH METHODOLOGY**

This research adopted the Ex-post facto and Quasi Experimental design. The ex-post facto research design is used because this type of research is one that takes place after the event or the fact had taken place while Quasi Experimental design is adopted because seeks to explore the causal effect of FD on HCD. In this circumstance, the research has no control over the variable of interest as and therefore cannot manipulate them because the variables are verifiable. The method of data collection used in this research is the secondary source of data, from the CBN Statistical Bulletin and United Nation Development Programmes Annual Statistics for the period of 1981-2020. The research adopted a number of techniques of data analysis such as descriptive statistics, various unit root test, correlation matrix and multiple regression tool of analysis with the aid of EVIEW Statistical Software. The OLS Model was adopted because it shows the level of relationship between the explanatory variables and the explained variable in other to ascertain whether it has significant relationship or not. The model for the research was adopted from the study of Osuka, Ihejirika & Chinweze (2018). This model was modified to suit the variables of this research. HCT was proxied with {Human Development Index (HDI)} and FD was proxy with {Broad money supply (M2) to Gross Domestic product (GDP), Credit to Private Sector (CPS) to Gross Domestic product (GDP), Commercial Bank Deposits (CBD) to Gross Domestic product (GDP) and Market Capitalization (MCAP) to Gross Domestic product (GDP)}. Hence, this research state the functional form of the model specification follows:

$$\text{HDI} = f(\text{M2/GDP}, \text{CPS/GDP}, \text{CBD/GDP}, \text{MCAP/GDP}) \dots \dots \dots (1)$$

The above functional equation is thus stated in econometric form as presented below:

$$HDI = \beta_0 + \beta_1 M2/GDP_i + \beta_2 CPS/GDP_i + \beta_3 CBD/GDP_i + \beta_4 MCAP/GDP_i + U_i$$

Where:

$U_i$  = Error Term

$\beta_0 - \beta_4$  = the Parameters

A prior Expectation =  $\beta_1, \beta_2, \beta_3, \beta_4 > 0$

(Implying that  $\beta_1, \beta_2, \beta_3, \beta_4$  will improve Human Capital).

#### 4.1 Results Discussions

**Table 4.1: Descriptive Statistics**

	HDI	M2_GDP	CPS_GDP	CBD_GDP	MCAP_GDP
Mean	0.599550	15.38350	11.40426	7.822835	11.13727
Median	0.537000	12.89992	8.227343	5.754267	7.209362
Maximum	0.978000	25.15527	22.33140	14.90392	39.95010
Minimum	0.435000	9.151674	5.917270	3.134581	3.053461
Std. Dev.	0.151786	5.309628	5.502428	3.863877	8.571254
Skewness	1.004980	0.615887	0.749413	0.513768	1.127888
Kurtosis	2.772768	1.707431	1.798373	1.617437	4.209213
Jarque-Bera	6.819284	5.313333	6.150646	4.945517	10.91787
Probability	0.033053	0.040182	0.046175	0.054352	0.004258
Sum	23.98200	615.3401	456.1703	312.9134	445.4910
Sum Sq. Dev.	0.898526	1099.494	1180.792	582.2524	2865.189
Observations	40	40	40	40	40

Source: Computed from E-Views 9.0 (2021)

The descriptive characteristics of the variables are presented in Table 4.1. The average values of the HDI, M2 to GDP, CPS to GDP, CBD to GDP and MCAP to GDP are 0.5996, 15.3835, 11.4043, 7.8228 and 11.1373 respectively, while their standard deviation are 0.1518, 5.3096, 5.5024, 3.8639 and 8.5713 respectively. All the variables are positively skewed towards normality. The kurtosis that measures the peakness of the distribution reveals that HDI is leptokurtic indicating that the distributions are peaked relative to normal distribution, while M2 to GDP, CPS to GDP, CBD to GDP and MCAP to GDP are platykurtic, which implies that the distribution of the variables are flat relative to normal distribution. Lastly, the Jarque-Bera statistics revealed that the variables normally distributed at 5% significant level, since the Jarque-Bera Probability for the variables are lesser than 5%.

**Table 4.2: Correlation Matrix**

	HDI	M2_GDP	CPS_GDP	CBD_GDP	MCAP_GDP
HDI	1.000000				
M2_GDP	-0.426735	1.000000			
CPS_GDP	-0.411782	0.964852	1.000000		
CBD_GDP	0.430643	0.914937	0.914424	1.000000	
MCAP_GDP	0.554671	0.739879	0.721527	0.881128	1.000000

Source: Computed from E-Views 9.0 (2021)

The Pearson correlation test is presented in Table 4.2 and it shows the absence of multi-co linearity among the variables since the correlation values are less than 0.7. Furthermore, the result shows the explanatory variables namely CBD to GDP and MCAP to GDP have positive correlation with HDI while M2 to GDP, CPS to GDP has negative correlation with HDI in Nigeria.

**Table 4.3: Result of Stationarity Using ADF Test**

Test Variables	ADF Test Statistic Value	Mackinnon Critical Value @ 5%	Order of Integration	P-Value	Decision
HDI	-10.21032	-2.941145	1(1)	0.0000	Stationary
M2_GDP	-5.944800	-2.941145	1(1)	0.0000	Stationary
CPS_GDP	-5.443914	-2.943427	1(1)	0.0001	Stationary
CBD_GDP	-5.441385	-2.941145	1(1)	0.0001	Stationary

MCAP_GDP	-6.775092	-2.941145	1(1)	0.0000	Stationary
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Source: Computed from E-Views 9.0 (2021)

The summary of the ADF unit root test output in table 4.3 above revealed that all the variables under investigation i.e. HDI, M2 to GDP, CPS to GDP, CBD to GDP and MCAP to GDP contain unit root test at their first difference 1(1). Evidence of this could be seen from the value of their respective ADF statistics which is more than the critical value at 5%. Moreover, additional evidence of stationary series could also be seen from the p-value for all variables which is less than 5% level of significance greater than 95% confidence level. Based on this result, the null hypothesis of non-stationarity is rejected while the alternative hypothesis specifying the presence of stationarity is accepted instead.

**Table 4.4: Summary of Johansen Cointegration Test Output**

Hypothesized	Eigenvalue	Trace Statistic	0.05		Max-Eigen Statistic	0.05	
			Critical Value	Prob.**		Critical Value	Prob.**
None *	0.728099	83.78823	69.81889	0.0026	49.48808	33.87687	0.0003
At most 1	0.442544	54.30015	47.85613	0.0055	32.20613	27.58434	0.0100
At most 2	0.177019	32.09402	29.79707	0.0086	27.40325	21.13162	0.0063
At most 3	0.105098	17.69076	15.49471	0.0247	24.219574	14.26460	0.0005
At most 4	0.012323	2.471191	1.841466	0.0424	7.471191	3.841466	0.0044

Researcher’s computation Based E-views 9.0. Output (2021)

Table 4.4 above revealed the multivariate cointegration test by Johansen and Juselius cointegration technique reveal that both the trace statistic and the Maximum Eigenvalue statistic shows evidence of two cointegration relationship (at None and at most 1), where the values of the trace statistic and the Maximum Eigen value statistic is greater than their respective critical values at 5% level of significance level.

**Table 4.5: Multiple Regression Result**

Dependent Variable: HDI  
 Method: Least Squares  
 Date: 10/22/21 Time: 02:16  
 Sample: 1981 2020  
 Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.718274	0.086197	8.332954	0.0000
M2_GDP	-0.008710	0.015189	-0.573402	0.5700
CPS_GDP	-0.010963	0.015261	-0.718387	0.4773
CBD_GDP	0.043739	0.021448	2.039261	0.0490
MCAP_GDP	0.018126	0.005542	3.270889	0.0024
R-squared	0.381920	Mean dependent var		0.599550
Adjusted R-squared	0.311282	S.D. dependent var		0.151786
S.E. of regression	0.125966	Akaike info criterion		-1.189139
Sum squared resid	0.555361	Schwarz criterion		-0.978029
Log likelihood	28.78278	Hannan-Quinn criter.		-1.112808
F-statistic	5.406734	Durbin-Watson stat		1.185509
Prob(F-statistic)	0.001694			

Researcher’s computation Based E-views 9.0 Output (2021)

Table 4.5 above, the p-value of M2 to GDP is 0.5734, which is greater than the significance value of 0.05 and the t-ratio value of -0.5734 lesser than 2, which indicates the extent of significance to which M2 to GDP affects HDI in Nigeria. The coefficient of M2 to GDP of -0.0087, this implies that M2 to GDP have a negative effect on HDI in Nigeria. The implication is that a one percent (1%) increase in M2 to GDP would lead to 0.87% decrease in HDI. Support by findings of Osuka, Ihejirika & Chinweze (2018).

The p-value of CPS to GDP is 0.4773, which is greater than the significance value of 0.05 and the t-ratio value of -0.7184 lesser than 2, which indicates the extent of significance to which CPS to GDP affects HDI in Nigeria. The coefficient of CPS to GDP of -0.0437, this implies that CPS to GDP has a negative effect on HDI in Nigeria. The implication is that a one percent (1%) increase in CPS to GDP would lead to 4.37%

decrease in HDI. Supported by the finding of Moshabesha (2017) but contradicts the finding of Olowofeso, Adeleke and Udoji (2016).

The p-value of CBD to GDP is 0.0490 which is less than the significance value of 0.05 and the t-ratio value of 2.0393 greater than 2, which indicates the extent of significance to which CBD to GDP affects HDI in Nigeria. The coefficient of CBD to GDP of 0.0437, this implies that CBD to GDP have a positive effect on HDI in Nigeria. The implication is that a one percent (1%) increase in CBD to GDP would lead to 4.37% increase in HDI. This finding agrees with the findings of Marlyse (2016).

Finally, the p-value of MCAP to GDP is 0.0024 which is less than the significance value of 0.05 and the t-ratio value of 3.2709 greater than 2, which indicates the extent of significance to which MCAP to GDP affects HDI in Nigeria. The coefficient of MCAP to GDP is 0.0181; this implies that MCAP to GDP have a positive effect on HDI in Nigeria. The implication is that a one percent (1%) increase in MCAP to GDP would lead to 4.37% increase in HDI. This finding agrees with the findings of Nwanna and Chinwudu (2016).

## V. Conclusion and Recommendations

### Conclusion

The paper examined the relationship between financial deepening and human capital development in Nigeria. In order to achieve the main objective of the study, HCD which is the explained variable was proxy with HDI while the FD as the explanatory variable was measure with M2 to GDP, CPS to GDP, CBD to GDP and MCAP to GDP. The method of data collection used in this study was the secondary source of data (time series data), from the CBN Statistical Bulletin and United Nation Development Programmes Annual Statistics for the period 1981-2020. The stationary and normality tests were carried out in order to ascertain the set data will give accurate regression result, since the data for the study are annual time series data. The study adopted a number of techniques of data analysis such as descriptive statistics, correlation and multiple regression tool of analysis with the aid of E-VIEW 9.0 statistical package was used to analyze the data because this technique was used in order to establish the kind of relationship that exists between the explanatory variables and the explained variable used in the study. The findings revealed that CBD to GDP and MCAP to GDP have positive significant effect on HDI in Nigeria while M2 to GDP and CPS to GDP have negative insignificant effect on HDI in Nigeria. Thus, the research concluded that FD significant effect on HCD in Nigeria.

### Recommendations

Based on the findings the study suggested that; Government policies should be directed towards manipulating the money supply in such a way that will facilitate economic growth. Regulators like Securities and Exchange Commission should be diligent in the supervision of the market to ensure that efficiency and discipline is restored. CBN, should encourage banks to be efficient in their financial intermediation function by ensuring that ensure that funds from the surplus sector is efficiently channeled to the deficit sector of the economy. Government through its intervention programme should ensure that more credits are made available to the private sector to promote entrepreneurial response in various sector of economy which will in turn spur economic growth. Finally, the government should encourage its employees to continue their education beyond secondary school and lower the occurrence of life-threatening disorders. They should also transfer loans from the public sector to the private sector, which has demonstrated its ability to boost economic growth.

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