Original Research Article

Sectorial Microcredit and Economic Development in Nigeria

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Abstract

In light of faltering sustainability in growth and development in Nigeria, this study evaluates the Micro Finance Banks Sectoral influence on the development of the Nigerian Economy over the period of 1992 to 2017, utilizing secondary data culled from the Central bank of Nigeria Statistical Bulletin and the World Bank. The study employed the use of Stationarity, Multiple Regression, Johansen's Co-integration and Error Correction estimates. While the Co-integration results indicated significant long run relationship among the study variables, the Multiple Regression and Vector Error Correction estimates both point to Apportioned Microcredit to mining/quarrying, real estate/construction and transport/general commerce sectors as the sectoral microcredit that significantly influence Nigeria's human development index both in the short and long terms respectively. Only Apportioned Microcredit to the mining/quarrying, real estate/construction and transport/general commerce sectors are valuable in predicting variations in economic development as captured by Human Development Index. In light of the above, it was thus recommended that other sectoral activities should be revamped according to their level of insignificance as more efforts should be devoted to the Agricultural sector, manufacturing sector and other sectors of the economy and there should be incentive to sensitize the populace about microfinancing which would bolster deposit based and help disbursement in the right direction, promotion of economic, political and social stability amongst others.
Keywords: Microcredit, Economic Development, Human Development Index.

INTRODUCTION

Various scholars have attempted to succinctly define the concept of economic development in the past. Mabogunje [1] as cited in Tchakoute-Tchuigoua [2] defined economic development as an enhancementin the living standards of a given set of population living in the rural areas on a sustainable basis through the transformation of socio-spatial structure of their productive capacity. Adedayo [3] also described development as anexpansion and transformation of the economic space in order to enhance the quality of life of the inhabitants. It is well established that empowerment by way of financial resources is closely related to development as it connotes an increase in economic strength of a people. Development and financial empowerment through banks are therefore critical component for poverty alleviation and ensuring a society's economic development [4].

A veritable tool in this development emancipation especially at the grassroots are the microfinance banks. The operation of microfinance institutions date back to the pre-independence period in Nigeria when traditional thrift saving system and activities of the traditional group networks which served as proprietors of financial exchange led by traditional money lenders could not handle the growing expansion and needs of people in rural communities [5].

The failure of conventional banking in Nigeria to meet the socio-economic complexities (needs) of the rural communities that consequently experience rapid growth and changes as well as government's desire to reach rural areas with development gave rise to the emergence of community banks (now microfinance banks) as a way of providing financial answers to the low income earners or people so as to finance and improve their income generating activities, i.e. productive activities. Microfinance banks can be seen as an economic growth method intended to advantage the low income class of a given country like Nigeria, both rural and urban poor.

Microfinance according to the Central Bank of Nigeria [6] is about providing financial services to the poor who largely constitute about 65% excluded from financial services of conventional banks. More so, lack of access to credit has been identified as the reason

behind the growing level of poverty in many developing countries. This further emphasizes the crucial role microfinance institutions play in economic growth and development especially in their service for unserved and underserved markets (economically active person in rural and urban areas) to help meet economic and development objectives which include to reduce poverty (considered as the most important), create employment, help existing businesses to grow or diversify their activities, empower women and other disadvantaged groups and even encourage the growth of new businesses [7]. In 2005, the Central Bank of Nigeria (CBN) formulated a new policy framework to enhancetheaccessibility of financial services by micro-entrepreneurs and low income households who require such facilities (soft loans and investable funds) to expand and modernize their operations and their contribution to economic growth and development in Nigeria. The objective is in line with the institution's policy in ensuring financial inclusion for all, such that financial services get to the poor whether in rural or urban communities as this would help improve their productivity levels and also help contribute to the nation's gross domestic product (GDP). In 2004, the Central Bank of Nigeria asserted that the emergence of microfinance institution has been largely due to the inability of the formal financial institutions to provide financial services to both the rural and urban poor. In view of the need for financial inclusion, both government and non-governmental agencies over the years have implementedand supported series of microfinance programmes and institutions in a bid to provide policy strategies needed to improve the productivity of micro, small and medium scale enterprises.

However, Nnamdi and Eniekezimene [8] posited that despite government efforts in Nigeria to promote sectoral output, not much progress seems to have been achieved, judging by poor performance of many non-oil sectors.

Many studies continually focus on growth at the expense of sustainability in the form of development. This study thus is imperative due to the fact that although the literature on microcredit operations is to say the least growing, the obvious dimension of estimating the prevailing nature of empirically verifiable short and long run relationships which prevail between microcredit disbursements to various sectors in Nigeria and economic development in the country has not been sufficiently estimated. The drive to achieve this objective and consequently contribute towards minimization of the existing gap in literature in that respect constitutes the core problem of this study. As such, its therefore becomes imperative to evaluate the influence of Micro credits on economic development outputs in Nigeria.

REVIEW OF RELATED LITERATURE
This section reviews the theoretical, conceptual and empirical framework of the study which is presented under the following subheads:

Theoretical Framework
The Theory of Financial Intermediation
This theory is predicated on the intermediation functions of Banks, Banks by nature of their operations are net risk takers. Their intermediation capacity emanates from their ability to mobilize funds. Credits when effectively sent, hypothetically constitutes an important vehicle for transmission of the impacts of saving money operations to the economy. In such manner, the causality relationship between the economy and financial development would hypothetically stay unidirectional with causality spilling out of the economy to the financial division. Proving Schumpeter's position, Robinson [9] sees financial establishments as unimportant handmaids to local undertaking and to that degree, generously stays latent to the indispensable variables that prompt financial development. Later studies by Goldsmith [10] and Shaw [11] among others, watch to a great extent that powerful loan cost administration would build reserve funds, profitable ventures and therefore, financial development. In like manner, these concentrates to a great extent contend that the degree of financial development and orderly level of financial liberalization approaches winning in an economy would clearly, represent the predominant level of financial development. Inside the domain of these studies, back on very basic level capacities to assume supply-driving parts and would hypothetically, apply noteworthy causal impact on monetary development.

Gap, Exigency and Catalyst Theory
These theories are fundamental in the evaluation of the subject matter. Nwankwo [12] contended that the expanding approach enthusiasm for improvement in financial institution is an outcome of the subsidizing crevice made by ordinary managing an account establishments' carelessness of smaller scale wanders. The concentrate too, shows that the exigency proposal stays essentially on the apparent critical need by different governments to start monetary strengthening activities which won't just kick off their financial development handle additionally quicken same. Further, the impetus postulation intensely sees the financially related part as having the natural limit to connection fund suppliers with proficient financial clients like entrepreneurs and in that procedure, catalyse and in the long run speed up financial development procedure of countries even at the smaller scale level.

Empirical Literature
Many Studies have tried to investigate the interrelationship between microfinance banks activities and economic development towards capturing the role of the financial institutions involved in these credits on

the economy as a whole, in this light the following literatures are reviewed towards evaluating the discovery of researchers in relation to the subject matter.

Nnamdi and Nwiyordee [13] observed evidences and insight into microcredit programmes, financial inclusion and sectorial entrepreneurship in Nigeria over a period of 1992 to 2011 utilizing secondary data estimated by the Augmented Dickey Fuller and Standard Granger Causality technique it was discovered that only a single sector stimulated economic growth while other sectors failed terribly.

Nnamdi and Torbira [14] observed the role of Microcredits in Nigeria's Economic growth using a multi-sectorial analysis approach considering a period of 1992 to 2014, utilizing estimation techniques such as Augmented Dickey Fuller, Johansen cointegration, Error correction Model and Pairwise granger causality test. The study discovered no significant causal association despite the evidence of long run relationship between employed variables.

Similarly, Nnamdi and Torbira [14] evaluated the Leverage on Nigeria's economic growth with a view to ascertain if it was conventional or micro credit stimulated over a period of 1992 to 2014, utilizing the Augmented dickey fuller test, Johansen cointegration test, error correction model and pair wise granger causality test, the discovered a long run relationship between microcredit and economic growth proxied by Gross Domestic Product.

Gibson [15] evaluated the challenges faced by African commercial banks in providing adequate funding to SMEs and proffers strategies for increasing SMEs' access to risk capital. The findings show that shareholder loans, as opposed to pure equity, reduce investors' risk and increase their current income. Risk capital intermediaries may capitalize their funds using diverse financial instruments which reflect investors' differing return objectives. Governments can initiate tax incentives programs to increase private sector participation in SME risk capital. The implication is that increasing the availability of non-asset-based financing is critical to viability of Africa's SME sector and contribution to the continent's economic growth.

Sharma and Puri [16] evaluated the extent of relationship between microcredits and economic growth in India. The study employs correlation and simple regression analytical techniques and confirms prevalence of significant measures of association and relationship between disbursed microcredits and economic growth in India over the period 2006 to 2012. The contributions of the variations in microcredits to changes in India's GDP were also very high.

Furthermore, Nnamdi and Torbira [17] compared the leveraging effects of conventional (commercial bank credits) and microcredits on Nigeria's economy and confirm that microcredits over the period of study (1992 to 2014), promote Nigeria's economic growth more than commercial bank credits. The study recommended the establishment of more microcredit institutions as well as intensified research into micro deposit and credit products backed with enforcement of credit contracts in order to promote better and enhanced growth of Nigeria's economy through microcredit operations.

Okpara [18] evaluated some of the critical poverty-inducing factors in Nigeria and the extent to which disbursed microcredits influence poverty reduction among the active poor in the country. The results show that increased disbursement of microcredits reduced significantly, the level of poverty among the active poor. Consequently, the study calls for significant increases in the quantum of disbursed microcredits as well as expansion in the network of microfinance institutions in Nigeria.

Audu and Achegbulu [19] evaluated the influence of microfinance operations on poverty reduction in Nigeria. The study finds that irrespective of all investments in Nigeria's microfinance scheme, rural poverty still persists and continues unabated. The study attributes this result to the tendency for Nigerian microfinance institutions to concentrate their investments and lendings in the urban areas with little emphasis on the rural enclaves.

Nwigwe et al., [20] observed that regardless of the intensity of implementation of microfinance policy pursued, its impact on poverty reduction is at best doubtful. Idowu and Oyeleye [21] study the influence of microfinance operatons in selected local government areas in Oyo state, Nigeria. They find compelling reasons to conclude that microfinance operations reduced poverty index from 0.1668 to 0.1551 within a study period of three (3) years. In another development, Idowu and Salami [22] found that among the female hairdressers in Ogbomoso North Local Government in Oyo State, Nigeria, there is a significant relationship between the standard of living of the hairdressers and microfinance facilities they accessed.

Further, Agbaeze and Onwuka [23] studied the relationship between microcredit operations and poverty alleviation in Enugu East Local Government Council, Enugu State, Nigeria. The results provide evidence to assert that while poverty could generally be said to have remained high within the area studied, however, those households with access to microcredits on the average, enjoyed higher standards of living compared to those without access to microcredits.

Nwakanma *et al.,* [24] studied the relationship between microcredit disbursements and economic growth in Nigeria. Employing an Auto-Regressive Distributive Lag Bound (ARDL) and Granger Causality tests, the study finds a valuable long run relationship between Nigeria's economic growth and microcredit operations over the period of study, 1982 to 2011. The Granger Causality results further confirm a significant unidirectional causality which runs from Nigeria's GDP to disbursed microcredits. The study recommends intensified development of micro deposit and credit products as well as improved enforcement of credit contracts in order to deepen the effects of microcredit operations on Nigeria's economic growth.

Ifionu [25] examined the impact of microfinance banks on economic development using the ordinary least square method of multiple regression analysis and Granger Causality test. The result showed the high impact of deposit mobilization on microfinance banks operations in which all financial inclusion as recommended.

Okafor *et al.,* [26], evaluated the influence of sectoral credits on economic performance in Nigeria over the period of 1981 to 2014. Multiple regression technique was employed. The results provide evidence to suggest that Apportioned Microcredits to various sectors have significant influence on Nigeria's economy.

Nnamdi [27] evaluated the nexus between bank credits allocated to Nigeria's public and private sectors and the nation's economic growth over the period 1981 to 2011. The results confirm prevalence of significant long-run relationship and causalities among the variables of study.

Asikhia [28] examined micro business owners, their perceived relationships with microfinance organizations and the consequent influences on their income levels and national development. The results indicate that the strength of relationship between micro business operators and microfinance institutions is more of a function of their anticipated benefits from such relationships.

METHODOLOGY
Design
The study adopts the Ex-post facto research design as it uses past data as evaluated by quantitative mean for forecasting future trends.

Method of Data Collection
The data for the study were derived mainly from the secondary sources which includes; Central Bank of Nigeria Bulletins and the World Bank. This data is estimated utilizing the Econometric Views (E-Views) version 10 statistical application package.

Operationalization of Variables
In light of the study objectives, Economic Development is denoted and captured by theHuman Development Index in Nigeria over the Study period. This encompasses the social, political and economic sphere of an economy.

While the independent variables encompasses sector Apportioned Microcredits to the Agriculture and Forestry as captured by annualized value of microcredit disbursed to Agriculture and Forestry sector as a ratio to aggregate microcredit disbursed over the study period, Microcredit to Mining and Quarryingas denoted byannualized values ofmicrocredit disbursed to Mining and Quarrying sector as a ratio to aggregate microcredit disbursed over the study period, Microcredit to Manufacturing and food processing as captured by annualized value of microcredit disbursed to Manufacturing and food processingsector as a ratio to aggregate microcredit disbursed over the study period, Microcredit to Real Estate and Constructionas denoted byannualized values ofmicrocredit disbursed to Real Estate and Constructionsector as a ratio to aggregate microcredit disbursed over the study period, and Microcredit to other sectors;which entails all microfinance credits disbursed to other sectors as a ratio to aggregate microcredit disbursed over the study period. All employed variables are expected to be positively related to economic development as captured by the Human Development Index.

Data Analysis
To attain the objective of the study, the following tools are employed;

Stationarity Tests
To evaluate for internal trend of employed variables and know if their values rotate around their respective mean, the study employs the stationarity/unit root test. This would be done using the Augmented Dickey Fuller option.

Multiple Regression Test
To determine the static (short-run) level of relationship between variables and suitability of the model, the multiple regression was utilized.

Johansens'sCointegration Test:
The Johansen co-integration is employed to ascertain the presence and evidence of long run relationship between employed variables.

Error Correction Estimates
To adjust for disequilibrium between the short and the long run, the study employs the Error correction Estimate.

Model Specification: The study builds on the model of Nnamdi and Eniekezimene (2018) which is presented below as follows; below;

HDI =f (AGF, MNQ, MFP, RES, TRC, OTH)
(i)

For estimation purposes, equation (i) is re-written as shown in equation (2) below;

$$HDI = \beta_0 + \beta_1 AGF + \beta_2 MNQ + \beta_3 MFP + \beta_4 RES + \beta_5 TRC + \beta_6 OTH + \mu_I$$

Where,

HDI = Human Development Index
AGF = Apportioned Microcredits to agriculture/forestry sector
MNQ = Apportioned Microcredits to mining/quarrying sector
MFP = Apportioned Microcredits to manufacturing & food processing sector
RES = Apportioned Microcredits to real estate & construction sector
TRC = Apportioned Microcredits to transport/commerce sector

OTH = Apportioned Microcredits to others sector
β_0 = Constant Parameter
$\beta_1, -\beta_6$ = Estimation parameters for sectorial microcredits respectively
μ_I = Error terms

Apriori Expectations
On apriori, a positive relationship is anticipated to exist between microfinance activities as captured by microcredit and economic development as captured by Human Development Index; this is represented mathematically as follows;

$$\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0 \ \& \ \beta_6 > 0$$

RESULTS AND DISCUSSION
Presentation of Data
Above is the presentation of all employed data for the study towards carrying out various tests and making inferences.

Table-1: Actual values of Human Development Index (HDI), Apportioned Microcredits to Agriculture & Forestry Sector (AGF), Apportioned Microcredits to Mining & Quarrying Sector (MNQ), Apportioned Microcredits to Manufacturing & Food Processing Sector (MFP), Apportioned Microcredits to Real Estate & Construction Sector (RES), Apportioned Microcredits to Transport/Commerce Sector (TRC), Apportioned Microcredits to Others Sector (OTH) In Nigeria Over the Period 1992 to 2017

Year	HDI (%)	AGF (₦'b)	MNQ (₦'b)	MFP (₦'b)	RES (₦'b)	TRC (₦'b)	OTH (₦'b)	Total Micro credits: (₦'b)
1992	0.38	29.50	3.70	19.90	14.60	45.60	22.50	135.80
1993	0.38	123.20	5.70	129.60	47.50	280.00	68.50	654.50
1994	0.39	155.40	32.20	201.00	34.90	513.80	283.30	1,220.60
1995	0.39	98.60	17.90	124.80	102.60	575.70	210.20	1,129.80
1996	0.4	229.40	17.60	155.40	92.70	695.00	210.10	1,400.20
1997	0.4	367.40	28.50	200.00	105.20	729.90	187.80	1,618.80
1998	0.41	962.70	31.00	299.40	67.10	1,042.70	123.90	2,526.80
1999	0.41	1,007.20	27.00	293.50	71.90	1,447.80	110.90	2,958.30
2000	0.42	1,248.35	33.46	363.77	89.11	1,794.44	137.45	3,666.60
2001	0.46	447.37	11.99	130.36	31.94	643.08	49.26	1,314.00
2002	0.4	1,467.71	39.34	427.69	104.77	2,109.77	161.61	4,310.90
2003	0.4	3,389.27	90.86	987.64	241.95	4,871.91	373.18	9,954.80
2004	0.46	3,865.58	103.62	1,126.44	275.95	5,556.58	425.63	11,353.80
2005	0.47	9,704.91	260.16	2,828.03	692.79	13,950.33	1,068.58	28,504.80
2006	0.48	505.23	449.33	491.98	2,554.43	5,078.32	7,370.91	16,450.20
2007	0.48	701.80	624.14	683.39	3,548.24	7,054.05	10,238.58	22,850.20
2008	0.49	3,354.30	412.40	2,006.33	2,139.15	23,962.48	10,878.40	42,753.06
2009	0.49	4,736.90	569.70	2,275.70	2,421.10	28,314.20	19,898.06	58,215.66
2010	0.5	5,102.90	520.40	2,172.90	2,257.40	25,975.90	16,956.86	52,867.50
2011	0.51	4,679.20	329.40	1,728.85	1,725.45	36,114.94	6,350.46	50,928.30
2012	0.51	7,407.68	298.73	2,275.01	3,718.03	54,673.01	22,049.79	90,422.25
2013	0.52	4,803.12	603.25	2,937.27	2,616.01	53,409.48	29,686.46	94,055.58
2014	0.53	7,735.68	187.09	3,156.49	5,486.51	58,821.75	36,722.62	112,110.15
2015	0.53	11,761.52	390.88	3,372.79	5,218.26	117,759.41	48,744.48	187,247.34
2016	0.53	14,412.32	234.17	4,742.99	5,318.10	124,412.31	47,075.10	196,194.99
2017	0.52	16,589.95	346.10	4,484.29	9,771.14	132,870.23	26,428.34	190,490.05

Source: Central Bank of Nigeria Statistical Bulletin (2016), World Bank (2017)

Table-2: Standardized Values of Human Development Index (HDI), Apportioned Microcredits to Agriculture & Forestry Sector (AGF), Apportioned Microcredits to Mining & Quarrying Sector (MNQ), Apportioned Microcredits to Manufacturing & Food Processing Sector (MFP), Apportioned Microcredits to Real Estate & Construction Sector (RES), Apportioned Microcredits to Transport/Commerce Sector (TRC), Apportioned Microcredits to Others Sector (OTH) In Nigeria Over the Period 1992 to 2017

Year	HDI	AGF/TMCR	MNQ/TMCR	MFP/TMCR	RES/TMCR	TRC/TMCR	OTH/TMCR
1992	0.38	0.217	0.027	0.147	0.108	0.336	0.166
1993	0.38	0.188	0.009	0.198	0.073	0.428	0.105
1994	0.39	0.127	0.026	0.165	0.029	0.421	0.232
1995	0.39	0.087	0.016	0.110	0.091	0.510	0.186
1996	0.4	0.164	0.013	0.111	0.066	0.496	0.150
1997	0.4	0.227	0.018	0.124	0.065	0.451	0.116
1998	0.41	0.381	0.012	0.118	0.027	0.413	0.049
1999	0.41	0.340	0.009	0.099	0.024	0.489	0.037
2000	0.42	0.340	0.009	0.099	0.024	0.489	0.037
2001	0.46	0.340	0.009	0.099	0.024	0.489	0.037
2002	0.4	0.340	0.009	0.099	0.024	0.489	0.037
2003	0.4	0.340	0.009	0.099	0.024	0.489	0.037
2004	0.46	0.340	0.009	0.099	0.024	0.489	0.037
2005	0.47	0.340	0.009	0.099	0.024	0.489	0.037
2006	0.48	0.031	0.027	0.030	0.155	0.309	0.448
2007	0.48	0.031	0.027	0.030	0.155	0.309	0.448
2008	0.49	0.078	0.010	0.047	0.050	0.560	0.254
2009	0.49	0.081	0.010	0.039	0.042	0.486	0.342
2010	0.5	0.097	0.010	0.041	0.043	0.491	0.321
2011	0.51	0.092	0.006	0.034	0.034	0.709	0.125
2012	0.51	0.082	0.003	0.025	0.041	0.605	0.244
2013	0.52	0.051	0.006	0.031	0.028	0.568	0.316
2014	0.53	0.069	0.002	0.028	0.049	0.525	0.328
2015	0.53	0.063	0.002	0.018	0.028	0.629	0.260
2016	0.53	0.073	0.001	0.024	0.027	0.634	0.240
2017	0.52	0.087	0.002	0.024	0.051	0.698	0.139

Source: Central Bank of Nigeria Statistical Bulletin (2016), World Bank (2016).

Unit Root Test (Augmented Dickey Fuller)

Due to the underlying shocks inherent in time series variables, and also shocks that could be found in the error terms (other variables not captured by the model), we therefore intend to capture the stationarity of the employed variables, since a stationary variable is useful in forecasting and predicting and has a great possibility of the effect of shock to die out gradually, while non-stationary data are not suitable for long run test.

Table-3: Results of Stationarity (Unit Root) test

Variable	ADF t-statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
D(HDI)	-5.971147	-3.752946	-2.998064	-2.638752	I(1)	0.0001
D(AGF)	-4.411050	-3.737853	-2.991878	-2.635542	I(1)	0.0028
D(MNQ)	-5.206921	-3.752946	-2.998064	-2.638752	I(1)	0.0004
D(MFP)	-5.976722	-3.737853	-2.991878	-2.635542	I(1)	0.0001
D(RES)	-5.140497	-3.752946	-2.998064	-2.638752	I(1)	0.0004
D(TRC)	-5.386686	-3.752946	-2.998064	-2.638752	I(1)	0.0002
D(OTH)	-4.771757	-3.752946	-2.998064	-2.638752	I(1)	0.0010

Note:D(HDI), D(AFM), D(MQM), D(MFP), D(REC) and D(TRC) represent the differenced values of Human Development Index (HDI), Microcredit apportioned to the Agriculture and Forestry sector (AFM), Mining and Quarrying sector (MQM), Manufacturing and Food Processing sector (MFP), Real Estate and Construction sector (REC), Transportation and Commerce sector and Others sector respectively (OTH).
Source: Extracted from Eview-10

In light of the ADF t-statistics relative to the respective critical values at the 1, 5 and 10 percent levelrespectively, it can be seen that all variables are stationary at the first difference (1) showing a great level of integration amongst variables, since the prerequisite of co-integration is the integration of all variables at same level. This parameter therefore leads to the co-integration of employed variables.

Multiple Regressions (Ordinary Least Square)

The multiple regressions was carried out using the Ordinary Least Square regression tool, as it is the best unbiased linear regression estimator, it was carried out in the normal form and the log-linear form.

Table-4: Ordinary Least Square Output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dependent Variable: D(HDI)				
Method: Least Squares				
Date: 09/01/18 Time: 08:56				
Sample (adjusted): 1993 2017				
Included observations: 25 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.136156	10.26136	0.132689	0.8958
D(AGF)	-0.865904	0.325404	-2.661012	0.0336
D(MNQ)	-2.369508	0.636558	-3.722376	0.0016
D(MFP)	-1.548836	0.725772	-2.134053	0.0016
D(RES)	1.027486	0.630051	1.630798	0.0716
D(TRC)	0.832335	0.826588	2.548578	0.0262
D(OTH)	0.742560	0.824041	0.901120	0.9430
R-squared	0.761304	Mean dependent var		0.005600
Adjusted R-squared	0.718261	S.D. dependent var		0.019596
S.E. of regression	0.022499	Akaike info criterion		-4.519182
Sum squared resid	0.009112	Schwarz criterion		-4.177896
Log likelihood	63.48977	Hannan-Quinn criter.		-4.424524
F-statistic	12.34301	Durbin-Watson stat		2.199158
Prob(F-statistic)	0.000027			

Source: Extracted from Eview-10

Table-4 above, shows from its coefficient of C (1.361565) that if all other variables are kept at a constant or zero, the criterion variable Human Development Index will increase by approximately 0.136156 units, this shows that economic development elicits a positive response to microcredit disbursed. All variables exhibit a positive coefficient showing a positive relationship and movement with the criterion variables thus adhering with the proposed apriori expectation while Microcredit to Agriculture (AGF), Mining and Quarrying (MNQ) and Manufacturing Sector (MFP) show adverse performances in the aforementioned sector in light of microcredit disbursed and economic development.

The R-squared (R^2) coefficient of determination, showing an output of 0.761304, signifies that the predictors account for approximately 76 percent (%) variation in the criterion variable while approximately 24% are captured by other variables not in the model (The white noises or unobserved variables), while the Durbin Watson reveals an output of 2.199158 shows the presence of negative serial correlation and is within the relevant range. The results provide evidence that in the short run, the coefficients of microcredits disbursed to agriculture and forestry, mining & quarrying, manufacturing and food processing, real estate & construction, as well as transport and commerce sectors are significant in explaining the variations in Nigeria's human development Index. On the other hand, allocated microcredits to others sector failed the significance test The F-statistics given its Probability level of 0.000027 is significant,

Presentation of Johansen's Co-integration Test Results
Table-5 below presents the results of Johansen Co-integration tests for all the variables of this study:

Table-5: Results of Johansen's Unrestricted Co-integration Rank Test Test (Maximum Eigen Value):

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
Date: 09/01/18 Time: 09:13				
Sample (adjusted): 1994 2017				
Included observations: 24 after adjustments				
Trend assumption: Linear deterministic trend				
Series: HDI AGF MNQ MFP RES TRC OTH				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.992326	277.8088	125.6154	0.0000
At most 1 *	0.958287	160.9308	95.75366	0.0000
At most 2 *	0.815344	84.68401	69.81889	0.0021
At most 3	0.634377	44.14182	47.85613	0.1070
At most 4	0.411806	19.99415	29.79707	0.4232

At most 5	0.166714	7.257380	15.49471	0.5479
At most 6	0.113091	2.880311	3.841466	0.0897
Trace test indicates 3 cointegratingeqn(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		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.992326	116.8780	46.23142	0.0000
At most 1 *	0.958287	76.24682	40.07757	0.0000
At most 2 *	0.815344	40.54219	33.87687	0.0069
At most 3	0.634377	24.14767	27.58434	0.1297
At most 4	0.411806	12.73677	21.13162	0.4767
At most 5	0.166714	4.377069	14.26460	0.8176
At most 6	0.113091	2.880311	3.841466	0.0897
Max-eigenvalue test indicates 3 cointegratingeqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Extracts from E-Views 10 Output.

The presence of 4 co-integrating equation in the Johansen's co-integration test shows the presence of significant long run relationship between employed variables. As supported by the Trace statistics and the Max-Eigen Statistics. This shows that variables are related even in the presence of changes within their environment.

Presentation of Error Correction Estimates:

To correct for the errors that prevail between the long and short run dynamics of the variables in the study, the error correction test was employed. The results are shown in Table-5 below:

Table-5: Results of Error Correction Model

Dependent Variable: D(HDI)				
Method: Least Squares				
Date: 09/01/18 Time: 09:22				
Sample (adjusted): 1993 2017				
Included observations: 25 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.298642	0.311951	-0.957337	0.9790
D(AGF)	0.326565	11.185680	0.029195	0.9771
D(MNQ)	0.527417	0.213333	2.472275	0.0135
D(MFP)	0.297820	0.112078	2.657257	0.0121
D(RES)	0.221624	0.412495	0.537277	0.9845
D(TRC)	0.293451	0.121989	2.405545	0.0044
D(OTH)	0.325341	0.217285	1.497301	0.0771
ECM(-1)	-0.230324	0.106107	-2.170677	0.0233
R-squared	0.881434	Mean dependent var		0.459200
Adjusted R-squared	0.832613	S.D. dependent var		0.053379
S.E. of regression	0.021839	Akaike info criterion		-4.555904
Sum squared resid	0.008108	Schwarz criterion		-4.165863
Log likelihood	64.94879	Hannan-Quinn criter.		-4.447723
F-statistic	18.05435	Durbin-Watson stat		1.868645
Prob(F-statistic)	0.000001			

Source: Extracts from E-Views 10 Output

The Error Correction estimate of -0.230324 displayed the anticipated negative sign. It shows that 23.03% of the disequilibrium in the long run values of human development index (HDI) in Nigeria is offset within the year due to distortions in the explanatory variables. On the other hand, the coefficient of determination (R^2) of 0.881434 indicates that about 88.14% of the variations in Nigeria's economic development in the long run is accounted for by variations in the study's explanatory variables. Further,

like previous studies, the results show that only microcredits disbursed to mining & quarrying, real estate & construction, and transport/commerce sectors are the significant explanatory variables for prediction of variations in Nigeria's human development index in the long run. In the same direction, other sectoral microcredit disbursements to agriculture & forestry, manufacturing & food processing, and others sector are statistically unimportant in explaining Nigeria's human development index in the long run. On the whole, the F-

statistics is significant at 0.05 level while the Durbin Watson value is within the acceptable range.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study via its statistical methods discovered that all employed variables attained stationarity at the first differencing, and discovered subsequently from the multiple regression model that in the short run, only apportioned microcreditsto the mining/quarrying, real estate/construction and transport/general commerce sectors are valuable in predicting variations while all other sectors showed disbursement complacency which follows evidences as highlighted by Nnamdi and Eniekezimene [8] who found similar long run relationships.

- This shows possible presence of the Dutch disease as Agricultural disbursement was not significant.
- There is also a possibility of improper mobilization and management of fund as the growth of disbursement is not tallying with the level of development in the economy.

CONCLUSIONS

It can thus be concluded that only Microcredit apportioned to the mining/quarrying, real estate/construction and transport/general commerce sectors are valuable in predicting variations in Nigeria's human development index within the context of this study. Moreso, the finding shows the prevalence of underutilized financial resources towards the development of key Nigerian sectors and the country inability to efficiently diversify its activities properly. The fund market can be inferred to be biased in disbursement of microcredit to key areas due to misallocation to other short-term activities and industries and the adamant demand dependency of activities in the nation.

RECOMMENDATIONS

In view if the discovered behaviors and relationships among employed variables the study proffers the following recommendations:

- Other sectoral activities should be revamped according to their level of significance as more efforts should be devoted to the Agricultural sector, manufacturing sector and other sectors of the economy.
- To do the above, there should be incentive to sensitize the populace about microfinancing which would bolster deposit base and help disbursement in the right direction.
- Government should promote economic, political and social stability in the country.
- Microfinance Banks should increase their microcredit to those viable sectors that is

mining / quarrying , real estate, transport and general commerce in order to boost human development index
- Funds disbursed should be properly monitored to avoid diversion.

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