

Foreign Portfolio Investment and Human Capital Development in Nigeria: 1987-2018

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ABSTRACT

As a result of low savings that characterize their economies, most developing economies scramble for international capital inflows to fill the void in their domestic savings. The international capital can take the form of Foreign Portfolio Investment. There are mixed and conflicting results in past studies on the effect of Foreign Portfolio Investment on Human Capital Development in Nigeria which this study will attempt to resolve. Foreign portfolio investment (FPI) is an aspect of international capital inflows and involves the transfer of financial assets: such as cash, stock or bonds across international borders in want of profit. The main objective of this study is to explore, determine, assess, examine and ascertain the effect of FPI on human capital development in Nigeria. The specific objectives of this study are to explore, determine, assess, examine and ascertain the effects of foreign portfolio investment, market capitalization, exchange rate and interest rate respectively on human capital development in Nigeria. The study adopted ex-post facto research design and sourced data sourced data from the Central Bank of Nigeria Statistical Bulletin and Annual Reports and the World Bank Development Indicators which were analyzed using Descriptive Statistics, Augmented Dicker Fuller tests for unit roots and Autoregressive Distributive Lag (ARDL) for the hypothesis. The study concluded that foreign portfolio investment has both short run and long run positive and significant effects on human capital development. Hence, it is recommended that government should strengthen and deepen the capital market system in Nigeria to sustain existing foreign portfolio investment and attract new ones.

KEYWORDS: *Foreign Portfolio Investment, Human Capital Development, Economic Growth, Economic Development and Market Capitalization*

INTRODUCTION

Foreign portfolio investment (FPI) as an aspect of international capital inflows involves the transfer of financial assets: such as cash, stock or bonds across international borders in want of profit. FPI comprises of debt and equity investments with financial derivatives recently included. This type of investment has become an increasing significant part of the world economic order over the past three decades and an important source of fund to support investment not only in developed but also developing countries. FPI provides funds needed to impact positively on the quality human capital by increasing the number of persons who have the skills, education and experience

that are critical for economic growth and subsequent development in the host country.

Conducive business environment and strong legal system have been identified as a major attraction of FPI. Irrespective of how vibrant a capital market may be, an unfriendly business environment and weak legal system would not attract foreign portfolio investment. Nigeria business environment has been marred by inconsistent power supply, insecurity, bad roads among others as well as weak and slow judicial process (Chigbu & Ubah 2015). The Nigeria business environment is highly uncertain with inconsistencies in government policies and lack of transparency in

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government operations. These unfavorable conditions may have discouraged some foreign investors from investing in the capital and money market.

Human capital refers to the abilities and skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (God'stime & Uchechi, 2014). Investment is one important factor for ensuring economic growth and welfare of the citizens. A nation's state of development depends largely on the quality of its workforce and its human capital development. By international measure, Nigeria is rated as "less developed country" because its gross domestic product is low with poor standard of living, low literacy rate, poor health, high infant mortality rate and it is not surprising that economic growth and development is one of Nigeria's goals (Adegboye, Ogbemor, & Egharvba, 2014). For many years, Nigeria has been stressing the importance of education, health and human development. The study by Sanusi (2002), stressed the importance of human capital development for Nigeria. This work also stressed the need for the Nigerian economy to be efficient and competitive in the new world order in which the national frontier no longer constitute barrier to human, material and capital flows.

The Harrod-Domar Model has posited that the savings as well as investment rates must be between 18% - 20 % to sustain a 6% growth of GDP (Jhingan, 2005). However, like Nigeria, most less developed countries are entrapped by the vicious circle of poverty. They lack the capital resources and the incomes of the people are very low. Because of low incomes, the savings ratios also remain low, resulting in low investment levels. At the same time, due to low incomes, the taxable capacity remains low, i.e. government earnings also remain low. In such situations, the less developed countries face savings – investment gap as well as deficit in their balance of payments.

Nigeria is the largest recipient of remittances in Sub-Saharan Africa (Ekwe & Inyama, 2014). Likewise, Nigeria is one of the largest receivers of all forms of international capital. However, Nigeria like most developing economies have been bedevilled by the twin economic crises of mounting debt burden and foreign investment inadequacies occasioned by corruption, misappropriation and poor articulation of projects as well as more than proportionate foreign direct investment income remittance (Ezirim, Anoruo & Muoghalu, 2006). Furthermore, Iheke (2012)

maintains that Nigeria faces immense challenges in accelerating growth, reducing poverty and meeting the Millennium Development Goals (MDGs). Unfortunately, as Nkoro and Furo (2012) put it, the growth experience of many of the economies such as Nigeria has not been very satisfactory and as a result, they accumulate huge external debt in relation to gross domestic product and face serious debt servicing problems. Ezirim, Anoruo & Muoghalu (2006) observed that foreign investors come in with a small amount of money, which is further magnified by the depreciating exchange rates, and end up carting away huge sums of money out of the host countries in form of investment income.

International capital inflows ensure that recipient countries outperform countries that fail to attract it economically. However, massive international capital inflows put pressure on the exchange rate of the domestic country's currency (Ghosh, 2010), thereby reducing the trade competitiveness of the economy. It is against the obvious savings gaps in developing economies, the challenges of governments in the past in areas of exchange rate deterioration, increasing external debt and worsening economic environment while using international capital inflows to influence human capital development as evidenced by the mixed findings in past studies in this area that compelled this researcher to embark on this study.

Review of Related Literature

Conceptual Framework

Foreign portfolio investment (FPI) is a variant of international capital inflows and involves the transfer of financial assets: such as cash, stock or bonds across international borders in want of profit. Foreign portfolio investment comprises of debt and equity investments with financial derivatives recently included. This type of investment has become an increasing significant part of the world economic order over the past three decades and an important source of fund to support investment not only in developed but also developing countries. Conducive business environment and strong legal system have been identified as a major attraction of foreign portfolio investment. Irrespective of how vibrant a capital market may be, an unfriendly business environment and weak legal system would not attract foreign portfolio investment.

Market capitalization refers to the total market value of all stocks or shares traded on the stock exchange market. It is also called market cap and is calculated by multiplying the total number of issued and fully paid shares of companies traded on the stock market by the respective market prices of the companies' shares and summing up their products. Market

capitalization is therefore a function of market price and number of issued and fully paid shares. The number of shares issued and paid in the capital market is dependent on availability of funds to supplement savings shortfall which are endemic in developing countries through international capital inflows like foreign portfolio investment. Political stability, openness to the world, accountability and good governance is critical to high market capitalization.

Interest rate refers to the amount charged by a lender on the amount it provided as loans and advances. In the context of this study, it is conceptualized as the amount charged by foreign portfolio investors on the amount it has invested in the recipient country. Interest rate is charged as a percentage of the principal sum provided by the investor. The rate charge as interest is expected to be higher than the investor's average cost of capital for it to be profitable to the investor. Where it is impractical for the portfolio investor to earn an interest higher than its average cost of capital, the investor will opt out of the investment. Foreign portfolio investors scout to take advantage of interest rate differentials through arbitrage.

Exchange rate refers to the rate at which one currency can be exchanged for another. In the Nigerian context, it refers to the rate at which the Naira can be exchanged or converted for any other currency. Exchange rate is critical in any international transaction as it determines the flow of finance. International investors like foreign portfolio investors always scout for investment outlets where they will take advantage of exchange rate differentials arbitrage to improve on their profit positions.

The human development index (HDI) was developed by the United Nations Development Programme (UNDP) in 1999 and measures the standard of living and provides a useful tool for a comparative evaluation of nations in terms of several indicators including education, literacy, average life expectancy and life quality. The long debate among economists and policymakers on finding a more definitive indicator of economic and social progress of countries resulted in the development of the human development index. The HDI has gained tremendous global recognition among academicians and policymakers as an established rating tool.

It is very germane to expose and espouse economic growth in this study as it is practically impossible to carry out a study on foreign portfolio investment and human capital development without discussing economic growth. Human capital development has tremendous impact on economic growth. Government should ensure that adequate capital resources are

allocated to human capital development in order to enhance economic growth. Economic growth is the process by which a nation's wealth increases over time. It can also be referred to as the increase in per capita gross domestic product or other measures of aggregate income. It should be noted that economic growth is necessary but not a sufficient condition for development to take place. For example, growth can be led by one sector (for instance the crude oil sector in Nigeria) while other sectors are stagnant. Secondly, a country may not use the benefit of growth to advance the development process as it has happened in many Less Developed Countries (LDCs). Where GDP grows steadily over time say at 2% annually but the rate of population growth is 2.5% or above, this would amount to zero growth rate. Hence for growth to be realized, GDP growth rate must always outstrip population growth rate.

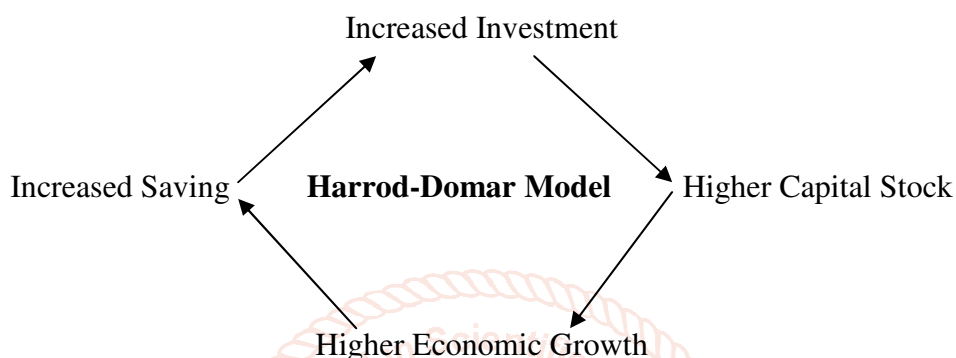
Economic development is one of the most frequently used concepts by world economies. It refers to the process by which the economic well being and quality of life is improved. Economic development seeks to achieve long-term sustainable development in a nation's standard of living, an increase in the per capita income of every citizen, adjusted for purchasing power parity (Porter, 1998). Economic development encompasses progress in providing livelihood on a sustainable basis, access to education and basic healthcare for the majority of the population (Belshaw & Livingstone, 2002). There are different indicators that economists use to measure the level of economic development in a country. These include declining poverty rates, increasing literacy rate, declining infant mortality and increasing life expectancy. Thus, it can be concluded that economic development leads to the creation of more opportunities in the sector of education, health sector, research, human development and environmental conservation. It equally implies an increase in the per capita income of the citizenry. Economic development is measured by rising real per capita income, Gini coefficients and other measures of the distribution of income and wealth as well as indicators of quality of life, that range from life expectancy to crime statistics to environmental quality. From this standpoint, economic development differs from growth in terms of a focus on a broader set of metrics.

Theoretical Framework

The theoretical framework of this study is anchored on the Harrod-Domar growth model (1946) it is associated with transfer savings, investment and productivity by human capital. The Harrod – Domar model is a classical Keynesian model of economic

growth used in development economics to explain an economy's growth rate in terms of the level of savings and productivity of capital. The model was developed independently by Roy F. Harrod in 1939 and Evsey Domar in 1946. According to Harrod-Domar model, three kinds of growth exist and they are (1) the rate of growth at which the economy does not expand indefinitely or go into recession (2) the actual growth which is the real rate of increase in a country's GDP and (3) the natural growth which refers to the growth an economy require to maintain

Diagram of the Harrod Domar Model



According to Harrod Domar: Rate of economic growth (g) = $\frac{\text{Level of Savings}}{\text{Capital Output ratio}}$

The level of savings captures the average propensity to save which is the ratio of national savings to national income. Capital output ratio refers to the amount of capital needed to increase output. A high capital output ratio means that investment is inefficient while a lower capital output rate means that investment is more efficient and that growth rate will be higher. Based on the model, the growth in an economy can be achieved through (a) increased level of savings in an economy and or (b) reducing the capital output ratio. When the quality of resources is high, then the capital output ratio will be lower.

Harrod Domar argued that in developing countries, low rates of economic growth and development are linked to low savings rate. It therefore opined that to boost economic growth rate, it is necessary to increase savings either domestically or from international capital. Higher savings create virtuous circle of self sustaining economic growth.

Since Harrod – Domar economic growth model stresses the importance of savings and investment as key determinants of growth, it follows that the model is apt in this study on developing countries like Nigeria. It is a known phenomenon that less developing countries have abundant supply of labour and that it is lack of sufficient physical capital stock or savings that holds back their economic growth and development. Investment from international capital flows therefore trigger investments that results to

full employment. The Harrod-Domar economic growth model stresses the importance of savings and investments as key determinants of growth and recommended the growth at which an economy is at full employment. The model suggests that the economy's rate of growth depends on (1) the level of national savings where it postulates that higher savings trigger higher investment (2) Higher Investment triggers productivity resulting into higher capital stock (3) Higher capital stock triggers higher economic growth.

economic growth and higher national income level. Less financially endowed countries need savings from the more financially endowed countries for survival, improvement in the welfare of its citizens and development of its wealth which can be achieved through international capital flow. The transfer of international capital to developing countries like Nigeria will lead to higher growth which will in turn result to increased savings and ensure that growth is more sustaining.

Empirical Review

Various literatures were reviewed by the researcher to analyze the effect of foreign portfolio investment on human capital development in Nigeria in order to establish their relationship. Iheanachor O & Ikenna N (2018) examined portfolio investment and human capital Development: Evidence from Nigeria. Annual time series data for the period 1987 to 2017 were used. Data were obtained from Central Bank of Nigeria (CBN) Statistical Bulletin. Data collected were analyzed with descriptive statistics, Augmented Dickey Fuller and Phillip Peron tests and Vector Auto-Regressive technique supported. The study revealed that portfolio investment had positive and significant effect on human capital development in Nigeria. Felix, & Amuche, (2017), examined the relationship between foreign portfolio investment and human capital development in Nigeria. Annual time series data for the period 1986 to 2015 were used. Data were obtained from Central Bank of Nigeria

(CBN) Statistical Bulletin and World Development Indicators (WDI) database, published by the World Bank. Data collected were analyzed with both descriptive statistics and econometric techniques. Time series properties of the variables were examined using both Augmented Dickey Fuller and Phillip Peron tests. Co-integration properties of the variables were also examined. Vector Auto-Regressive technique supported by Variance Decomposition and Impulse Response Analysis were employed to empirically determine the relationship between foreign portfolio investment and human capital development in Nigeria. The results showed that the correlation between foreign portfolio investment and human capital development in Nigeria is positive and very significant.

James & Johnson (2016), investigated the effect of foreign portfolio investment on human capital development in Nigeria with the view to establishing empirical relationship between foreign portfolio investment and human capital development in Nigeria. Secondary data were employed in the study and were sourced from the Central Bank of Nigeria Statistical Bulletin 2015 edition and the International Financial Statistics (IFS). The ordinary least square (OLS) estimation technique was employed in this study. The findings revealed that foreign portfolio investment had positive effect on human capital development in Nigeria. The study recommended among others that proactive steps must be taken to expand market capitalization which is the major driver of foreign portfolio investment in order to keep stimulating human capital development in Nigeria. Paul, Chibueze & Callistus (2016), investigated the impact of foreign portfolio investment on employment growth in Nigeria. Using single equation reduced form specification, and employing data for the period 1980 to 2014, it was found that in the long term, portfolio investment impacted on employment growth positively and significantly. This outcome supports the general view of a positive relationship between portfolio investment and human capital development. Samuel (2016), evaluated the effect of foreign portfolio investment on human capital development in Nigeria. Secondary data were used. The Ordinary Least Square Estimation Method was employed. The findings revealed, among others, that there were strong impact of foreign portfolio investment on human capital development in Nigeria for a given period, followed by decline, as a result of massive capital outflow and divestment by the investors, caused by the global recession.

Model Dimension

The study adopted the ex-post facto research design. The Secondary data used in this study were sourced from the archives of the World Bank Development Indicators and the Central Bank of Nigeria (CBN), Statistical Bulletin from 1987 to 2018.

The model used for this investigation is the adaptation and modification of the works Iheanachor and Ikenna (2018). They analyzed the foreign portfolio investment and human capital: Evidence from Nigeria. The study employed Descriptive Statistics, Augmented Dickey-Fuller Unit Root Test and Philip Peron test and Vector Auto-Regressive technique. The results revealed that foreign portfolio investment had positive and significant effect on human capital development in Nigeria within the period under review.

Their model is stated thus:

$$HDI = f(FPI, MKC, ITR)$$

which is adapted and modified in this study thus:

$$HDI = f(FPI, MKC, ITR, EXR)$$

The econometric equation for the modified model is:

$$HDI = b_0 + b_1 FPI + b_2 MKC + b_3 ITR + b_4 EXR + U_t \quad \text{--- Eqn. (1)}$$

Where:

HDI = Human capital development index

FPI = Foreign Portfolio Investment,

MKC = Market Capitalization

ITR = Interest Rate

EXR = Exchange Rate

b_0 = Intercept of the relationship in the constant

$b_1 - b_4$ = The coefficients of the explanatory variables

U_t = Stochastic Disturbance (Error Term)

A priori Expectation

The theoretical expectation of the study is that foreign portfolio investment will have positive effect on human capital development. The relationship is $\beta_1 > \beta_2 > \beta_3 > \beta_4 > 0 < \beta_5$

Methods of Analysis

The data was analyzed with econometric techniques using descriptive statistics, diagnostic test using Augmented Dickey Fuller test and the Auto Regressive Distributive Lag (ARDL test) (Bounds test). Descriptive statistics was used to describe the basic feature of the data in the study as they provide simple summaries about the samples and the measures. Augmented Dickey fuller test was applied to carryout diagnostic test for unit roots and the ARDL was used in testing the short run and long run relationships between the dependent and the independent variables.

Results and Discussion of Findings**Descriptive Statistics of variables of the study**

	HDI	FPI	EXR	MKC	ITR
Mean	0.453	2.892571	130.0147	138.5466	18.81645
Median	0.475	8134.140	129.0041	54.20470	17.98000
Maximum	0.5	113711.6	150.2980	899.8630	29.80000
Minimum	0.35	121.5000	111.9433	1.933200	10.50000
Std. Dev.	0.053759	35967.95	12.21667	234.5915	3.836578
Skewnes	1.241875	1.055818	0.442803	2.094772	0.913481
Kurtosis	2.913926	2.692842	2.366218	6.165754	4.446283
Jarque-Bera	2.573511	5.881416	0.494157	35.61678	7.013135
Probability	0.276165	0.052828	0.781079	0.000000	0.030000
Sum	4.53	896697.0	1300.147	4294.944	583.3100
Sum Sq. Dev.	0.02601	3.88E+10	1343.224	1650995.	441.5799
Observations	31	31	31	31	31

Source: E-views 10.0 Output

The result of the mean shows that average growth rate of the human capital development in Nigeria is 0.453%. This figure is low enough to insinuate that the level of human capital development Nigeria is not improving. The maximum and minimum values for the variables showed 0.5000% and 0.350% for HDI respectively. Also the standard deviation 0.054% showed that there is a very wide variation in human capital development which signifies that human capital development is unstable in Nigeria. The mean of exchange rate (EXR) showed that 130% of human capital development (HDI) in Nigeria is affected by the exchange rate. This value is pegged at 139% for MKC, 19% for ITR, The maximum and minimum values for the variables showed 150% and 111% for EXR respectively; and the standard deviation is 12%., indicating high variation in exchange rate (EXR). This means that the Nigerian economy is relatively unpredictable and risky and is capable of discouraging investment in the country. The mean of interest rate (ITR) is 18.81645%, standard deviation of 3.836578% with minimum and maximum values of 10.50000% and 29.80000% respectively. This also asserts that the Nigerian economy is unpredictable and risky.

Augmented Dickey-Fuller Unit Root Test

Variables	ADF Statistic	Order Of Integration	Level of Significance
HDI	-4.668720	1(1)	5%
EXR	-6.000361	1(0)	5%
ITR	-6.657659	1(0)	5%
MKC	-5.589936	1(0)	5%

Source: Researchers compilation using E-views 10.0 output

The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to ascertain whether they are stationary series or non-stationary series. The test aimed to understand the state at which the variables could be held stable for regression analyses. The result of the ADF test indicated mixed stationarity as some of the variables were stationary at 5% level [1(0)] while others were stationarity at first difference [1(1)].

Auto Regressive Distributive Lag Test (Bounds Test)

The Auto Regressive Distributive Lag (ARDL) test is used because it is the most suitable tool of analyses that accommodates both the short and long run trends in testing the relationship between the dependent and independent variables.

Auto Regressive Distributive Lag Test (Bounds) Test Result

ARDL Bounds Test		
Date: 10/18/19 Time: 14:25		
Sample: 1987 2018		
Included observations:31		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	5.81478	5

Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: *E-views 10.0 Output*

The result of the study revealed that the F-statistics from the bound test is greater than the lower and upper critical values for model one; foreign portfolio investment and human capital development. This connotes the existence of cointegration or long run relationship between foreign portfolio investment and human capital development.

ARDL Long Run Relationship Result

ARDL Cointegrating And Long Run Form				
Dependent Variable: HDI				
Selected Model: ARDL				
Date: 10/18/19 Time: 14:43				
Sample: 1987 2018				
Included observations: 31				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FPI)	8.792413	3.589053	3.021623	0.0010
D(MKC)	2.656331	2.610355	2.530053	0.0034
D(MKC)	7.801246	3.618564	2.160672	0.0002
D(ITR(-1))	5.842601	7.062700	0.217931	0.8302
D(ITR(-2))	3.875030	5.562704	2.442088	0.0006
D(EXR)	4.663552	6.724510	3.206379	0.0001
D(EXR(-1))	1.157115	9.919621	3.626037	0.0051
D(EXR(-2))	-3.237873	1.097709	-1.507913	0.1511
CointEq(-1)	-5.359410	4.013707	4.315947	0.0005
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI	3.559357	6.65731	0.021631	0.9830
MKC	2.616155	4.82033	0.523706	0.6077
ITR	4.347565	2.12467	0.989744	0.3370
EXR	7.849711	3.26624	-2.202710	0.0426
C	4.556863	2.64308	-0.171613	0.8659

Source: *E-views 10.0 Output*

The result from foreign portfolio investment and human capital development model showed that the error correction term [CointEq(-1)] is rightly signed. The negative value indicates that foreign portfolio investment can be used to return deviations of human capital development to the equilibrium point. This implies that any fluctuation in human capital development can be restored to equilibrium through foreign portfolio investment. The coefficient indicates about -5.359410% errors in human capital development from foreign portfolio investment can be corrected within a year. The probability value is less than 0.05 indicating a statistically significant effect of the speed of adjustment. This suggests that foreign portfolio investment have a significant policy adjustment effect on human capital development in Nigeria.

Short Run Relationship Result

Dependent Variable: HDI
Method: ARDL
Date: 10/18/19 Time: 14:21
Sample (adjusted): 1987 2018
Included observations: 31 after adjustments

Maximum dependent lags: 2 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (3 lags, automatic)				
Fixed regressors: C				
Number of models evaluated: 2048				
Selected Model: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HDI(-1)	7.59160	0.013707	2.26958	0.0000
FPI	8.79241	3782.589	3.41623	0.0030
MKC	2.46563	244.6104	2.53053	0.0024
ITR	3.87812	365.6186	4.60672	0.0006
ITR(-1)	4.34657	377.0816	3.52789	0.0049
ITR(-2)	5.84260	247.0627	2.21791	0.0002
ITR(-3)	6.33750	259.5627	2.44258	0.0266
EXR	4.66355	206.7245	3.26379	0.0001
EXR(-1)	3.26846	202.4782	5.64419	0.0030
EXR(-2)	12.5157	199.9196	0.62603	0.5401
EXR(-3)	33.2379	201.0977	2.50791	0.0051
C	21.2881	1199.718	3.17528	0.0011
R-squared	0.79214	Mean dependent var		31664.68
Adjusted R-squared	0.75824	S.D. dependent var		35940.06
S.E. of regression	1333.094	Akaike info criterion		17.53024
Sum squared resid	2843426	Schwarz criterion		18.14316
Log likelihood	24.11884	Hannan-Quinn criter.		17.72220
F-statistic	2.694616	Durbin-Watson stat		2.860650
Prob(F-statistic)	0.57382			

Source: *E-views 10.0 Output*

From the ARDL test result, the regression equation for foreign portfolio investment and human development index can be presented thus:

$$\text{HDI} = 7.59160 + 8.79241 \text{ FPI} + 2.46563 \text{ MKC} + 3.87812 \text{ ITR} + 4.66355 \text{ EXR} + \text{U}$$

The ARDL revealed that the constant parameter (HDI) is positive at 7.59160 which imply that if all the independent variables are held constant, HDI as the dependent variable will grow by 7.59160 units. The result of the analysis indicates that human capital development is an endogenous variable in the model of the effect of foreign portfolio investment on human capital development in Nigeria. Foreign Portfolio Investment (FPI): The coefficient of FPI is positive at 8.79241 with t-statistics of 3.41623 and probability value ($p = 0.0030 < 0.05$) show that FPI has positive and significant effect on HDI. This implies that a unit increase in foreign portfolio investment leads to further growth in human capital development in Nigeria by 7.59%. Market Capitalization (MKC): The coefficient of MKC is positive at 2.46563 with t-statistics of 2.53053 and probability value ($p = 0.0024 < 0.05$) show that MKC has positive and significant effect on human capital development in Nigeria. This implies that a unit increase in MKC leads to further growth in human capital development in Nigeria by 2.46%. Interest Rate (ITR): The coefficient of ITR is positive at 3.87812 with t-statistics of 4.60672 and probability value ($p = 0.0006 < 0.05$) show that ITR has positive and significant effect on human capital development in Nigeria. This implies that a unit increase in ITR leads to further growth in human capital development in Nigeria by 4.60%. Exchange Rate (EXR): The coefficient of EXR is positive at 4.66355 with t-statistics of 3.26379 and probability value ($p = 0.0030 < 0.05$) show that EXR has positive and significant effect on human capital development in Nigeria. This implies that a unit increase in foreign portfolio investment leads to further growth in human capital development in Nigeria by 4.66%.

Diagnostic Tests:

The result of the study indicates that all the Variance Inflation Factor (VIF) are below five (5) which means that there is absence of Multi-collinearity in the model. The p. value of the model is greater than 0.05,

which connotes that the model is serially correlated at 5% significance level. The results show that the probability values are greater than 0.05. The study therefore submits that model is not Heteroskedastic and the result obtained from the estimated model is

unbiased. The RESET test result shows that the p. value is less than 0.05 which asserts that the model is well specified and is good for estimation.

Test of Hypothesis

The test was carried out at 0.05 level of significance.

H_{01} : Foreign portfolio investment has no positive and significant effect on human capital development in Nigeria.

H_1 : Foreign portfolio investment has positive and significant effect on human capital development in Nigeria.

The F-statistics for Bound test (5.81478) is greater than the lower (2.26) and upper (3.35) critical bounds values indicating a long run effect in the model. However, the F-statistics for short run ARDL model is 2.694616 with p.value of 0.57382. The study therefore concludes as follows:

- Long Run Effect: Foreign portfolio investment has positive and significant long run effect on human capital development in Nigeria.
- Short Run Effect: Foreign portfolio investment has positive and significant short run effect on human capital development in Nigeria.

Discussion of findings

The findings are in tandem with the objectives of this study. The study revealed that portfolio investment has positive and significant Long Run and Short Run Effect on human capital development in Nigeria. The implication is that government can rely on foreign portfolio investment in its tactical and strategic planning for human capital development. The finding is in consonance with the works of Felix & Amuche (2017), Kanu (2015), James & Johnson (2016), Paul, Chibueze & Callistus (2016), Samuel (2016) and Frank & Garry (2015).

Conclusion and Recommendation

The objective of this study is to examine the effect of foreign portfolio investment on human capital development in Nigeria: 1987-2018. The specific objectives are to examine the effect of foreign portfolio investment (FPI), market capitalisation (MKC), exchange rate (EXR) and interest rate (ITR) on human capital development in Nigeria. The analysis carried out included Descriptive statistics, Augmented Dickey Fuller test for unit roots, Autoregressive Distributive Lag and Diagnostic tests. The results of the Augmented Dickey Fuller stationarity test indicates that both the dependent and independent variables attained stationarity at level 1(0) and first differences 1(1) of stationarity which necessitated the use of Autoregressive Distributive Lag (ARDL) for the analysis. Again the study carried

out diagnostic test to analyse the reliability of the models with the Normality, Serial Correlation, Multi-collinearity, Heteroskedasticity, and Ramsey RESET Tests. The results of the Autoregressive Distributive Lag (ARDL) indicated the existence of both long and short run relationships. The adjusted R-Squared is 0.75824 which means that 76% of the total variables of Human Development Index (HDI) can be explained by the dependent variables of FPI, MKC, ITR and EXR while the remaining 24% is due to stochastic variables.

Foreign portfolio investment therefore has positive and significant long run and short run effect on human capital development in Nigeria and can be a veritable and reliable policy instrument for boosting both short term and long term planning for human capital development sustainability in Nigeria.

Government should strengthen capital market in Nigeria to sustain existing foreign portfolio investments and attract new ones. Greater foreign participation in the capital market will give credence to the market and attract further foreign portfolio investments. This would obviously involve the elimination of factors that discourage and hinder the attraction of foreign capital investment in the country and promote sustainable human capital development. Government should closely use fiscal policy measures to allow market determination of interest rate as it has been clearly found in this study that interest rate could be a great influencer of foreign portfolio investment. Exchange rate should be allowed to float but guided to a reasonable extent by government because total exchange rate control will suggest to foreign portfolio investors that Nigeria is highly volatile and unpredictable. Government should aim at instilling good governance that would achieve political stability, accountability and openness to the world which will have positive influence on market capitalization and attract more foreign portfolio investment.

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